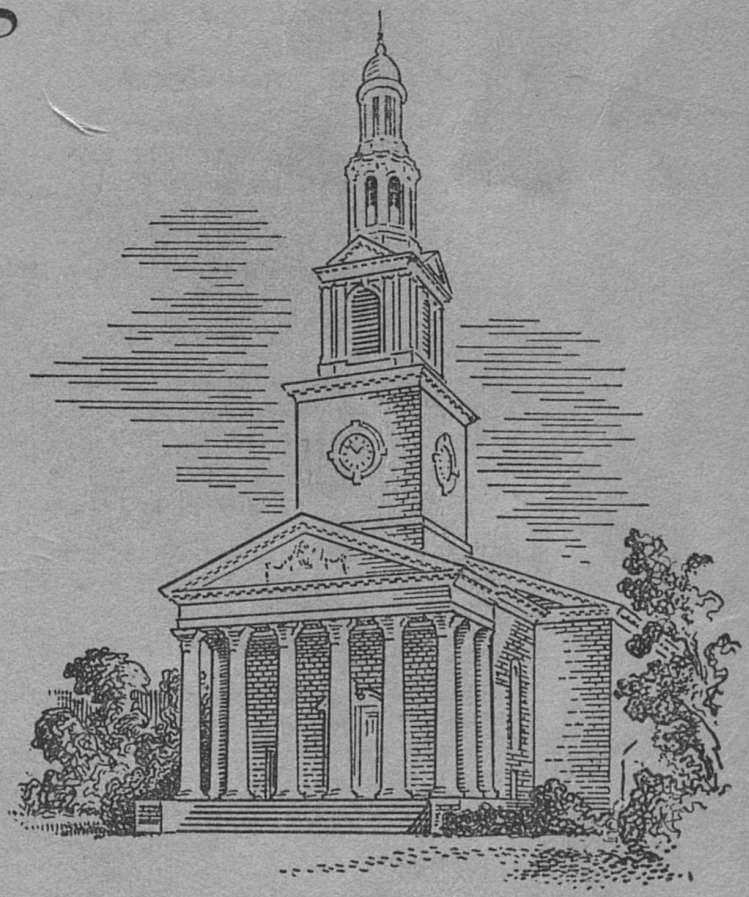
Mr. Gillis

BULLETIN OF THE

UNIVERSITY OF KENTUCKY

General Catalog

1950-51



ANNOUNCEMENTS 1951-52

VOLUME 43 MAY, 1951 NUMBER 5

BOARD OF TRUSTEES

1951

Ex Officio Members

Lawrence W. Wetherby, Governor
Boswell B. Hodgkin, Superintendent of Public Instruction
Harry F. Walters, Commissioner of Agriculture

From the State Board of Agriculture

George M. Cheek, Frankfort, 1951 — ?
Dr. W. M. Coffee, LaCenter, 1949 — ?
Carl Dempewolfe, Henderson, 1950 ~~4~~

Members at Large

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Mrs. Paul G. Blazer, Ashland, 1950 ~~2~~
John C. Everett, Maysville, 1954
Harper Gatton, Madisonville, 1953
R. P. Hobson, Louisville, 1950 ~~2~~
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Herndon J. Evans, Pineville, 1953
Guy Huguelet, Lexington, 1954
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Lawrence W. Wetherby, Chairman
Frank D. Peterson, Secretary and Treasurer

Executive Committee

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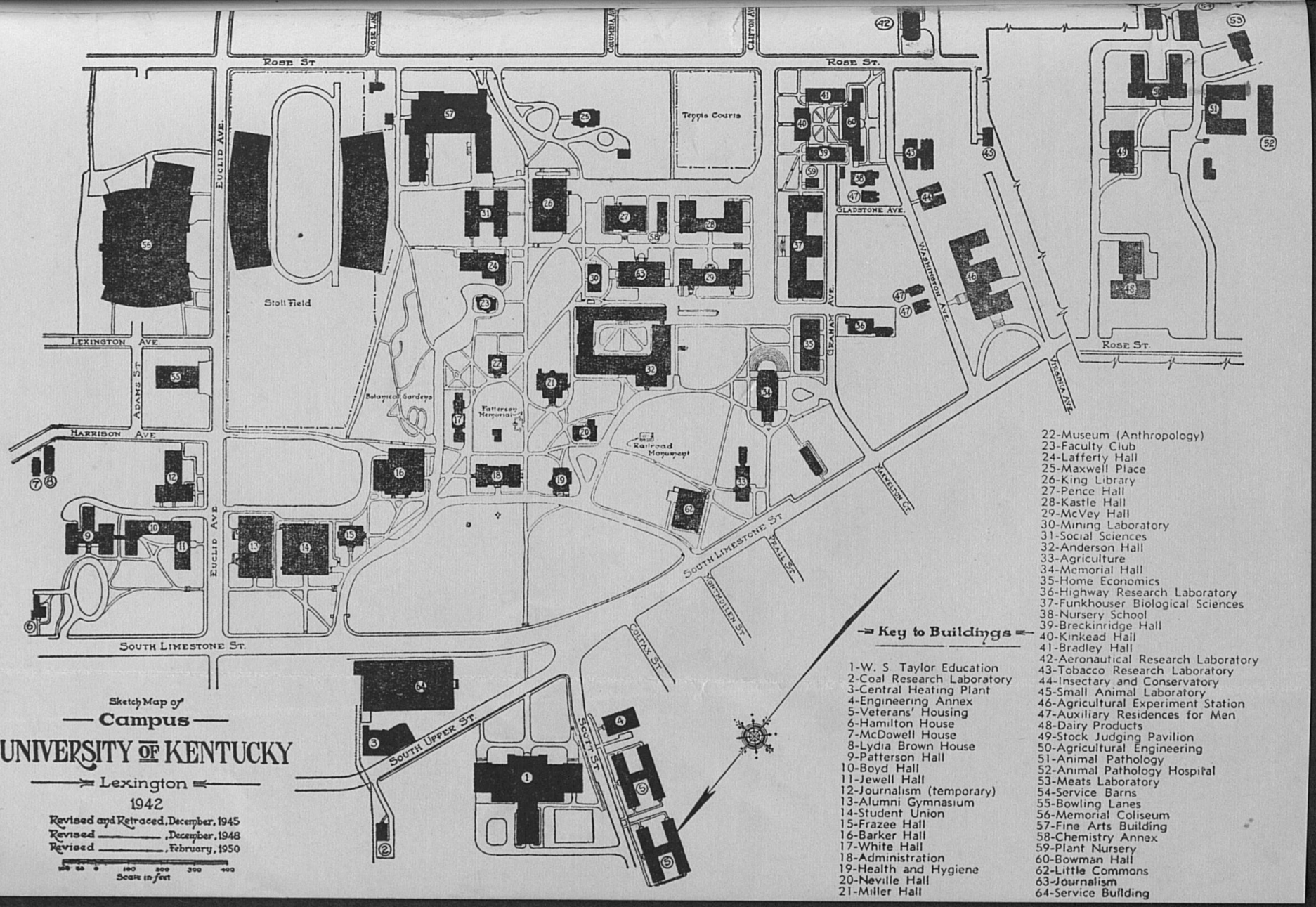
Harper Gatton
R. P. Hobson
H. D. Palmore

W. M. Moore - Covington - 1955
Thomas Ballantine - Louisville - 1955
Smith Broadbent, Jr. Cadiz - 1955



Sketch Map of
— Campus —
UNIVERSITY OF KENTUCKY
Lexington
1942

Revised and Retraced, December, 1945
Revised _____, December, 1948
Revised _____, February, 1950

Scale in feet

Key to Buildings

1-W. S. Taylor Education
2-Coal Research Laboratory
3-Central Heating Plant
4-Engineering Annex
5-Veterans' Housing
6-Hamilton House
7-McDowell House
8-Lydia Brown House
9-Patterson Hall
10-Boyd Hall
11-Jewell Hall
12-Journalism (temporary)
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 (Anthropology)
23-Faculty Club
24-Lafferty Hall
25-Maxwell Place
26-King Library
27-Pence Hall
28-Kastle Hall
29-McVey Hall
30-Mining Laboratory
31-Social Sciences
32-Anderson Hall
33-Agriculture
34-Memorial Hall
35-Home Economics
36-Highway Research Laboratory
37-Funkhouser Biological Sciences
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-Animal Pathology Hospital
53-Meats Laboratory
54-Service Barns
55-Bowling Lanes
56-Memorial Coliseum
57-Fine Arts Building
58-Chemistry Annex
59-Plant Nursery
60-Bowman Hall
62-Little Commons
63-Journalism
64-Service Building

BULLETIN OF THE

University of Kentucky

LEXINGTON, KY.

1950-51 General Catalog

Announcements 1951-52

A bulletin published monthly, January to September inclusive, by the University of Kentucky, Lexington. Entered as Second-Class Matter at the Post Office, Lexington, Ky., under the Act of August 24, 1912.

Vol. 43 May, 1951 No. 5

ADMINISTRATIVE ORGANIZATION

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*Frank James Welch, M.A., Ph.D., Dean of the College of Agriculture and Home Economics; Director of Experiment Station; Director of Agricultural Extension Division

Levi Jackson Horlacher, M.S., Assistant Dean in Resident Teaching, College of Agriculture and Home Economics

Daniel Voiers Terrell, C.E., Dean of the College of Engineering

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Cecil C. Carpenter, M.S., Ph.D., Dean of the College of Commerce

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

Herman E. Spivey, M.A., Ph.D., Dean of the Graduate School

* See appended list of changes of status, p. 337.

CONTENTS

	Page
Publications and Sources of Information	4
Calendar for 1951-52	6
University Calendar for 1951-52	7
Registration Schedules for 1951-52	9
Part I. General Information of Special Interest to the Prospective Student	11
Origin, Purposes, and Accreditation	13
Admission to the University	14
Fees and Expenses	17
Residence Halls for Women	21
Residence Halls for Men	22
Opportunities for Financial Help	23
Special Services for the Student	23
The University and the Veteran	25
What Is Expected of the Student	28
Opportunities Outside the Classroom	33
The Alumni Association	37
The Plant of the University	37
Part II. Educational Opportunities at the University of Kentucky	42
Degrees and Curricula	43
College of Arts and Sciences	47
College of Agriculture and Home Economics	81
College of Engineering	97
College of Law	107
College of Education	111
College of Commerce	120
College of Pharmacy	129
Graduate School	132
Department of University Extension	142
Part III. Statement of courses Offered at the University	143
Part IV. Special Services of the University	289
Part V. The Academic and Administrative Staff of the University	295
Part VI. Statistical Summary	345
Index	352

PUBLICATIONS AND SOURCES OF INFORMATION

Several publications are issued by the University of Kentucky for the purpose of giving prospective students and other citizens information about the institution. The offices from which publications may be received are listed below.

Bulletin of General Information	Registrar's Office
General Catalog	Registrar's Office
Summer Session Bulletin	Registrar's Office
Agriculture and Home Economics Bulletin	College of Agriculture and Home Economics or Registrar's Office
Arts and Sciences Bulletin	College of Arts and Sciences or Registrar's Office
Campus View Books	Director of Public Relations
Commerce Bulletin	College of Commerce or Registrar's Office
Education Bulletin	College of Education or Registrar's Office
Engineering Bulletin	College of Engineering or Registrar's Office
Graduate Bulletin	Graduate School
Law Bulletin	College of Law or Registrar's Office
Pharmacy Bulletin	College of Pharmacy, First and Chestnut Streets, Louisville, Ky., or Registrar's Office
Summer Session Announcement	Registrar's Office

SPECIAL INFORMATION

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

The general policies of the University	President of the University
General information, all admissions, and transcripts of credits	Registrar
Living accommodations, student help, social affairs	Dean of Students or Dean of Women
A particular college and its program	Dean of the College
Graduate work	Dean of the Graduate School
Summer Session	Registrar
Class extension and correspondence study	Director of University Extension
Agricultural extension	Director of Agricultural Extension
Facilities for Veterans	University Personnel Office or Registrar
General Information About the University	Director of Public Relations

CALENDAR

1951

July

S	M	T	W	T	F	S
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June

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1952

July

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August

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September

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October

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November

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16	17	18	19	20	21	22
23	24	25	26	27	28	29
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December

S	M	T	W	T	F	S
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21	22	23	24	25	26	27
28	29	30	31	..	..	..

UNIVERSITY CALENDAR FOR 1951-52

First Semester

1951

September 10-12	Monday, 8:00 a.m. to Wednesday, 5:00 p.m. — Classification tests and physical examinations for all new students
September 13-15	Thursday, 8:00 a.m. to Saturday Noon — Registration and classification of all students, according to an alphabetical schedule, see p. 10.
September 17	Monday — Class work begins
September 22	Saturday — Last date one may enter an organized class for the first semester
October 12, 13	Friday and Saturday — Period for filing applications for degrees
October 22	Monday — Last date one may drop a course without a grade
November 22-26	Thursday, 8:00 a.m. to Monday, 8:00 a.m. — Thanksgiving holidays
December 19	Wednesday, 6 p.m. — Christmas holidays begin

1952

January 3	Thursday, 8:00 a.m. — Christmas holidays end
January 21-25	Monday through Friday — Final examinations
January 25	Friday, 6:00 p.m. — End of First Semester

Second Semester

February 2	Saturday, 7:45 a.m. — Classification tests and physical examinations of all new students
February 4, 5	Monday, 8:00 a.m. to Tuesday, 4:20 p.m. — Registration and classification of all students, according to an alphabetical schedule, see p. 10.
February 6	Wednesday — Class work begins

February 12	Tuesday — Last date one may enter an organized class for the second semester
Feb. 29-March 1	Friday and Saturday — Period for filing applications for degrees
March 10	Monday — Last date one may drop a course without a grade
April 11-15	Friday, 8:00 a.m. to Tuesday, 8:00 a.m. — Easter holidays
May 25	Sunday — Baccalaureate Services
May 27-31	Tuesday through Saturday — Final examinations
May 30	Friday — Eighty-fifth Annual Commencement
May 31	Saturday, 6:00 p.m. — End of Second Semester
June 3-7	Tuesday through Saturday — 4-H Club Week

Summer Session 1952

June 16	Monday, 7:45 a.m. — Classification tests and physical examinations for all new students
June 17	Tuesday, 8:00 a.m. to 4:30 p.m. — Registration and classification of all students, according to an alphabetical schedule, see p. 11.
June 18	Wednesday — Class work begins
June 21	Saturday — Last date one may enter an organized class for the summer session
June 28	Saturday — Last date one may drop a course without a grade
June 27, 28	Friday and Saturday — Period for filing applications for degrees
July 4, 5	Friday and Saturday — Independence Day holidays
August 8	Friday — Summer Session Commencement
August 9	Saturday Noon — End of Summer Session

REGISTRATION SCHEDULES FOR 1951-52

First Semester

September 10-12 — Monday, 8:00 a.m. to Wednesday, 5:00 p.m. — All new students except those entering the Graduate School, will report to the Memorial Coliseum for classification tests, physical examinations, and advisory conferences. They 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. Monday may not be able to complete them before the registration period, and their registration will thus be delayed.

September 13-15 — Thursday, 8:00 a.m. to Saturday Noon — Registration and classification of all students, according to the following alphabetical schedule:

Thursday Forenoon

8:00 to 8:50 — A through Bro
9:00 to 9:50 — Bru through Cri
10:00 to 1050 — Cro through Fle
11:00 to 11:50 — Fli through G

Friday Forenoon

8:00 to 8:50 — M
9:00 to 9:50 — N through Q
10:00 to 10:50 — R through Sil
11:00 to 11:50 — Sim through T

Thursday Afternoon

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

Friday Afternoon

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

Saturday Forenoon

8:00 to 11:30 — Miscellaneous, A through Z

September 17 — Monday, 8:00 a.m. — Class work begins

Second Semester

February 2 — Saturday, 7:45 a.m. — All new students, except those entering the Graduate School, will report to Memorial Hall for classification tests and physical examinations. These must be completed before registration.

February 4, 5 — Monday, 8:00 a.m. to Tuesday, 4:20 p.m. — Registration and Classification of all students, according to the following alphabetical schedule:

Monday Forenoon		Tuesday Forenoon	
8:00 to 8:50	U through Z	8:00 to 8:50	H
9:00 to 9:50	Sim through T	9:00 to 9:50	Fli through G
10:00 to 10:50	R through Sil	10:00 to 10:50	Cro through Fle
11:00 to 11:50	N through Q	11:00 to 11:50	Bru through Cri

Monday Afternoon		Tuesday Afternoon	
1:30 to 2:20	M	1:30 to 2:20	A through Bro
2:30 to 3:20	I through L	2:30 to 4:20	Miscellaneous A through Z
3:30 to 4:20	Miscellaneous L through Z		

February 6 — Wednesday, 8:00 a.m. — Class work begins

Summer Session 1952

June 16 — Monday, 7:45 a.m. — All new students, except those entering the Graduate School, will report to Memorial Hall, for classification tests and physical examinations. These must be completed before registration.

June 17 — Tuesday, 8:00 a.m. to 4:30 p.m. — Registration and classification of all students, according to the following alphabetical schedule:

Tuesday Forenoon		Tuesday Afternoon	
8:00 to 8:50	Ke through Ni	1:30 to 2:20	Clo through Ge
9:00 to 9:50	No through Si	2:30 to 3:20	Gi through Ka
10:00 to 10:50	So through Z	3:30 to 4:30	Miscellaneous A through Z
11:00 to 11:50	A through Cli		

June 18—Wednesday, 7:00 a.m.—Class work begins

PART I

GENERAL INFORMATION OF SPECIAL INTEREST TO THE PROSPECTIVE STUDENT

ORIGIN, PURPOSES, AND ACCREDITATION

The University of Kentucky, a state-supported institution, is located at Lexington, an urban community of about 75,000 population. The Board of Trustees 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 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.

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 the Department of University Extension.

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 Radio Studios, the Department of University Extension, the Department of Public Relations, the Engineering Experiment Station, the Child Guidance Service, the Family Life Institute, the Industrial Psychological Service, and the Social Research Consultation Service.

The University of Kentucky 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 depart-

ments 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, the National Association of Schools of Social Administration, the American Association of Colleges of Pharmacy, the American Council on Pharmaceutical Education, the American Association of Colleges for Teacher Education, and the National University Extension Association.

ADMISSION TO THE UNIVERSITY

Students are admitted to the University of Kentucky as freshmen, as students with advanced standing from other institutions, as graduate students, as special students, and as auditors. Admission to certain colleges is 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 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. The University classification tests must be taken by new undergraduate students before they can be registered for classes.

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 which demand 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 recommends that at least ten of the units presented be chosen from English, 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

Kentucky 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. He should have maintained a standing of 1.0 or an average of C in all previous college work. The student whose standing is below 1.0, however, may be admitted on probation if after taking the University classification tests such an admission seems warranted. In no case 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.

Out-of-State 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 Kentucky 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. Any other person may be admitted as a special student provided he is fully prepared to do the work desired and provided he is as 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 entrance requirements for admission to the freshman class.
2. Completing in residence sixty-seven credits 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 per-

mitted 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 The Graduate School

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

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

College of Engineering. In addition to meeting the general requirements for admission to the University, the applicant for admission to the freshman class of the College of Engineering shall include in high school credits one unit of plane geometry and one and one-half units of algebra. It is recommended that the student offer one-half unit in solid geometry; otherwise this subject will be added to the requirements of the freshman year.

Students whose scores on the University classification tests are in the lower one-fourth or those lacking in the requirements for algebra may enter the College of Engineering. The schedules of such students will be adjusted in accordance with their placement tests as directed by a special orientation committee of the College of Engineering and the Personnel Office.

College of Law—An applicant for admission to the College of Law must be at least eighteen years of age and must have, in addition to the standard high school course that will satisfy the general requirements for admission to the University, at least two years of college credit (60 semester hours, at least 6 of which must be in English and not more than 6 of which may be in non-theory courses). An academic standing of at least 1.3 or the equivalent for all pre-law college work is required. 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. In addition to meeting the general admission requirements of the University, outlined on the preceding pages, the applicant for admission to the freshman class of the College of Education must rank in the upper three-fourths on the University classification 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.

College of Commerce. In addition to meeting the general admission requirements of the University, outlined on the preceding pages, the applicant for admission to the freshman class of the College of Commerce must rank in the upper three-fourths on the University classification tests.

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

The Graduate School. A graduate of a fully accredited institution of higher learning may be admitted to the Graduate School upon evidence of

graduation and an official transcript of undergraduate courses. 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.

FEES AND EXPENSES

Fees at the University vary according to the privileges granted and the place of home residence of the student—resident of Kentucky or of another state or country. The table on page 21 gives the schedule of regular fees per semester and for the Summer Session. Checks are acceptable by the University in payment of fees, room rent, and board, if they are made out for the exact amount due. **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.**

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 of Kentucky unless he has resided in the state for twelve consecutive months next preceding the date of his original enrollment.
2. The legal residence of minors will follow that of the parents or legal guardians, except in the case of minors who have always resided in Kentucky but whose legal guardians are residents of other states.
3. No student shall be deemed to have gained Kentucky residence privileges at the University by his mere presence at the institution. A student once classified as a non-resident of Kentucky 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.

Initial Expenses

The undergraduate student who lives in Kentucky and who plans to enroll in the University for the first time should be prepared to meet initial expenses at registration time, approximately as follows:

Item	Women Students	Men Students
Fees for Semester	$ 60.00	$ 60.00
Military Deposit		25.00
Room and Board in Residence Halls	200.00	
Room in Residence Halls		69.00
Books and Supplies	20.00	20.00
Miscellaneous fees and deposits	10.00	10.00
Totals	$290.00	$184.00

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 $40.00 for incidental expenses. The student who does not live in Kentucky should be prepared to pay an additional fee of $60.00.

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 Masters degrees will be charged a fee of $20.00, and for the doctorate $25.00. These fees will cover the items listed 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 Fees

Special fees for certain courses and activities will be charged, as follows:

Applied Music:*

$25.00 per semester for one half-hour lesson per week
50.00 per semester for two half-hour lessons per week
6.00 per semester for rental of a practice room for Voice, or any instrument
3.00 per semester for rental of University owned instruments for Music 46
6.00 per semester for rental of University owned instruments for private practice for participation in the Symphony Orchestra or bands
5.25 per semester for each half-hour lesson per week for each student in Applied Music who is not regularly enrolled in the University. This is in addition to the usual charge for individual lessons

Architectural Engineering:

5.00 per semester for Architectural Engineering 4a, 4b, 6a, or 6b

Chemistry:

A breakage fee of $5.00 is charged students enrolling in any course in chemistry

Engineering Activities:

$1.50 per semester and $1.00 per summer session, charged all students enrolling in the College of Engineering.

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* For applied music fees in the Summer Session, see Bulletin of the Summer Session.

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:

$50.00 per course for summer field work in Geology 23a, 23b, and 118a-d

3.50 per course for field work in Geology 10a, 14a-d, and 107a-f

2.00 for field work in Geology 10b

.50 per course for field work in Geology 50a, 50b, 3, 12a, 30a, and 30b

Pharmacognosy:

$5.00 per semester for any course in this field

Physical Education:

$2.00 per semester for locker fee for Activity Course

8.00 per semester for P. E. 8 or 12

28.00 per semester for P. E. 15, 16, or 50

4.00 per semester for P. E. 11

3.00 per semester for P. E. 21, 22, 52, 53, 154, or 155

Psychology:

$120.00 per semester and $60 per summer session for Psychology 431, in addition to the regular incidental fees

Radio Arts:

$2.50 per semester for Radio Arts 2a

Zoology:

A breakage fee of $5.00 is charged for all laboratory courses in Zoology.

Deposit for Military Uniform

Each student taking basic military science makes a deposit of $25.00. For advanced R.O.T.C. the deposit is $45.00. This deposit is returned after the uniform and all equipment have been checked in at the close of the school year.

Deposit for University Band

Each member of the University Band is required to make a deposit of $25.00. The deposit is returned after all equipment has been checked in at the close of the school year.

Fees for Correspondence and Extension Courses

The fee for correspondence courses is $5.25 per semester hour; undergraduate extension classes, $5.25 per semester hour for Kentucky students and $10.50 per semester hour for out-of-state students. Graduate extension classes are $6.75 per semester hour for Kentucky students and $13.50 per semester hour for out-of-state students.

Fee For Auditors

All auditors are charged the same fee that they would pay for credit.

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 $40.00 for incidental expenses. The student who does not live in Kentucky should be prepared to pay an additional fee of $60.00.

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 Masters degrees will be charged a fee of $20.00, and for the doctorate $25.00. These fees will cover the items listed 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.

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Special Fees

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6.00 per semester for rental of a practice room for Voice, or any instrument
3.00 per semester for rental of University owned instruments for Music 46
6.00 per semester for rental of University owned instruments for private practice for participation in the Symphony Orchestra or bands
5.25 per semester for each half-hour lesson per week for each student in Applied Music who is not regularly enrolled in the University. This is in addition to the usual charge for individual lessons

Architectural Engineering:

5.00 per semester for Architectural Engineering 4a, 4b, 6a, or 6b

Chemistry:

A breakage fee of $5.00 is charged students enrolling in any course in chemistry

Engineering Activities:

$1.50 per semester and $1.00 per summer session, charged all students enrolling in the College of Engineering.

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* For applied music fees in the Summer Session, see Bulletin of the Summer Session.

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:

$50.00 per course for summer field work in Geology 23a, 23b, and 118a-d

3.50 per course for field work in Geology 10a, 14a-d, and 107a-f

2.00 for field work in Geology 10b

.50 per course for field work in Geology 50a, 50b, 3, 12a, 30a, and 30b

Pharmacognosy:

$5.00 per semester for any course in this field

Physical Education:

$2.00 per semester for locker fee for Activity Course

8.00 per semester for P. E. 8 or 12

28.00 per semester for P. E. 15, 16, or 50

4.00 per semester for P. E. 11

3.00 per semester for P. E. 21, 22, 52, 53, 154, or 155

Psychology:

$120.00 per semester and $60 per summer session for Psychology 431, in addition to the regular incidental fees

Radio Arts:

$2.50 per semester for Radio Arts 2a

Zoology:

A breakage fee of $5.00 is charged for all laboratory courses in Zoology.

Deposit for Military Uniform

Each student taking basic military science makes a deposit of $25.00. For advanced R.O.T.C. the deposit is $45.00. This deposit is returned after the uniform and all equipment have been checked in at the close of the school year.

Deposit for University Band

Each member of the University Band is required to make a deposit of $25.00. The deposit is returned after all equipment has been checked in at the close of the school year.

Fees for Correspondence and Extension Courses

The fee for correspondence courses is $5.25 per semester hour; undergraduate extension classes, $5.25 per semester hour for Kentucky students and $10.50 per semester hour for out-of-state students. Graduate extension classes are $6.75 per semester hour for Kentucky students and $13.50 per semester hour for out-of-state students.

Fee For Auditors

All auditors are charged the same fee that they would pay for credit.

SCHEDULE OF REGISTRATION AND INCIDENTAL FEES

Classification	FOR ONE SEMESTER		
	Kentucky Students	Out-of-State Students	
		Entering after Sept. 1, 1947	Entering before Sept. 1, 1947
Full-time Students:			
All Colleges except Law	$60.00	$120.00	$90.00
College of Law	63.00	126.00	93.00
Part-time Students:	Per Semester Hour	Per Semester Hour	Per Semester Hour
All Undergraduate Colleges except Law	5.25	10.50	7.75
College of Law	7.25	14.50	10.75
Graduate School	6.75	13.50	10.25
	FOR THE SUMMER SESSION		
Full-time Students:			
All Colleges except Law	30.00	60.00	45.00
College of Law	31.50	63.00	46.50
Part-time Students:	Per Semester Hour	Per Semester Hour	Per Semester Hour
All Undergraduate Colleges except Law	5.25	10.50	7.75
Graduate School	6.75	13.50	10.25
College of Law	7.25	14.50	10.75

Auditors are charged the same fee that they would pay for credit.

Withdrawal and Refund of Fees

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

During the first week after the opening of the summer session, students withdrawing from the University may receive a refund not to 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 in the Registrar's Office. 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 $400 a year. Rooms in the men's residence halls range in price from $45.00 to $69.00 a semester and board may be obtained in the University cafeteria for approximately $10 per week.

Estimates of **minimum** expenses for an academic year (two semesters), not including special course fees and deposits, are given below. The actual expenses, of course, vary greatly according to the habits of economy or extravagance of the individual student. For law and engineering students fees are slightly more than the amounts shown, and the cost of books and supplies may be greater than the estimates.

	Kentucky Students	Out of State Students
Fees	$120.00	$240.00
Board and Room	400.00	400.00
Laundry and Cleaning	40.00	40.00
Books and Supplies	40.00	40.00
Miscellaneous Fees and Deposits	20.00	20.00
Incidentals	75.00	75.00
Totals	$695.00	$815.00

RESIDENCE HALLS FOR WOMEN

The University of Kentucky maintains four large residence halls for women which house approximately 640 students. Four small residence units are maintained for 75 women and the University of Kentucky has three barracks for women which house 42 students. The residence halls are 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.

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 students are assigned to residence units according to classification, preference in placement is determined by the dates 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 room key. **A room reservation may be canceled with the deposit refunded if notification of the cancellation is received by the Dean of Women one calendar month previous to the first day of the opening of the freshman residence hall; 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 to the University.**

Meals for all women in the residence halls are served in the joint dining rooms of Jewell and Boyd Halls and in Sayre, and are under the direction of trained dieticians.

A trained nurse lives in residence 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 residences for women is $400 a year, half of which is payable at the beginning of each semester. The University reserves the right to change these rates at any time. Checks should be made payable to the University of Kentucky. Refunds on room and board will not be made after the twelfth week of a semester. A student withdrawing during the first twelve weeks will have withheld 8% of the total fee for each week or fraction thereof. Refunds on room and board will not be made for temporary absence from the residence halls. A student must withdraw officially in the Office of the Dean of Women to be eligible for a refund on room and board.

The University maintains one cooperative house accomodating approximately 20 women students. Application for a reservation in the 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.

Ten national sororities accommodating approximately 250 students in residence have chapter houses on the campus of the University of Kentucky.

RESIDENCE HALLS FOR MEN

The University operates four permanent residence halls for men. Also, as part of its emergency housing program, the University has erected ten officer-type barracks designed to house approximately 450 single men.

All male freshmen are required by order of the Board of Trustees to live in the residence halls so far as space is available.

To reserve a room in the halls or barracks it is necessary to secure an application blank from the Office of the Dean of Students and return it to that office with a deposit of $10.00. This application does not automatically reserve any rooms. The deposit will be returned if notice of cancellation is given ten days before the opening of the semester.

Any student desiring living accommodations in a private home in the city should come to the Office of the Dean of Students if assistance is needed.

Rentals per semester for rooms in the men's halls range from $45.00 to $69.00, depending upon the type of accommodations. Prices per semester for rooms in the barracks are $45.00 and $50.00. The University reserves the right to change the rates for rooms in all residence halls at any time.

MARRIED STUDENTS' HOUSING

The University has two housing projects, known as Cooperstown and Shawneetown, which accommodate 498 married veteran students and their families.

To apply for a housing unit in either project, communicate with the Office of the Dean of Students for general information and an application blank. In order to get on the waiting list it is necessary to send a deposit of $10.00 together with the filled-out application. This should be done as soon as possible as the waiting list for these units is made up according to the date of deposit. The deposit is refundable upon request at any time.

Any married student who needs living accommodations out in the city should come to the Office of the Dean of Students if assistance is needed.

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 semester.** The student who is to be partially self-supporting should seek advice in adjusting his study load to the end that his employment will not prevent him from obtaining the largest benefit from his courses.

Loan Funds, Scholarships, and Fellowships. To the greatest extent possible, financial assistance is rendered worthy students through loan funds and through scholarships and fellowships. Scholarships and fellowships at the University fall, in general, into three classes: (a) Grants to needy students in amounts equivalent to the University's incidental fees; (b) Awards to freshmen or other students of high scholarship attainments; and (c). Special awards from funds made available through gifts. These last awards are made in accordance with the conditions of the gifts, and vary from the small amounts necessary to cover the incidental fee to a sum approximately equal to the full cost of attending the University.

In some cases aid in the form of scholarships or fellowships is limited to students enrolled in a particular college or department. In other cases it is available to any student qualifying. A number of prizes and awards are 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 admission 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 Health Service

The University recognizes a special obligation in the health of the students. To meet this obligation it maintains the University Health Service.

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

In a case requiring major surgery a consultation is held with the student's parents or his home physician. The student is then either sent to a local hospital for the surgery or returned to his home. In a serious or chronic condition requiring long periods of hospitalization, the parents or home physician should remove the student from the infirmary to a hospital.

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, consisting of the Deans of the various colleges, the Dean of Students, and the Dean of Women.

Guidance and Counseling. The University Personnel Office offers guidance and counseling 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 position for which the student is best fitted; and personal adjustment counseling—developing an effective personality, helping the student overcome difficulties in social adjustment, worry and feelings of inadequacy, nervousness, difficulties caused by uncertainties of aims and purposes and other personal problems.

The required Freshman Placement and Classification examinations and aptitude, achievement, and interest 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 on 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 the Personnel Office is also secretary of the Scholarship and Attendance Committee.

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

All placement and classification tests administered to new students are given under the supervision of the University Personnel Office. For the year 1949-50, the tests given were as follows: The Kentucky General Scholastic Ability Test, The Kentucky English Test, and The Kentucky Mathematics Test. The tests are used primarily as an aid in determining the student's eligibility for enrollment in different colleges, the particular courses or sections, the total academic load, and his vocational objective.

"The University Personnel Office operates a Testing Center for the State Department of Education in giving the General Educational Development Tests, high school and college level (for veterans). It is also an officially designated center for administering many nation-wide tests, such as the National Teacher, Graduate Record Examinations, and the Miller Analogies Test.

The University Personnel Office, Testing Division, is authorized by the Kentucky Association of Colleges and Secondary Schools to conduct the Kentucky Cooperative Counseling and Testing Service.

Veterans. The University Personnel Office, Veterans' Division, is the University Center for veterans. Veterans who are receiving benefits through the Veterans' Administration must be cleared officially through this office. See "The University and the Veteran", p. 25.

Orientation Week Program. All new students in the undergraduate colleges, both freshmen and those with advanced standing, are expected to take part in a series of orientation programs which are conducted at the opening of the first semester of residence.

A dual purpose is served by the orientation program; first, the University wishes to learn something about the new student, and second, it is hoped that the new student will learn more about the history, the traditions, and the life of the University. In order to accomplish these aims, the following activities are conducted: Placement tests (a scholastic ability test, an English test, and a mathematics test), a complete physical examination, and scheduled formal meetings. The first meeting is a general assembly for all new students which is addressed by the President of the University and the President of the Student Government Association. At this meeting, also, the Deans and the Heads of other University administrative departments are introduced to the new students by the Vice President. The undergraduate colleges conduct meetings where the Deans and other college officers have an opportunity to meet their new students and interpret the academic program. The Dean of Women and the Dean of Students conduct conferences where information is presented on the extra-curricular activities of the University. The Director of Personnel conducts meetings for interpreting to the new students the results of the placement tests.

Orienation Programs are planned for each of the two semesters and for the summer session. Inquiries about Orientation Week should be addressed to the University Personnel Office, Room 9, Administration Building.

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 Veterans Should Report

The veteran should report to the University Personnel Office, Veterans' Division, which is located in Room 201 in 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 benefits, 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 (Veterans' Division): Veterans certification; academic, vocational, and personal counseling.

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, student organizations and personal counseling.

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:

1. An official transcript of his high school credits. (This applies to those who have not previously been in college.)
2. 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. All transcripts should be sent to the Registrar several weeks before registration.
3. 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).
4. 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.)
5. Sufficient funds to provide subsistence for two months.

Credit for Training Taken While in Military Service

With the exception noted below respecting military science, the University of Kentucky does not grant blanket credit for military service. Any 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.

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 Service. 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 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 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 will 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 subject or his general educational level by taking examinations.

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 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. Applications for aid under Public Law 346 are made by the veteran on a special form (V.A. Form 1953) prepared by the Veterans Administration. This application form may be obtained from the Veterans Administration Office.

Veterans eligible for benefits under provisions of Public Law 346 (GI Bill) who plan to enter the University of Kentucky for the first time or those who plan to re-enter after having been in training elsewhere, should communicate with the nearest V.A. Office prior to registration date for the purpose of obtaining a Certificate of Eligibility and Entitlement. A copy of the certificate presented by the veteran to the University of Kentucky will constitute authority for that institution to register that veteran under provisions of the act.

In the absence of a Certificate of Eligibility and Entitlement, either an original or supplemental form, the veteran will be expected to make satisfactory arrangements with the University Comptroller regarding payment of all charges.

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.

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

A student with a standing of 2.0 or more for the preceding semester, 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 two semester hours or the total load exceed twenty-three semester hours.

The maximum load of work for a summer session (including both residence and extension) shall in no case exceed half of that which would be allowed for a semester. Two short courses of four 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 semester or summer session during which the last assignment

is completed, and it shall be counted as a part of the load of that semester or summer session.

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 semester may be placed on probation by the dean of the college. If during the semester of probation, he again fails to pass in three-fourths of the normal load, he may be dropped from the University by the dean of his college. A student who has been thus dropped from the University may be reinstated only by the Committee on Scholarship and Attendance. (Students in the College of Pharmacy, see College Bulletin for information on probation.)

The above rule shall 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.

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.

Foreign Languages. No student whose native language is other than English, and who has had formal instruction in schools of his own country, may be permitted to take elementary, intermediate, or conversation courses in that language.

Unsatisfactory Scholarship and Attendance. A student who is doing unsatisfactory work, or who is irregular in attendance, is reported to the dean of the college in which he is registered. 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 credits 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 two semesters nor as a junior until he has had college residence of at least three semesters.

A Law student is classified as a second year student when he has completed 24 or more credits and as a third year student when he has completed 50 or more credits. He shall not, however, be classified as a second year student until he has been in residence at least two semesters, nor as a third year student until he has been in residence at least three semesters.

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 semester's work.

Special Examinations. 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 thirty-two of the credits required for a bachelors 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.

One-third of the residence and credit required for a masters degree may be taken by University extension. (Correspondence courses are excluded.)

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

A minimum of thirty of the last thirty-six credits presented for an undergraduate degree must be completed in residence (exclusive of credit by extension and special examination).

Northern Kentucky Extension Center. Undergraduate work may be taken at the Northern Kentucky Extension Center, Covington, Kentucky for residence credit under the following conditions:

A maximum of sixty-four semester hours taken at the Center, or in combination with extension work, may be applied toward an undergraduate degree, provided not more than thirty-two of the sixty-four semester hours may be in extension work.

Students who transfer to the Center from other institutions with a view to obtaining a degree from the University of Kentucky must complete a minimum of thirty of the last thirty-six semester hours on the Lexington campus.

Graduate work may be taken at the Northern Kentucky Extension Center to apply toward a graduate degree under the following conditions:

A maximum of one-third of the residence and credit required for a masters degree may be taken at the Center, or by a combination with other University extension work. (Correspondence courses are excluded.)

Any student, graduate or undergraduate, planning to transfer credit earned at the Northern Extension Center to other institutions should inquire as to the applicability of such credit toward degrees which those institutions award.

Entrance Examinations. All new students, other than those entering the Graduate School, are required to take the University classification 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 credit and one quality point added to his requirements for graduation.

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 semester is 2.4 or better, upon application to the Registrar, shall be extended the same privilege relative to absences 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 credit.
B—Good, valued at 2 points for each credit.
C—Fair, valued at 1 point for each credit.
D—Unsatisfactory, indicates a deficiency and gives no points but gives credit for graduation if with such credits the student's standing is 1 or more. .
E—Failure, valued at 0 credits and 0 points.
I—Incomplete.
X—Absent from examination.
WP—Withdrew, passing.
WF—Withdrew, failing.

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 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 credits. For example, a student who makes an average mark of C in 128 credits, would have 128 points and a standing of 1.0. An average mark of B would give the student 256 points and 128 credit 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 credits attempted.

Recording of Marks. Through the sixth Monday of any semester, and through the tenth class day of the summer session, 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 Semester Hour or Credit. A semester hour represents one hour of recitation or lecture or two hours of laboratory a week for one semester. Drawing, shopwork, physical education, and other courses requiring no outside work are reckoned at three hours for one semester hour. A semester hour is usually referred to as a credit in bulletins and catalogs which explain the University's program.

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 credits, 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 thirty of the last thirty-six credits presented for the degree must be completed in residence at the University. With respect to graduation requirements for Veterans of World War II, this rule may be waived, provided that the total previous residence credit has been not less than thirty credits.

Not more than thirty-two of the credits 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 136.

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 two semesters of residence and two semesters 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

Concert-Lecture Series. These programs are arranged through the cooperation of the University with the Central Kentucky Community Concert Association and the Lexington Public Forum and are open to all students who have paid the full-time fees. The program for 1950-51 includes:

October 25—James Melton, Tenor
October 28—Elmer Davis, News Analyst
November 10—Charles Laughton, Actor-Lecturer
November 18—London Royal Philharmonic Orchestra, with Sir Thomas Beecham, Conductor
December 4—Don Cossack Chorus
January 18—Artur Rubinstein, Pianist
January 27—Margaret Chase Smith, United States Senator from Maine
February 12—Jascha Heifetz, Violinist
February 19—Edward Weeks, Editor of the Atlantic Monthly
February 28—Elena Nikolaidi, Contralto
March 20—Dallas Symphony Orchestra—William Kapell, Guest Soloist

Musicales. These Sunday afternoon musical programs are arranged for the enjoyment of the students, faculty, and friends of the University. There is no admission charge. The program for 1950-51 follows:

October 1—Anne English, Mezzo-Soprano
October 15—Nathaniel Patch, Pianist
November 5—Arnold Blackburn, Organist
November 12—Earl Holloway, Baritone
December 3—Gordon Kinney, Cellist, and University Chamber Music Group

January 10—Helen Hamilton, Soprano
January 14—University Symphony Orchestra
February 18—Aimo Kiviniemi, Tenor
March 11—University Women's Glee Club
March 18—University Chorus and Orchestra, Elijah, by Mendelssohn
April 1—Kenneth Wright, Violinist, and University Chamber Music Group
April 15—University Concert Band
April 29—University Men's Glee Club
May 27—Baccalaureate

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 presents 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.

The University has its own FM station (91,300 kil.), carrying the call letters WBKY. Students taking courses in Radio Arts, and others of demonstrated talents are permitted to gain actual broadcasting experience by filling positions on this station. From the WBKY studios, daily programs are also broadcast to WHAS, Louisville, the Lexington commercial stations, and other outlets.

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 the students. Through the resident secretaries and visiting ministers opportunity is given the students to consult with sympathetic and able persons.

The vitality of religious life on the campus of the University of Kentucky is evidenced by the Pitkin Club, Inter-faith Council, the Newman Club, the Hillel Foundation, the active student denominational groups, Sunday School classes for students in the respective churches, and weekly religious discussion groups.

The Phalanx Fraternity, and the Dutch Lunch Club are other student groups meeting regularly for the purpose of encouraging interest in church and religious life.

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 former member of the Hi-Y Club or of the Y-Teens 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 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.

Intramural Sports. The Department of Physical Education conducts an extensive system of Intramurals for all men and women students. The men's program includes such sports as touch football, basketball, track, volleyball, softball, tennis, golf, wrestling, fencing, handball, badminton, swimming, and cross country. The women's program, set up by the Woman's Athletic Association, offers such activities as hockey, basketball, volleyball, softball, swimming, tennis, archery, golf, badminton, fencing, and camping trips. The intramural program affords an excellent opportunity for young men and women to experience the fun of friendly competition and to enjoy the pleasures of healthful social situations.

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 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)
Phi Upsilon Omicron (Home Economics)
Pi Mu Epsilon (Mathematics)
Rho Chi (Pharmacy)
Sigma Pi Sigma (Physics)
Tau Beta Pi (Engineering)

Leadership Societies

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

Recognition Societies

Alpha Zeta Omega (Pharmacy)
Chi Delta Phi (Literary — women)
Eta Kappa Nu (Electrical Engineering)
Gamma Theta Upsilon (Geography)
Phi Alpha Theta (History)
Phi Epsilon Phi (Botany)
Pi Sigma Alpha (Political Science)
Pi Tau Sigma (Mechanical Engineering)
Sigma Gamma Epsilon (Geology)
Theta Sigma Phi (Journalism)

Professional Societies

Alpha Chi Sigma (Chemistry)
Arnold Society of Air Cadets
Block and Bridle (Animal Husbandry)
Delta Sigma Pi (Commerce)
Kappa Psi (Pharmacy)
Pershing Rifles (Military)
Phi Alpha Delta (Law)
Phi Beta (Music-Speech-Art — women)
Phi Delta Chi (Pharmacy)
Phi Delta Kappa (Education — men)
Phi Delta Phi (Law)
Phi Mu Alpha (Music — men)
Phi Sigma Iota (Romance Languages)
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
Bacteriological Society
Baptist Student Union
Business Education Club
Campus League of Women Voters
Canterbury Club
College Chamber of Commerce
Cosmopolitan Club
Cub Club
Dairy Club
Delta Pi Epsilon (Business Education)
Dutch Lunch Club
Eta Sigma Phi (Ancient Languages)
Future Teachers of America
Gamma Delta (Lutheran)
German Club
Hardin Country Club
Harlan County Club
Henry Watterson Press Club
Hillel Foundation
Home Economics Club
Hort Club
Intercollegiate Zionist Federation of America
International Relations Club
K-Club
Newman Club
Patterson Literary Society
Phalanx Fraternity
Philosophy Club
Pitkin Club
Poultry Club
Pryor Premedical Society
Social Work Club
Sociology Club
Southeastern Conference Society of the Spiked Shoe
Student Branch of the Institute of Radio Engineers, Inc.
Tau Kappa Alpha (Forensic)
Tau Sigma—(Dance)
University of Kentucky Affiliate of the Louisville Chapter of the American Society for Metals
University 4-H Club
University of Kentucky Young Republican Club

Veterans Club
Wesley Foundation
White Mathematics Club
Young Democratic Club

Administrative and Service Organizations

Agricultural Council
Alpha Phi Omega (Boy Scouts)
Committee of 240
Guignol
House Presidents' 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 Symphony Orchestra
University of Kentucky Troupers
Women's Administrative Council
Women's Athletics Association
Women's Glee Club
Women's Panhellenic Association
Young Men's Christian Association
Young Women's Christian Association

THE ALUMNI ASSOCIATION

The Alumni Association was established to render service both to the University and to its former students. It is the purpose of this Association to aid in the growth and development of the University, to promote the best interests of alumni, and to enable them to keep in touch with the institution and with each other. As the basis for its activities it maintains records of alumni, showing where they are located and what they are doing. Its program includes the sending of information to alumni 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 1950-51 are as follows: President, Edwin R. Denney, '31; Vice President, George P. Hillen, '32; Executive Secretary, Helen G. King, '25; and Treasurer, Bernie A. Shively, '36.

THE PLANT 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. In addition to these permanent buildings, the University has erected nine temporary buildings to provide additional space for the greatly increased enrollment. The location of buildings 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 Comptroller, the Dean of Students, the Dean of Women, the Registrar, the Department of Public Relations, and the University Personnel Service, the last including the University Veterans Service.

Aeronautical Research Laboratory. This laboratory is designed for airplane engine 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 classrooms 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 and 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, rural sociology, fertilizer, feed, and seed control, and agricultural extension. The public service laboratories are also located in the Experiment Station.

Alumni Gymnasium. This building, located at the corner of Limestone and Euclid Streets, houses the offices of the Men's Department of Physical Education, the main playing floor, a corrective gymnasium, classrooms, and lockers and showers. The majority of physical education activities and intramurals for men are held in this building.

Anderson Hall. 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.

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

Animal Pathology Hospital. This building is used as the animal hospital 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 Division of Physical Education for Women.

Bowman Hall. This is a residence hall for men, providing recreational space and lobby facilities for the men's residence hall group.

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 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 Aeronau-

tical 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.

Chemistry Annex. This temporary building is located between Kastle Hall and Pence Hall and is used for chemistry laboratory and lecture .

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 Center (not shown on map). This building contains milking stalls for forty cows, a milk room, maternity pens, calf pens, silos, and a feed storage loft.

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.

Engineering Annex. This building is located on Scott Street adjacent to the Scott Street Barracks and is used by the Engineering College for additional drafting rooms.

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

Fine Arts Building. Completed in 1949, this building houses the departments of Art, Music, Dramatics, and Speech. A feature of the building is the air-conditioned Guignol Theatre seating approximately 425 persons.

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

The W. D. Funkhouser Biological Sciences Building. This building houses the Departments of Anatomy and Physiology, Bacteriology, Botany, and Zoology. The Biological Sciences Library is also located here.

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

Health and Hygiene Building. This structure 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.

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.

Journalism Building. This building is expected to be put into service

in August of 1951, housing the Journalism Department, the Kernel Press, The Kentucky Kernel, the Kentuckian, the central office of the Kentucky Press Association, and complete photographic facilities.

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

The Margaret I. King Library. This library has a total seating capacity of 700. It also houses the Department of Library Science and the Bureau of Source Materials in Higher Education. The University libraries, including departmental, divisional, and collegiate collections shelved outside the King Library, include about half a million volumes.

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

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

Little Commons. This temporary building is located between the Health Building and the Agriculture Building and provides additional cafeteria facilities.

Lydia Brown House. This a residence hall for women.

McDowell House. This is a residence hall for women.

McVey Hall. In this building are located the offices of the Dean of the College of Arts and Sciences and the offices and classrooms for the departments of English, Mathematics, Radio Arts, and Social Work, the Campus Bookstore, the University Post Office, and the Broadcasting Studios of Station WBKY.

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 Coliseum. The Coliseum was erected by the State of Kentucky as a memorial to the Kentucky men and women who died in World War II in the service of their country. This building provides facilities for Physical Education, including the swimming pool, complete housing for the Department of Athletics, and will seat from 12,000 to 15,000 for basketball games, concerts, and lectures. Other facilities include an electronic organ, a sound reinforcement system, and dressing rooms for visiting artists and visiting teams.

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

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.

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. This building also contains the office of the Veterans Housing Projects.

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. The office of the Dean of the Graduate School is also located in this building:

Psychology Annex Building. This building is located at 620 South Limestone and is used by the Psychology Department for offices, classrooms, and the speech correction clinic.

Service Building. This building houses all offices and shops of the Division of Maintenance and Operations, the central store room of the University, and shipping and receiving facilities. The third floor of this building is used as a Library Annex and temporary museum.

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

Social Science Building. This building is located north of the Library and houses classrooms and offices for the departments of Sociology, Political Science, Geography, and Anthropology.

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.

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

Temporary Journalism Building. Located on Euclid Avenue adjacent to Jewell Hall, this temporary building will house classes in Journalism until the completion of the new Journalism Publications Building.

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 12 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, a College of Pharmacy, and a Graduate School. Instruction is given in each college or school through two semesters of approximately eighteen weeks each, and the summer session of eight weeks. 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 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 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 (Met.E.)
Master of Arts in Education
Master of Science in Education
Doctor of Education (Ed.D.)
Doctor of Philosophy

The names of degrees listed above give 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-eight departments as follows: Anatomy and Physiology, Ancient Languages and Literatures, Anthropology, Art, Bacteriology, Botany, Chemistry, Economics, English, Speech, and Dramatic Arts, 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, Radio Arts, Romance Languages and Literatures, Social Work, Sociology, and Zoology.

College of Agriculture and Home Economics. Students in agriculture may select any one of the following curricula: general agriculture, agricultural economics, animal industry, horticulture, ornamental horticulture, or vocational agriculture. There are pre-professional programs for students who plan to study agricultural engineering, forestry, veterinary medicine, or theology.

Students in home economics may select any one of the following curricula: general home economics, child development and family living, clothing, costume design, textiles and interior decoration, home economics extension, institution economics, or vocational home economics.

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

DEGREES AND CURRICULA IN THE COLLEGE OF ARTS AND SCIENCES

Martin Marshall White, M.A., Ph.D., Dean

INTRODUCTORY STATEMENT

Aim. The aim of the College of Arts and Sciences is to train 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, 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-nine departments: Anatomy and Physiology; Ancient Languages and Literatures; Anthropology; Art; Bacteriology; Botany; Chemistry; Economics; English, Speech, and Dramatic Arts; 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-nine 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.

Freshman 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. During the semester the student is interviewed and every attempt is made to determine his difficulty. 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.

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 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 128 credits and 128 points,* that is, a standing of 1.0; and in the departments of Anatomy and Physiology, Ancient Languages, Art, Botany, Economics, Geology, German, Journalism, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Radio Arts, 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

English, first and second semesters, freshman year, 6 credits.

Foreign Languages, a basic achievement examination or the second year of a foreign language, with at least a C grade for each semester. (French, German, Greek, Italian, Latin, Spanish.)

General Hygiene, first or second semester, freshman year, 1 credt.

Physical Education, freshman and sophomore years. Students required to take physical education will enroll each semester until the physical fitness standard is completed. This requirement may be satisfied in one or more semesters.

Military Science (men), freshman and sophomore years, 8 credits.

Group Requirements

Humanities, sophomore year, 6 credits.

Social Studies, freshman or sophomore year 6 credits.
(Anthropology, Geography, History, Political Science, Sociology).

Physical Sciences, freshman or sophomore year, 6 credits.
(Astronomy, Chemistry, Geology, Mathematics, Physics.)

Biological Sciences, freshman or sophomore year, 6 credits.
(Anthropology, Bacteriology, Botany, Anatomy and 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 six credits) to be chosen in any combination of three from the following courses, except that one, and only one, shall be either Humanities D or E. (Each of these courses will carry two credits.)

   Humanities A, Classicism: Graeco-Roman; Modern European.
   Humanities B, The Renaissance; Romanticism.
   Humanities C, Realism and Naturalism; the Contemporary.
   Humanities D, Art; The Renaissance to the Present.
   Humanities E, Music: The Renaissance to the Present.

2. **The Social Studies.** The student is permitted to choose any two of the following courses, to satisfy the group requirement in the social studies:

   History 5a, b, History of U. S., 4a, b, Modern Europe; Political Science 51a, b, American Government; Anthropology 3a, Sociology 3a, b, or Geography 3a, b, Societies Around the World.

3. **The Biological Sciences.*** Any two of the following courses will satisfy the biological science requirement: Anatomy and Physiology 2 or 10; Anthropology 1; Bacteriology 2a, b, 52; Botany 1, 2, 25; Psychology 1a, b; Zoology 1.

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*Either the biological or the physical science group requirement must be in laboratory courses.

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 six or more credits from the following courses: Astronomy 51a, b; Chemistry 1a, b, 4a, b, Geology 50a, b, 14a, b, c, d, 20a, b (with 50a, b) 3, 14a, b, c, d (with 3) 30a, b; Mathematics 5, 17, 3, 19; Physics 1a, b, 3a, b, 51a, b (51a is prerequisite for 51b).

Freshman Core Curriculum	Credits
General Hygiene	1
Military Science (men)	4
Physical Education	0
English	1
Social Studies	6
Physical or Biological Sciences	6
Foreign Languages or free electives	6

Total number of credits required in Lower Division: 64

The normal load per semester is 16 credits

Rules and Procedures

1. Superior Students: Entering freshmen, in the upper twenty-five per cent of the classification scale, as determined by University of of Kentucky classification tests, may substitute other courses in the groups for those courses which are set up especially to satisfy group requiremnts. Other students, 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, is advised to take English D (with no credit) in his first semester, and the regular freshman English course in his second and third semesters, or whenever he has satisfactorily removed the deficiency.

THE UPPER DIVISION

Junior and Senior Years

The student is required to gain, while registered in the Upper Division, at least 40 credits in a Field of Concentration. These 40 credits are to be elected subject to the approval of his adviser and the dean of the college, and must be in courses not open to freshmen. The college recognizes two types of Fields of Concentration:

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

Generically Related Fields

The college recognizes four general fields of generically related subject matter:

* Note: Either the biological or the physical science group requirements must be in laboratory courses.

1. **Literature, Philosophy, and the Arts**
   This field includes Ancient Languages and Literatures; Art; English, Speech, and Dramatics; German Language and Literature; Journalism; Library Science; Music; Philosophy; Radio Arts; and Romance Languages and Literatures.
2. **Social Studies**
   This field includes Anthropology, Archaelogy, 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). Anthropology (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 40 credits on approval of the adviser and the dean.

If the student elects a generically related field he is required to gain at least 15 of his required 40 credits in a department which he chooses as his major.

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

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

A minimum of 6 credits is required as a prerequisite for a major in any department. As a general rule the prerequisites are to be acquired while the student is registered in the Lower Division.

In order to avoid working a hardship upon students who wish to secure teachers' certificates, it is provided that, if necessary, 6 credits in Education may be included in the 40 credits of the concentration field, in fields other than Social Studies.

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

Topically Related Fields

The student may elect for his concentration field some topic and choose for the field courses which contribute to this central interest. Examples of central themes are "Public Opinion," "The Romantic Movement," "Biochemistry," and Scientific Secretaryship." The student will take a minimum of forty credits 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, Anthropology, Art, Botany, Economics, Geology, German, Journalism, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Radio Arts, 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 semester papers of some sustained effort. Credit for such courses may be granted to undergraduates to an amount of not more than 12 credits. At the end of the semester a written report of the work in such a course, or a paper representing part of the work must be read before the staff of the department. A copy of this 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 semester's work of a beginning modern

foreign language will not entitle the student to credit for that course until he has gained a passing grade in the second semester's work.

Classification in Foreign Languages

a. The student who presents one unit of high school foreign language will be permitted to enroll in first year work for full credit.

b. The student who presents two units of high school foreign language will be permitted to enroll in first year work, but will receive credit only if he makes at least a B standing in this course.

c. No student whose native language is other than English, and who has had formal instruction in schools of his own country, may be permitted to take elementary, intermediate, or conversation courses in that language.

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 30 credits. Credits in the other colleges gained during the junior and senior years may, if not open to freshmen, be counted on major and field requirements. However, election of law courses by Arts and Sciences students is limited by the following 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 8 credit hours of law during a semester selected from the following courses: Contracts, Torts, Agency, Crimes, Property I and II, Constitutional Law, Taxation, Municipal Corporations, Public Utilities, and such other law courses as the Dean of the College of Law may approve.

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

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

Residence Requirements

A minimum of 30 of the last 36 credits presented for the degree must be completed in residence at the University. The last 15 credits of residence work must be completed while registered in the college through which the degree is granted.

Extension and Special Examination

A maximum of 32 credits, taken by extension, special examination, or both, may be counted toward the baccalaureate degree. Not more than half of the credits 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 60 credits 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 98 credits in Arts and Sciences subjects, with a standing of 1.0 or more, before transferring to the professional school. For Arts-Law he should have 100 credits, with a standing of 1.3 on all work attempted, before transferring to Law College.

2. He must have met the specified requirements of the College of Arts and Sciences (except hygiene, in Arts-Medicine) and have gained at least 20 credits in his field of concentration before transferring to the professional school.

3. He must have been registered in the College of Arts and Sciences for at least one full year, immediately preceding the completion of his Arts and Sciences requirements, and must have gained at least 30 credits in Arts and Sciences subjects in this college.

4. He must spend at least one year in a College of Law approved by the Association of American Law Schools, or in a Class A Medical School, or 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 credits to bring his total in the Arts and the professional work up to 128 credits, 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 work preparatory for the study of medicine in compliance with the minimum entrance requirements of the American Medical Association and the Association of American Medical Colleges. However, most medical schools require considerably more than these minimum requirements.

Minimum Requirements for Entrance to Medical Schools

1 year English Composition
1 year Biology with laboratory
1 year Physics with laboratory
2 years Chemistry including
  (a) General Chemistry
  (b) Qualitative Analysis
  (c) Quantitative Analysis
  (d) Organic Chemistry
Electives sufficient for Junior classification

The student may pursue a combination Arts-Medicine curriculum, spending three years at the University before transferring to medical school and obtaining the A.B. or B.S. degree after the first year's work in medical school. (See page 56 of this bulletin.)

The student who completes a four years' course of study and thereby obtains his degree will have time to meet the requirements for entrance to all medical schools. Opportunity is thus afforded for a broader background in the natural sciences, social studies, and humanities, 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.

The number of students applying annually for admission to medical colleges exceeds the number which can be admitted. Boards of admission consequently fill their quotas from those who are best prepared, or who have had three or four years of college work, or even a college degree. Furthermore, these boards seldom select a student who does not have a satisfactory standing, regardless of the number of years spent in college.

Recommendation for Prospective Medical Students

1. Consider the study of medicine only if you have a serious desire to do so, and if you are capable of demonstrating this by successfully and satisfactorily completing your college courses. An applicant for entrance to medical school should have at least a 1.5 standing.

2. Rather early in your academic career, try to determine to what medical school or schools you will make application. Then, inform yourself as to the specific requirements and desires of these schools and try to conform to them. In order to do this it is advisable for you to write the Dean of the medical school or meet with him in an interview.

3. The College of Arts and Sciences has a faculty committee, known as the "Premedical Advisory and Recommendation Committee," the purpose of which is to advise prospective medical students and ultimately to recommend them for entrance to medical schools. When you enroll, you will be assigned by the Dean to a member of this committee who will be your adviser and with whom you should consult early and frequently in your premedical work. This committee collectively passes upon you as an applicant to medical school. Only the recommendation of this committee carries the endorsement of the University.

Recommended Courses Preparatory to the Study of Medicine*

FRESHMAN YEAR

First Semester	Crs.	Second Semester	Crs.
Chem. 1a—General Chem.	5	Chem. 1b—General Chem.	5
Zool. 1—General Zoology	4	Bot. 1—General Botany	4
Math. 17—Col. Algebra	3	Math. 18—Pl. Trig.	3
English 1a—English Comp.	3	English 1b—English Comp.	3
Mil. Sci. 1a—First Year Elem. Course, Infantry	2	Mil. Sci. 1b—First Year Elem. Course, Infantry	2
**Phy. Ed.		**Phys. Ed.	

SOPHOMORE YEAR

First Semester	Crs.	Second Semester	Crs.
Sociology 3a—Societies Around the World	3	Sociology 3b—Societies Around the World	3
German or French	3	German or French	3
†Chem. 30a—Organic Chem. or †Chem. 21a—Quantitative Analysis	5	‡Chem. 30b—Organic Chem. or †Chem. 21b—Quantitative Analysis	5
Humanities	2	Physics 1b—General Physics	5
Physics 1a—General Physics	5	Mil. Sci. 6b—Second Yr. Elem. Course, Infantry	2
Mil. Sci. 6a—Second Yr. Elem. Course, Infantry	2	**Phys. Ed.	
**Phys. Ed.		Humanities	4

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 CURRICULUM

Students who wish to take up the study of dentistry are advised to follow the two year's Pre-Medical curriculum which more than meets the pre-dental requirements specified by the Dental Education Council of America. With the two years' curriculum, entrance may be gained to all Class A dental schools with the exception of a very few which require three years of preparatory work. For combined Arts-Dentistry degree, see p. 53.

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.

Recommended Courses for Majors in Anatomy and Physiology

JUNIOR YEAR

First Semester	Crs.	Second Semester	Crs.
Psych. 1a—Intro. to Psychology	3	Psych. 1b—Intro. to Psychology	3
Chem. 130a—Organic Chemistry	5	Chem. 130b—Organic Chemistry	5
Zool. 101a—Histology	2	Zool. 106—Embryology	4
Anat. & Phys. 105—Architecture of Human Skelton	4	Anat. & Phys. 109—Cellular Physiology	3
Zool. 157b—Vertebrate Anatomy	4		
or			
Bact. 102—General Bacteriology	4		

SENIOR YEAR

First Semester	Crs.	Second Semester	Crs.
Anat. & Phys. 116a—Seminar (Tutorial)	1	Anat. & Phys. 116b—Seminar (Tutorial)	1
Anat. & Phys. 107—Comparative Neuro-Physiology	4	Anat. & Phys. 108—Circulation, Respiration, and Metabolism	3
Chem. 140a—Physical Chem.	4	Chem. 140b—Physical Chem.	3
English 3a—Hist. of Eng. Lit.	3	English 3b—Hist. of Eng. Lit.	3
Electives in lang., social subject, or botany	6	Elective (Cont. elective subj.)	6

ANCIENT LANGUAGES

The courses and curricula in Ancient Languages and Literatures are

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* 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 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 basic achievement examination in a foreign language, or make at least a C grade on both semesters of a second year language.

Math. 17 and 18 are advised and should be taken sometime during the freshman year.

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

† Choice depending on length of preparatory course desired.

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

confined to the classical fields (Greek and Latin) and are planned to meet the needs of the following:

(1) Students who are going to teach classical languages or who are going to do graduate work or research in classical languages, ancient history, archaeology, medieval studies, or linguistics.

(2) Students who wish to take the M.A. in one of the following fields: (1) Latin, (2) Greek, (3) classical languages and civilization, and (4) the teaching of classical languages.

(3) Students who wish to take one of the fields in (2) as a minor on the M.A. or Ph.D.

(4) Students who wish to get a general liberal education without preparing for any specific vocation. The broadest possible educationally sound program will be permitted.

(5) Students who want to prepare through a classical major for work in the various graduate and professional schools. Such students will use their electives to meet the specific requirements of the individual graduate or professional school.

(6) Students who wish to prepare with a classical major for entering various vocations upon the completion of the A.B. degree. For the individual student this department, in consultation with the department representing the student's vocational interests (home economics, journalism, radio arts, etc.), will arrange a curriculum that will satisfy the requirements both of a classical background and of the vocation.

(7) Students who intend to enter the ministry and wish to take an undergraduate classical major or merely to learn to read the Greek New Testament.

(8) Students who want for the work of their major department a background of classical culture through courses in Greek and Latin.

(9) Students who want to build the background of their English vocabulary for use in the learned professions (law, medicine, teaching, the ministry, etc.) or in literary or public work.

(10) Students who want to fulfill through Greek or Latin the foreign language proficiency or course requirements.

The emphasis in this department will be threefold:

(1) On interpreting classical culture in its relation to Western civilization.

(2) On learning to read Greek and Latin.

(3) On developing a background for classical scholarship for those who will teach or do graduate work or research in the field.

The student, in working out his major, may place emphasis on Greek, or on Latin, or on classical civilization, or on a combination of these. To this end, three majors are offered: Latin, Greek, and Classical Civilization.

ANTHROPOLOGY

Anthropology is the study of man in all his aspects, past and present. It must concern itself with anything that concerns man, and thus it synthesizes the materials of a large number of separate studies and disciplines in both the social and biological sciences. Basically, anthropology is divided

into (1) Physical Anthropology, which deals with man's origin, evolution, and growth, the relationships of races, and man's physical response to the environment; and (2) Cultural Anthropology, which includes prehistory (or archaeology), and ethnology (or social anthropology), the study of the culture of various social groups. Attention has been directed chiefly toward "primitive" peoples, in the attempt to learn how such aspects of man's behavior as religion, language, social controls, and economic activities have developed and interacted on each other. But "civilized" groups, as well, are studied with the broad viewpoint and emphasis on understanding the total scope of man's life.

While many of the Department's advanced courses are planned for students interested in professional training, the introductory courses and Anthropology 180 should be of much wider interest. They survey the entire field, and show the relations between all the facets of human activity, throughout man's long occupation of the earth. These courses emphasize the essential unity of mankind and furnish a basis for further work in many different fields of the social and biological sciences. In addition, properly qualified students in other departments will find the advanced courses sufficiently broad in scope to be of value to them.

Students who intend to major in Anthropology should know that advanced degrees are required by nearly all institutions that hire professional anthropologists. However, even the smaller colleges are rapidly adding Anthropology to their curricula. Properly qualified anthropologists presently have a wide variety of employment possibilities, not only in teaching or research, but in the many practical applications of this field.

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. It 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 Bacteriologists.

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 curriculum 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 have a reading knowledge of a foreign language.

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

FRESHMAN YEAR

First Semester	Crs.	Second Semester	Crs.
English 1a	3	English 1b	3
Chemistry 1a	5	Chemistry 1b	5
Bacteriology 2a	4	Bacteriology 2b	4
Zoology 1	4	Botany 1	4
*Physical Education	0	*Physical Education	0
**Military Science	(2)	**Military Science 1b	(2)
	16		16

SOPHOMORE YEAR

First Semester		Second Semester	
Zoology 7b	4	Chemistry 21	5
Physics 1a	5	Physics 1b	5
Bacteriology 56	4	Bacteriology 57	4
Humanities	4	Humanities	2
**Military Science 2a	(2)	**Military Science 2b	(2)
	17		16

JUNIOR YEAR

First Semester		Second Semester	
Zoology 101a	4	Zoology 101b	3
Bacteriology 103	4	Bacteriology 125	5
Foreign Lang.	3	Foreign Lang.	3
Bacteriology 110a	3	Bacteriology 110b	3
Anatomy & Phys.	5	Zoology 106	4
	19		18

SENIOR YEAR

First Semester		Second Semester	
Chemistry 130a	5	Chemistry 130b	5
Bacteriology 111	4	Physics 120	2
Bacteriology 150a	1	Bacteriology 150b	1
Bacteriology 120a	4	Bacteriology 120b	6
Elective (Social Sc.)	3	Elective (Social Sc.)	3
	17		17

Total credits 136 exclusive of Military Science.

BOTANY

The elementary courses of the Department of Botany are designed to give the general student a knowledge of the basic principles of plant life, to show him the relation of plants to man, and to give him a better understanding of his environment. These courses are fundamental to students of agriculture, forestry, and pharmacy and will satisfy part of the premedical requirements of most medical schools. The advanced courses lead to an undergraduate major in botany with emphasis upon morphology, classification, physiology, and cytogenetics and should be of interest to students of applied botanical sciences.

CHEMISTRY

The Department of Chemistry provides an opportunity for a student to obtain a bachelor's degree with chemistry as a major or the degree of Bachelor of Science in Industrial Chemistry. The curriculum in industrial

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

** Required of all able-bodied male freshmen and sophomores who are citizens of the United States.

chemistry is a prescribed course, designed to train persons who desire to follow chemistry as a profession in the industries or to pursue advanced training in graduate schools. Under the Topical Field offered by the College of Arts and Sciences, opportunity is provided for the development of programs of those persons who wish to combine training in chemistry with (a) library techniques to fill positions in scientific libraries, (b) commercial subjects to become salesmen or secretaries for scientific or industrial laboratories, (c) home economics subjects to obtain preparation for work in the field of foods, textiles, etc., or (d) other combinations.

THE DEGREE OF B.S. IN INDUSTRIAL CHEMISTRY

The degree of Bachelor of Science in Industrial Chemistry is awarded upon completion of a prescribed curriculum. The curriculum is designed to prepare the student to continue the study of chemistry in a graduate school, or to engage in technical work with a substantial background of training. Although it is constructed on the basis of four academic years, students are advised to plan to spend an additional semester or two summer terms, so that the load may be lighter during the regular years.

German 21b must be completed and one year's work in French is recommended, so that a fair reading knowledge of both languages may be acquired. Students planning to take this curriculum are advised to include one year of physics and one-half year of solid geometry in their high school studies. Deficiencies in these subjects may require enrollment in preliminary courses at the University. Solid geometry is a prerequisite for Mathematics 20a.

Registration in chemistry courses of juniors or seniors majoring in industrial chemistry is restricted to students having a grade-point average of 1.5 or higher in all subjects exclusive of military training, except that this regulation may be set aside by action of the faculty of the Department of Chemistry.

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

FRESHMAN YEAR

First Semester	Crs.	Second Semester	Crs.
Military Science 1a	2	Military Science 1b	2
English 1a	3	English 1b	3
Mathematics 17 (College Algebra)	3	Mathematics 19 (Analytic Geometry)	3
Mathematics 18 (Trigonometry)	3	German 1a	3
Chemistry 1a (General Chemistry)	5	Chemistry 1b (General Chemistry and Qualitative Analysis)	5
Hygiene 1	1	Engineering Drawing 2	1
		*Elective, Social Studies	3
	17		20

SOPHOMORE YEAR

First Semester	Crs.	Second Semester	Crs.
Military Science 6a	2	Military Science 6b	2
Chemistry 21a (Quantitative Analysis)	5	Chemistry 21b (Quantitative Analysis)	4
Mathematics 20a (Diff. Calculus)	4	Mathematics 20b (Int. Calculus)	4
Physics 3a	6	Physics 3b	6
German 1b	3	German 21a	3
		English 6	3
	20		22

JUNIOR YEAR

First Semester	Crs.	Second Semester	Crs.
Chemistry 130a (Organic)	5	Chemistry 130b (Organic)	5
Chemistry 140a (Physical)	3	Chemistry 140b (Physical)	3
Chemistry 144a (Physical Lab.)	2	Chemistry 144b (Physical Lab.)	2
German 21b	3	Mathematics 105 (Differential Equations)	3
Economics 51	3	*Electives, Humanities	4
English 30	2	*Elective, Social Studies	3
*Elective, Humanities	2		
	20		20

SENIOR YEAR

First Semester	Crs.	Second Semester	Crs.
Chemistry 110a (Advanced Inorganic)	2	Chemistry 110b (Advanced Inorganic)	2
Chemistry 120 (Advanced Qualitative)	3	Chemistry 111 (Inorganic Laboratory)	1
Chemistry 133 (Qualitative Organic)	3	Chemistry 121 (Semimicro Quantitative Analysis)	3
Chemistry 160 (Industrial)	3	Chemistry 161 (Industrial)	2
Chemistry 181 (Chemical Literature)	1	Chemistry 141 (Chemical Thermodynamics)	3
†Chemistry 188a (Seminar)	0	†Chemistry 188b (Seminar)	1
‡Biological Science	3	‡Biological Science	3
Elective (Physics or Mathematics)	3	Elective (Chemistry or Geology)	3
	18		18

Total number of semester hours required for a degree 155

ECONOMICS

Courses in the field of Economics are concerned with that segment of human behavior which is directed toward the wealth-getting and wealth-using activities of man. The courses include the Principles of Economics, Price Economics, Economic History, Business Cycles, Labor Economics, Labor Legislation, Industrial Relations, Real Estate, Money and Banking, Public Finance, Public Utilities, et cetera.

Economic activity constitutes a substantial proportion of man's total activity and is therefore worthy of study from the standpoint of acquiring a liberal education.

Students interested in majoring in economics and in preparing themselves as professional economists or as specialists in such fields as taxation, labor relations, finance and statistics, should add to their program of study other social science subjects and work in Commerce. The latter courses assist greatly in understanding the field of Economics.

GEOGRAPHY

The need for well-trained personnel in the field of Geography has become increasingly apparent. At the present time three major fields of activity utilize the services of competent professional geographers: Educa-

* Electives are to be chosen from courses designated by the Department of Chemistry. A student who is planning on graduate work may substitute six semester hours of French for the requirement in the Humanities.

† Chemistry 188a, b (Undergraduate Seminar). Each senior is required to present a minimum of four reports to the student-faculty group to earn one semester hour of credit. Attendance at the seminar for two semesters is required before one hour of credit is earned.

‡ The Biological Science requirement may be met by courses in this field selected with the approval of the Department of Chemistry.

The requirements in physical education must be met by the completion of work prescribed by the Department of Physical Education, without credit.

tion (Elementary, Secondary, and Collegiate), Government (National, State, and City), and Business (Trade, Transportation, Publishing). The Department of Geography is prepared to offer necessary training to students for these economic activities.

In addition to the development toward professional geographers, the Department of Geography contributes directly to the fulfillment of the College of Arts and Sciences requirement in Social Studies (Geography 3a, b). To non-geography majors in all colleges of the University the Department of Geography offers a wide selection of supplementary and elective courses.

A thorough foundation in all phases of Geography is required of all department majors. For those who do not wish to become professional geographers, but desire a major in Geography, courses in other fields may be substituted after major requirements have been met. (See Catalog of Courses.) Attention is directed to all Social Study disciplines (Anthropology, History, Political Science, Social Work, Sociology), to Geology in the College of Arts and Sciences; and to related or supplementary courses in the Colleges of Agriculture and Home Economics, Commerce, Education, and Engineering.

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 indispensable to 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

FRESHMAN YEAR

	Crs.
*Geology 50a, b—Outlines of Geology	6

SOPHOMORE YEAR

Geology 30a, b—General Geology	10
Geology 10a, b—Field Geology	4

JUNIOR YEAR

Geology 107a, b—Advanced Field Geology	4
Geology 123a, b—Mineralogy	6
Geology 112—Economic Geology	4
Geology 118a—Field Work in Regional Geology (Summer)	8

SENIOR YEAR

Geology 101a, b—Paleontology	3
Geology 129—Elem. Petrology	6
Geology 130—Elementary Structural Geology	3
Geology 107c, d—Adv. Field Geology	4
Geology 127—Petroleum Geology	2
Geology 126a, b—Seminar	2

ALLIED SCIENCES, ETC.

Chemistry—General, Qualitative*, and Quantitative
Physics—General**
Zoology—General Zoology
Mathematics—College Algebra, Trignometry, Analytics**, and Calculus
Engineering—Mechanical Drawing** and Plane Surveying**

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. For later training in Geo-physical methods, add calculus and substitute Physics 3a, b, for a second year of Chemistry. For combination engineering and geology, consult Mr. Stokley.

HISTORY

The Department of History has two fundamental functions in a liberal arts curriculum. First, it seeks to give a maximum number of students an understanding of the background of civilization. History is a significant gateway to the world's great collections of literature embodying the story of man's striving, hopes, and accomplishments. It is basic to many of the fields of the Arts and Sciences, and to an intelligent understanding of the complexities of civilization. The second function of the Department of History is that of offering a sound and comprehensive advanced and graduate program whereby students may acquire better familarity with the broad movements in history, an intense knowledge of given fields, and specific knowledge of historical criticism and techniques.

For a Department of History to render effective service to its students, it must be composed of scholarly men who have had original experience in research, writing, and interpretation of source materials. Since this department offers work leading to two advanced degrees, it tries to live up to these objectives.

History offers students an excellent foundation for many special courses in the university curriculums, its cultural possibilities are unlimited, and it provides excellent training for specialists in the fields of journalism, library work, public service, literature, law, and the radio. In his own right the historian has an unlimited field for teaching, research, and writing.

HYGIENE AND PUBLIC HEALTH

The lower division courses are designed to meet the general requirements in health and also to fulfill the requirement in health for teacher certification in elementary and secondary schools. The courses at the upper division level lead to a major in Hygiene and Public Health. There are opportunities in the field of Public Health for those interested in sanitary work, education, field positions in voluntary and official health agencies, etc.

JOURNALISM

The Department of Journalism is one of the 38 members of The Association of Accredited Schools and Departments of Journalism. Since 1931 the department has been accredited and has been a member of the Association which is composed of the leading schools of journalism in the United States.

General reference materials, representative daily newspapers, and

* A sophomore may enter Geol. 30a, b without taking 50a, b.
** Required work in other sciences indicated by asterisks.

recognized trade journals of the publishing industry are available in the department. In the general library are hundreds of volumes dealing with all phases of the communications industry.

A daily 10-hour teletype service of the United Press supplies latest news dispatches for students and provides laboratory materials for news editing and radio news writing. The department, which supervises student publication activities has standard equipment to print a modern community newspaper and to provide high-grade commercial job printing for the campus. In the extensive plant is a type laboratory for instruction in typography, make-up, and the mechanics of publishing and advertising.

Various campus-based publications, such as the Kentucky Kernel (student newspaper), The Kentuckian (student yearbook), The Kentucky Press (official publication of The Kentucky Press Association, which maintains its state headquarters in the department), and The KHSPA News (bulletin of the Kentucky High School Press Association), present opportunities for student practice in the publication field.

Upper division students are active in the free lance field, making sales to a wide variety of publications throughout the nation.

Beyond technical courses which are restricted to professional students and a limited number of highly qualified students in other fields of interest, the department provides one general elective course for the non-professional student. Here instruction is given to the "consumer of journalism," rather than the producer.

The Degree of A.B. in Journalism

The professional curriculum leading to the degree of Bachelor of Arts in Journalism is divided into four sequences to facilitate specialization by the student in the junior and senior years. These sequences are: The General Editorial, The Community-Publishing, Advertising, and Radio-Journalism. The first three sequences are fully accredited by the American Council on Education for Journalism. All sequences, providing a wide range of elective courses to be chosen under the guidance of a professional adviser, have as their aim a liberal education joined with professional training for men and women, seeking careers in the various phases of journalism, advertising, publishing, and radio-journalism.

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

Pre-Journalism Curriculum

General Editorial Sequence, Community-Publishing sequence, Advertising Sequence, and Radio-Journalism Sequence.

FRESHMAN YEAR		SOPHOMORE YEAR	
Courses	Crs.	Courses	Crs.
Journalism 2	2	Journalism 21, 22	6
English 1a, 1b	6	English 3a, 3b	6
Social Studies	6	Mod. For. Language	6
Psychology 1a	3	Economics 51	3
Physical Science	6	Humanities	6
Biological Science	3	Elective	3
Hygiene	1	Military Science (men)	4
*Elective	3	Physical Education	0
Military Science (men)	4		
Physical Education	0		
	34		34

General Editorial Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses	Crs.	Courses	Crs.
Journalism 100a, 100b	6	Journalism 105	2
Journalism 101	3	Journalism 106	3
Journalism 107	2	Journalism 108	3
Journalism 109	2	Journalism 123	3
*English elective	6	Journalism 114	3
*Social Study elective	3	Journalism 127	3
*General electives	12	*General electives	15
	34		32

Minimum required for the degree, 134 credit hours.

Community-Publishing Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses	Crs.	Courses	Crs.
Journalism 100a, 100b	6	Journalism 114	3
Journalism 101	3	Journalism 105	2
Journalism 107	2	Journalism 106	3
Journalism 109	2	Journalism 108	3
Journalism 102	3	Journalism 123	3
Journalism 103	3	*General electives	18
*Social Studies electives	3		
*English electives	3		
*General electives	9		
	34		32

Minimum required for the degree, 134 credit hours.

Advertising Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses	Crs.	Courses	Crs.
Journalism 100a	3	Journalism 114	3
Journalism 101	3	Journalism 103	3
Journalism 109	2	Journalism 105	2
Journalism 111	3	Journalism 106	3
Art 29 (Advertising Art)	2	Journalism 108	3
*Commerce electives	6	Journalism 115	3
*General electives	15	Journalism 123	3
		*Commerce electives	6
		*General electives	6
	34		32

Minimum required for the degree, 134 credit hours.

Radio-Journalism Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses	Crs.	Courses	Crs.
Journalism 100a, 100b	6	Journalism 114	3
Journalism 101	2	Journalism 150	2
Political Science 173	3	Journalism 105	2
*Speech, English electives	6	Journalism 123	3
*Radio-Arts electives	6	Journalism 127	3
*General electives	9	*Speech, English electives	6
		*Radio—Arts electives	6
		*General electives	9
	32		34

Minimum required for the degree, 134 credit hours.

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* Women and others not required to take military science must complete 8 additional elective hours during the freshman and sophomore years.

Electives taken in freshman and sophomore years cannot be used to satisfy electives required in the junior and senior years.

All electives in junior and senior years must be in courses not open to freshmen.

PRE-LAW COURSES

Two years of college credit (exclusive of certain specific courses) with a minimum standing of 1.3 on all work attempted will be required for admission to the College of Law. 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 16.

LIBRARY SCIENCE

The University provides professional education for librarianship through the Department of Library Science of the College of Arts and Sciences. This Department is accredited by the American Library Association, the only training agency so accredited in Kentucky. The Department also is accredited by the Southern Association of Colleges and Secondary Schools.

An acute nation-wide shortage of librarians, estimated at 18,000 by the American Library Association, provides unusual opportunities for qualified men and women entering the profession. Recognizing its responsibility for preparing librarians for various levels of service in schools, colleges and universities, and public libraries, the Deppartment offers training on both an undergraduate and a graduate level.

The **undergraduate curriculum,** leading to a bachelor's degree, may be taken during the junior and senior years. Intended primarily for the education of school librarians, this program gives the training required for certification by the Kentucky State Board of Education and also meets the standards established for school librarians by the Southern Association of Colleges and Secondary Schools. Students working toward the A.B. in Education may enroll for certain courses in the undergraduate curriculum designed for teacher-librarians. This curriculum also provides the basic foundation for graduate work and gives students majoring in other fields opportunities to take related courses in Library Science.

The **graduate curriculum** is designed for majors in Library Science and leads to a master's degree. It is open to non-majors on the approval of the Head of the Department. Students in the College of Education who are working toward the M.A. in Education may elect courses in Library Science to fulfill the Southern Association requirements for teacher-librarians. Students in subject fields may elect certain courses in Library Science to qualify for positions in special libraries. In general, the graduate courses are designed to train for the more responsible positions in librarianship. Those interested should consult with the Department for guidance in the selection of courses.

REQUIREMENTS FOR THE MASTERS DEGREE

Prerequisites: A bachelor's degree from an approved college or university; an undergraduate scholastic record that is above average, together with evidence of ability to perform graduate work satisfactorily; and completion of a preliminary core of nine semester hours in library science.

Undergraduate preparation should include academic rather than professional courses. Languages are considered basic for those interested in college or university library work. The preliminary core of nine semester hours in library science is satisfied at the University by courses 133a, 145, and either 110 or 121. Subject to the recommendation of the Head of the

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* All electives taken in junior and senior years must be chosen from courses NOT open to freshmen.

Department, these nine units may be taken during the first semester of the graduate program; comparable work taken elsewhere may reduce this requirement.

Requirements for the Masters Degree: Satisfactory completion of twenty-four semester hours of graduate work in library science, fulfillment of the residence requirement of 36 weeks; fulfillmnt of the requirement of a reading knowledge of one modern foreign language; preparation of a thesis; and passing a final oral examination in which the student is asked to defend his thesis and also is examined on any subject matter related to his field.

The residence requirement may be fulfilled by any combination of semesters or summer sessions which totals the required number of weeks. Subject to the recommendation of the Head of the Department, prospective students who have had previous training in Library Science may take up to one-third of their graduate work in courses in other departments. Such courses must be related closely to the student's field of specialization.

PROFESSIONAL CURRICULUM IN LIBRARY SCIENCE

UNDERGRADUATE COURSES

Course No.	Title	Crs.
152	Book Selection	3
101a-d	Independent Work	1-4
110	The Library in the School	3
121	Introduction to Library Work	3
127a, b	Books and Related Materials for Children and Young People	6
129	Cataloging and Classification	3
133a, b	Reference and Bibliography	5
139	Library Practice	3
145	Organization of Library Materials	3
152	Book Selection	3
Educ. 186	Visual Teaching	3

GRADUATE COURSES

Course No.	Title	Crs.
212	The Public Library	2
214	The College and University Library	2
227	Reading for Young People	2
229	Advanced Cataloging and Classification	4
232	Library Work with Children	4
233	Subject Bibliography	3
235	Government Publications	2
242	History of Books	2
250	Adult Reading Guidance	3
252	Advanced Book Selection	4
254	Seminar	2

MATHEMATICS AND ASTRONOMY

The Department of Mathematics and Astronomy serves a twofold purpose. **First:** It provides courses to fit the needs of other departments and colleges. The Department shapes its courses to prepare the student for his work in agriculture, bacteriology, chemistry, economics, engineering, physics, etc. **Second:** The Department provides courses for those specializing in mathematics. The high school teacher and the college teacher find courses for their respective needs.

The Mathematics library is one of the best in the South. It contains several thousand volumes and a number of bound volumes of mathematical and astronomical journals, bulletins, and magazines.

The Department gives work leading to the degrees of A.B., B.S., M.A., M.S., and Ph.D.

Astronomy. A non-mathematical course in Descriptive Astronomy is offered. Other courses offered from time to time are of a practical and mathematical nature.

The University has a small observatory equipped with an eight-inch telescope and other instruments. Occasional meetings are held at the observatory to give the student an opportunity to view the more interesting celestial objects.

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 defense 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 $25.00 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.

Subsistence. Advanced course ROTC enrollees receive an allowance of 90 cents for subsistence in lieu of rations.

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 Department of Defense 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. An advanced course ROTC enrollee, provided he makes an over-all standing in the University of 1.5 and shows special aptitudes in military training may be designated a Distinguished Military Graduate and receive a commission in the Regular Army or Air Force.

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.

A student who desires to major in music may work toward the Bachelor of Music degree or the Bachelor of Arts degree. Any student in the University who has the necessary prerequisites may, and is encouraged to, elect courses and performing organizations in the department. There are courses with no prerequisites.

The sequence of courses for the Bachelor of Music degree represents an intensive study of music designed for those who plan to be professional musicians or school music teachers. It presumes a reasonable degree of musical knowledge and proficiency on the pre-college level.

The Bachelor of Arts degree with a major in music is designed as a cultural degree with a music emphasis for those who do not intend to be professional musicians or to teach school music.

Departmental Facilities

The University provides one of the most modern and adequately equipped Fine Arts buildings in the South. The music facilities include well lighted, sound proofed, air conditioned classrooms, rehearsal halls, teaching studios, listening cubicles, a departmental library and 44 practice rooms including 4 two-manual practice pipe organs. In the building there are two auditoriums seating approximately 500 and 120 each. Radio, recording and broadcasting facilities are available for instructional purposes and performances.

Scholarships

The department offers a limited number of tuition scholarships. Application for these scholarships should be made to the Head of the Department of Music.

University Bands

The University bands furnish an opportunity for participation for students who have previous performing experience on band instruments. **The marching band** performs for the football and basketball games and furnishes music for the ROTC spring parades. **The concert band** presents concerts on the campus, in the community and for radio programs.

University Vocal Ensembles

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

Choristers. The choristers is a select group of mixed voices which performs standard choir literature. Each year they present several performances including a traditional program of Christmas music.

University Chorus. This organization is open to all university men and women. The Chorus presents at least one major composition for chorus and orchestra each year.

University Symphony Orchestra

The **University Symphony Orchestra** is a student, faculty, and civic musical organization. The orchestra appears regularly in concerts. It also combines with the University Chorus in the spring performance of a cantata, oratorio or some other major choral work. Admission to the orchestra is arranged by consultation with the director.

Participation in Musical Organizations

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

Special Fees

Special fees for applied music lessons, practice rooms, organ rental and instrument rental are listed on page 18.

Curriculum Leading to the Degree of Bachelor of Music

The following sequences are offered:

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* The Department of Music is a member of the National Association of Schools of Music.

PUBLIC SCHOOL MUSIC

Instrumental Supervision

FRESHMAN

	1st Sem. Crs.	2d Sem. Crs.
Applied Major a, b	2	2
[4]Music C15a, b (Piano)	1	1
Music 11a, b (Theory I)	2	2
Class Instrument	1	1
English 1a, b	3	3
[1]Performing Organization	1	1
Foreign Language	3	3
Psychology 1a, b	3	3
Military Science	(2)	(2)
Physical Education	..	..
[3]Recital Attendance	..	..
	16	16

SOPHOMORE

	1st Sem. Crs.	2d Sem. Crs.
Applied Major c, d	2	2
Music C15c, d (Piano)	1	1
Music 33a, b (Theory II)	2	2
Class Instrument	1	1
Performing Organization	1	1
Humanities E (Music)	..	2
Humanities	2	2
Hygiene 9	2	..
Physical Science	3	3
Social Science	3	3
Military Science	(2)	(2)
Recital Attendance	..	..
	17	17

JUNIOR

	1st Sem. Crs.	2d Sem. Crs.
Applied Major e, f	2	2
Music 34a, b (Theory III)	4	4
Class Instrument	1	1
Music 47a, b (Methods)	3	3
Music 116a, b (Conducting)	2	2
Music 13a (Form & Analysis)	2	..
Performing Organization	1	1
Education 16	3	..
Education C44	..	3
Recital Attendance	..	..
	18	16

SENIOR

	1st Sem. Crs.	2d Sem. Crs.
Applied Major g, h	2	2
Class Instrument	1	1
Class Instrument	1	1
Music 19a, b (History)	3	3
Music 117a, b (Orchestration)	2	2
Music 118 (March. Band Tech.)	..	2
Performing Organization	1	1
Education 117a, b (Pr. Tch.)	4	4
Education 105	3	..
Recital Attendance	..	..
	17	16

TOTAL CREDITS 133

Vocal Supervision

FRESHMAN

	1st Sem. Crs.	2d Sem. Crs.
[5]Applied Major 17a, b or 15a, b	2	2
Appl. Minor C17a, b or C 15a, b	1	1
Music 11a, b (Theory I)	2	2
[1]Performing Organization	1	1
English 1a, b	3	3
Psychology 1a, b	3	3
Foreign Language	3	3
[2]Military Science	(2)	(2)
Physical Education	..	..
[3]Recital Attendance	..	..
	15	15

SOPHOMORE

	1st Sem. Crs.	2d Sem. Crs.
Applied Major 17c, d or 15c, d	2	2
Appl. Minor C17c, d or C15c, d	1	1
Music 33a, b (Theory II)	2	2
Performing Organization	1	1
Humanities E (Music)	..	2
Humanities	2	2
Social Sciences	3	3
Physical Sciences	3	3
Hygiene 9	2	..
Military Science	(2)	(2)
Recital Attendance	..	..
	16	16

JUNIOR

	1st Sem. Crs.	2d Sem. Crs.
Applied Major 17e, f or 15e, f	2	2
Appl. Minor C17e, f or C15e, f	1	1
Music 34a, b (Theory III)	4	4
Music 44a, b (Methods)	4	4
Music 115a, b (Choral Cond.)	2	2
Performing Organization	1	1
Education 16	3	..
Education C44	..	3
Recital Attendance	..	..
	17	17

SENIOR

	1st Sem. Crs.	2d Sem. Crs.
Applied Major 17g, h or 15g, h	2	2
Appl. Minor C17g, h or C15g, h	1	1
Music 19a, b (History)	3	3
Music 102a, b (Vocal Ped.)	2	2
Music 13a, b (Form & Anal.)	2	2
Performing Organization	1	1
Music 45 (Supervision)	..	2
Education 177a, b (Pr. Tch.)	4	4
Education 105	3	..
Recital Attendance	..	..
	18	17

TOTAL CREDITS 131

APPLIED MUSIC

Voice

FRESHMAN	1st Sem. Crs.	2d Sem. Crs.
Music C17a, b (Voice)	3	3
Music C15a, b (Piano)	1	1
[1]Performing Organization	1	1
Music 11a, b (Theory I)	2	2
English 1a, b	3	3
Foreign Language	3	3
Phychology 1a, b	3	3
[2]Military Science	(2)	(2)
Physical Education	..	..
[3]Recital Attendance	..	..
	16	16

SOPHOMORE	1st Sem. Crs.	2d Sem. Crs.
Music C17c, d (Voice)	3	3
Music C15c, d (Piano)	1	1
Music 33a, b (Theory II)	2	2
Performing Organization	1	1
Humanities E (Music)	..	2
Humanities	2	2
Foreign Language	3	3
Physical Science	3	3
Hygiene 1	1	..
Military Science	(2)	(2)
Recital Attendance	..	..
	16	17

JUNIOR	1st Sem. Crs.	2d Sem. Crs.
Music 17e, f, g, h (Voice)	4	4
Music 34a, b (Theory III)	4	4
Music 115a, b (Conducting)	2	2
Performing Organization	1	1
Foreign Language	3	3
[6]Social Science	3	3
Recital Attendance	..	..
	17	17

SENIOR	1st Sem. Crs.	2d Sem. Crs.
Music 17i, j, k, l (Voice)	4	4
Music 19a, b (History)	3	3
Music 107a, b (Vocal Lit.)	2	2
Music 102a, b (Vocal Pedagogy)	2	2
Music 13a,b (Form & Analysis)	2	2
Music 113a, b or 119a, b (Counterpoint or Composition)	2	2
Performing Organization	1	1
Recital Attendance	..	..
	16	16

TOTAL CREDITS 131

Piano

FRESHMAN	1st Sem. Crs.	2d Sem. Crs.
Music 15a, b, c, d (Piano)	4	4
Music 11a, b (Theory I)	2	2
[1]Performing Organization	1	1
English 1a, b	3	3
Foreign Language	3	3
[2]Military Science	(2)	(2)
Physical Education	..	..
[3]Recital Attendance	..	..
	16	16

SOPHOMORE	1st Sem. Crs.	2d Sem. Crs.
Music e, f, g, h (Piano)	4	4
Music 33a, b (Theory II)	2	2
Performing Organization	1	1
Humanities E (Music)	..	2
Humanities	2	2
Physical Science	3	3
Social Science	3	3
Hygiene 1	1	..
Military Science	(2)	(2)
Recital Attendance	..	..
	16	17

JUNIOR	1st Sem. Crs.	2d Sem. Crs.
Music 15i, j, k, l (Piano)	4	4
Music 34a, b (Theory) III	4	4
Music 13a, b (Form & Anal.)	2	2
Music 115a, b or 116a, b (Choral or Instrumental Cond.)	2	2
Music 19a, b (History)	3	3
Music 106a, b (Piano Lit.)	2	2
Performing Organization	1	1
Recital Attendance	..	..
	18	18

SENIOR	1st Sem. Crs.	2d Sem. Crs.
Music 15m, n, p, q (Piano)	4	4
Music 113a, b (Counterpoint)	2	2
Music 119a, b (Composition)	2	2
Music 117a, b (Orchestration)	2	2
Music 50a, b (Sightreading & Accompanying)	1	1
Music 103a, b (Piano Pedagogy)	1	1
Performing Organization	1	1
Elective	2	2
Senior Recital	..	..
Recital Attendance	..	..
	15	15

TOTAL CREDITS 131

Organ

FRESHMAN	1st Sem. Crs.	2d Sem. Crs.	SOPHOMORE	1st Sem. Crs.	2d Sem. Crs.
Music C18a, b (Organ)	3	3	Music C18c, d (Organ)	3	3
Music C15a, b (Piano)	1	1	Music C15c, d (Piano)	1	1
Music 11a, b (Theory I)	2	2	Music 33a, b (Theory II)	2	2
[1]Performing Organization	1	1	Performing Organization	1	1
English 1a, b	3	3	Humanities E (Music)	..	2
Foreign Language	3	3	Humanities	2	2
Psychology 1a, b	3	3	Hygiene 1	1	..
[2]Military Science	(2)	(2)	Physical Science	3	3
Physical Education	..	..	Social Science	3	3
[3]Recital Attendance	..	..	Military Science	(2)	(2)
			Recital Attendance	..	..
	16	16		16	17

JUNIOR	1st Sem. Crs.	2d Sem. Crs.	SENIOR	1st Sem. Crs.	2d Sem. Crs.
Music 18e, f, g, h (Organ)	4	4	Music 18i, j, k, l (Organ)	4	4
Music 34a, b (Theory III)	4	4	Music 113a, b (Counterpoint)	2	2
Music 19a, b (History)	3	3	Music 117a, b (Orchestration)	2	2
Music 13a, b (Form & Analysis)	2	2	Music 119a, b (Composition)	2	2
Music 115a, b or 116a, b (Choral or Instrumental Cond.)	2	2	Music 108a, b (Organ Lit.)	2	2
			Performing Organization	1	1
Performing Organization	1	1	Elective	2	2
Elective	2	2	Senior Recital	..	..
Recital Attendance	..	..	Recital Attendance	..	..
	18	18		15	15

TOTAL CREDITS 131

Orchestral Instrument

FRESHMAN	1st Sem. Crs.	2d Sem. Crs.	SOPHOMORE	1st Sem. Crs.	2d Sem. Crs.
Applied Major a, b	3	3	Applied Major c, d	3	3
[7]Music C15a, b or Sec. Appl.	1	1	Music C15c, d or Sec. Appl.	1	1
Music 11a, b (Theory I)	2	2	Music 33a, b (Theory II)	2	2
[1]Performing Organization	1	1	Humanities E (Music)	..	2
English 1a, b	3	3	Humanities	2	2
Psychology 1a, b	3	3	Performing Organization	1	1
Foreign Language	3	3	Hygiene 1	1	..
[2]Military Science	(2)	(2)	Physical Science	3	3
Physical Education	..	..	Social Science	3	3
[3]Recital Attendance	..	..	Military Science	(2)	(2)
			Recital Attendance	..	..
	16	16		16	17

JUNIOR	1st Sem. Crs.	2d Sem. Crs.	SENIOR	1st Sem. Crs.	2d Sem. Crs.
Applied Major e, f, g, h	4	4	Applied Major i, j, k, l	4	4
Secondary Applied Music	1	1	Music 113a, b (Counterpoint)	2	2
Music 34a, b (Theory III)	4	4	Music 117a, b (Orchestration)	2	2
Music 19a, b (History)	3	3	Music 119a, b (Composition)	2	2
Music 116a, b (Conducting)	2	2	Music 47a, b (Methods)	3	3
Music 13a, b (Form & Analysis)	2	2	Performing Organization	1	1
Performing Organization	1	1	Elective	2	2
Recital Attendance	..	..	Senior Recital	..	..
			Recital Attendance	..	..
	17	17		16	16

TOTAL CREDITS 131

Bachelor of Arts Degree with a Major in Music

This curriculum, leading to a Bachelor of Arts degree with a major in music, is intended to provide the student with a general cultural background with emphasis on music.

Music Requirements for a Major in Music

Requirements in the Field of Concentration: Forty credits of advanced work in the field of Literature, Philosophy, and the Arts during the junior and senior years, including the major work.

Music Prerequisites: Junior standing and the following lower division courses in music:

Humanities E, Music: The Renaissance to the Present
Theory 11a, b
Theory 33a, b
Theory 34a, b
Applied Music—8 to 12 semester hours

Upper Division Music Requirements: A minimum of 30 semester hours of advanced work in music in accordance with the student's particular interest and as directed by the Music Department.

Notes

1. All students must participate in two performing organizations for eight semesters with or without credit as directed.
2. Required of all able-bodied male freshmen and sophomores who are citizens of the United States.
3. All students are required during each semester of residence to attend a certain percentage of the departmental recitals as directed and posted each semester by the department.
4. If the applied major is piano, class instruments will be substituted for Music 15a, b (Piano) as directed.
5. Voice majors will take a piano minor; piano majors will take a voice minor.
6. Must satisfy lower division requirement.
7. A secondary instrument other than piano may be elected if the student passes a proficiency examination in piano.

PRE-PHARMACY

The freshman year of the curriculum in Pharmacy is given at the Lexington campus of the University, 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. The freshman year includes the following requirements:

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Chem. 1a—General Chemistry	5	Chem. 1b—General Chemistry	5
Eng. 1a—English Composition	3	Eng. 1b—English Composition	3
Math. 5—College Algebra	5	Bot. 1—General Botany	4
Mil. Sci. 1a—Military Science	2	Math. 3—Plane Trigonometry or	3
Physical Education	0	Zoology 1—Prin. of Animal Biol.	4
Physics 51a—Int.	3	Mil. Sci. 1b—Military Science	2
		Physical Education	0
		Physics 51b—Int.	3
	18		20 or 21

PHYSICAL EDUCATION

Required Physical Education.

Upon entrance every student is given a physical examination by the Department of Health and Hygiene. The findings of that Department are furnished the Department of Physical Education and all students, except veteran (with more than three months service) are assigned to required physical education classes in accordance with their needs. Individuals with physical handicaps are assigned to "Adapted Physical Education" (P. E. 2). All others are assigned to "Orientation in Physical Education" (P. E. 1). In this course (P. E. 1) men students will be physically conditioned, given a survey of various sports and then tested as to their degree of physical fitness and sports knowledge and performance. Women students follow the same procedure except that they are given a posture test instead of the physical fitness test. As a result of the testing program, a student may be:

a. Assigned to take additional work the subsequent semesters to ameliorate or correct deficiencies in physical fitness as disclosed by the physical fitness or posture tests, or deficiencies in sports skills and knowledges as disclosed by performance and knowledge tests—as follows,

   1. **Men students** with a physical fitness index (P. F. I.) below 100 will be assigned to Weightlifting and Conditioning (P. E. 29) classes the subsequent semester or semesters to improve their P. F. I. until they reach the norm for Kentucky men.
   2. **Women students** ranked in the lower levels of the posture test will be assigned to Adapted Physical Education (P. E. 2) the subsequent semester or semesters until they reach a level of good body mechanics satisfactory to the Department.
   3. Those students (men and women) who failed in the sports knowledge and performance tests given in P. E. 1 will be required to enroll in the sports classes (P. E. 14 to 40) the subsequent semesters until they have corrected these deficiencies. Men students are required to become proficient in one team sport, one indoor individual recreational sport, and one outdoor individual recreational sport. **Women** students are required to learn one individual sport, one team sport, and some form of the dance.

b. Considered as having completed his or her requirements.

The required or service physical education program consists of specific courses of instruction for men and women students which are designed to: (1) determine the degree of physical fitness of the individual, (2) provide the student with a means of regulated and supervised physical exercise, (3) teach the student activities which may serve as a recreational pursuit during leisure time, and (4) develop a sane and intelligent attitude toward the need for and benefits of well-regulated physical activity. After a student has fulfilled these requirements he is encouraged to enroll in advanced sport classes for which he will receive one hour of credit for each three-hour course successfully completed. The number of hours acceptable is regulated by the Dean of each College.

A standard uniform is required of all students. The cost of this ranges from $5.00 to $12.00. A locker fee of $2.00 per semester is charged each

student which includes towel service, soap, and locker rental. Padlocks may be rented for 25 cents per semester. The swimming fee is $3.00 per semester.

Intramurals

A second phase of the Department's program is its intramural sports for men and women students and the Women's Athletic Association for women students. Through the intramural and W. A. A. programs and such organizations as the U. K. Troupers and Tau Sigma (Modern Dance) numerous activities are sponsored which provide opportunity for all students to participate in competitive sports and recreational activities.

Professional Physical Education

The third phase is the Teacher Education Program which provides opportunity for students to prepare to teach physical education, coach athletic teams, and to train for leadership in recreation and camping.

Topical Fields

Topical fields are offered in Recreation and Dance. A student enrolling in one of these fields will have an individual curriculum prescribed to prepare him for his life's work.

PHYSICS

The objectives of the Department of Physics are:

1. to provide instruction to the end that a student, regardless of his special interests, may acquire a general understanding and appreciation of physics.
2. to provide a complete undergraduate curriculum with sufficient elasticity so that a graduate with a major in physics may teach in secondary schools, go on to greater specialization in physics; or use his major as a strong foundation for vocations;
3. to provide graduate instruction and modern facilities for research in physics leading to advanced degrees.

Suggested Outline of a Curriculum in the Physical Sciences with Physics as a Major:

Freshman Year

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Military Science 1a	2	Military Science 1b	2
Physical Education	*	Physical Education	*
English 1a	3	English 1b	3
Math. 17 (Coll. Alg.)	3	Math. 19 (Analytic Geom.)	3
Math. 18 (Trigonometry)	3	Engineering Problems 2	1
Chemistry 1a (General)	5	Chemistry 1b (General)	5
		Hygiene	1
	16		15

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

Sophomore Year

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Military Science 6a	2	Military Science 6b	2
Math. 20a (Diff. Calc.)	4	Math. 20b (Int. Calc.)	4
Physics 3a (General)	6	Physics 3b (General)	6
Biological Sciences	3	Biological Sciences	3
†Foreign Languages	3	†Foreign Languages	3
	18		18

Junior Year

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Physics 104 (Theor. Mech.)	4	Physics 123a (Heat & Thermo.)	3
Math. C105a (Diff. Eq.)	2	Physics 111 (Elect. & Mag.)	3
Social Studies	3	Humanities	2
Chemistry 21a (Quant. Anal.)	5	Social Studies	3
Humanities	4	Field or Free Electives	6
	18		17

Senior Year

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs..
Physics 108 (Light)	3	Physics 155a (Atomic)	3
Math. (Adv. Calc.)	3	Math. (Adv. Calc.)	3
Field or Free Electives	12	Field or Free Electives	12
	18		18

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. (6) To give graduate training in Political Science and related fields in preparation for college and university teaching.

Public Service Courses

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

Students interested in entering the Federal Civil Service through the usual channel of the Junior Professional Assistant find a variety of types of specialized preparation acceptable. For general administrative work a course in public administration is essential. 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 fields of

† The foreign language requirement is not complete until the basic achievement examination has been passed, or the second year of a language with a C grade or better for each semester.

social sciences will be helpful. For those desiring to enter specialized fields of the public service in federal, state, or local government, combinations of courses across departmental lines can be arranged to supply the technical training desired.

PSYCHOLOGY

The Department's undergraduate program includes courses in general, social, experimental, animal, abnormal, and child psychology, in psychological testing, and in the applications of psychology to business and industry.

The graduate program includes work leading to the master's degree and the degree of Doctor of Philosophy in the fields of general, clinical, or industrial psychology. In cooperation with the Veterans Administration, the Department offers a four-year course of training in clinical psychology leading to the doctor's degree. Students in this program are appointed to half-time psychological internships in the local Veterans Hospital. Technical Bulletin 10A-146 of the Veterans Administration describes their work.

The Department operates a speech correction clinic. Corrective therapy is provided for stutterers, for cases of retarded speech development, and for other speech defective persons, and training is offered in the techniques of speech correction.

RADIO ARTS

This department has a three-fold function in (a) training of students who wish to go into broadcasting as a profession, (b) providing courses in certain phases of broadcasting for students in agriculture, education, journalism, political science, commerce, social work, and other fields, and (c) making available courses in the more cultural and artistic phases of radio for students pursuing a liberal curriculum.

A four-year major in Radio Arts leading to the A.B. degree provides for a survey course, courses in announcing, regulations, script writing, production, and a pro-seminar course leading to a comprehensive examination.

Radio Arts classes are held in the Radio Studio section of the top floor of McVey Hall. Professional facilities utilized in the laboratory work of this department include three studios, two announce booths, three studio control rooms, a master control room, a transmitter room, library and staff room, record room, sound effects room, and the usual office facilities. FM transmitter WBKY, plus daily broadcasts scheduled over commercial stations, provide students with ample performance opportunities.

Courses for Training in Radio Arts

Open to Freshmen

	Crs.
Radio Arts 1a, 1b—Radio Today	6

Open to Sophomores

Radio Arts 2a—Radio Announcing	2

Open to Juniors and Seniors

Radio Arts 101—Radio Regulations	2
Radio Arts 102—Advanced Radio Announcing	2
Radio Arts 105a—Radio Script Writing	2
Radio Arts 105b—Radio Script Writing	2
Radio Arts 106a—Radio Production	2
Radio Arts 106b—Radio Production	2
Radio Arts 110—Pro-Seminar in Radio	1

Note: Radio Arts majors must take 1a and 1b as prerequisites for all other Radio Arts courses, and must take 2a during the junior year.

SOCIAL WORK

Social Work consists of a network of services designed to meet a wide range of human needs. A career in social work offers a choice of interesting and varied activities, the challenge of community leadership, and the satisfaction of service to others as well as the security of an expanding profession.

The Department of Social Work is a member of, and accredited by, the National Association of Schools of Social Administration. Its curriculum, based upon the national standards in the field, leads to a degree of Bachelor of Arts with a major in Social Work. Students, upon its completion, are encouraged to continue their technical preparation in graduate professional schools of social work. However, our graduates are currently holding responsible positions in the public social services, group work activities, and in other social agencies at the junior professional level for which they are qualified. Students majoring in social work are guided in the selection of courses giving a broad liberal arts background, an understanding of human behavior, and the social, economic, and political forces shaping our society.

Courses in the Department cover the organization, operation, and history of public and private welfare services, including the developing Social Security program. Principles of relief and rehabilitation in family and children's work and the growing range of group work and leisure time activities are studied, as well as community organization and research in social work. Personal experience with agency programs in the field is planned for each student.

Early consultation with department members is urged for students considering a major in this field. Students from other departments are eligible to take may of the courses offered and SW 24 and SW 122 are especially recommended for all students interested in social welfare.

SOCIOLOGY

The Sociology Department conducts a program of training and research, complementary to that of other social sciences, focused upon the central problems of group organization, social action, and public policy. Basic courses in the fundamentals of social behavior are supplemented by specialized courses in research and analysis. Internships in important public agencies provide additional research experience and a chance to apply sociological principles under supervision.

The allied Social Research Consultation Service makes the tools and skills of social science available to Kentucky communities and organizations. Training in Sociology leads to scientific research, Social Science Analyst positions with the Federal or State governments, and positions in human relations with private agencies. Since every effort is made to guide students toward a broad training in the field of the social sciences, an undergraduate major in sociology proves valuable for those entering such professional fields as family relations, industrial relations, law, social service, and the like.

COURSES FOR NURSES

The college affords preliminary work for nurses. This covers anatomy and physiology, bacteriology, chemistry, hygiene and sanitation, psychology, and sociology. Nutrition and cooking are offered in the College of Agri-

culture 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 30 credits.

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

Thomas Poe Cooper, B.S., D.Sc., LL.D., Dean
Levi Jackson Horlacher, B.S., M.S., Assistant Dean

INTRODUCTORY STATEMENT

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

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, extension work, teaching, nutrition, research, commercial work, or any other work that requires knowledge of the place that agriculture and home economics have in the world today. The field of opportunity is as wide as the relation of agriculture and home economics to industry, commerce, and finance. In all these areas 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, the section of forestry, classrooms for marketing and rural sociology, and laboratories for the use of students in crops, soils, and agricultural entomology. The Dairy Products Building has modern, well equipped laboratories for work in dairy manufacturing, incubation, nutrition, 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. All classes in farm economics meet in this building. The Tobacco Laboratory is well equipped for the study of plant diseases. In the Meats Laboratory are modern freezer lockers, a sales room and rooms for slaughtering, cutting, and curing meat. The Experiment Station Building contains no classrooms, but offices of many of the members of the teaching staff are located there.

The Home Economics Building is modern and equipped with classroom and laboratory fixtures of the latest design. In addition to offices and classrooms the building contains laboratories for foods, clothing, nutrition, dietetics, experimental cookery, costume design, and interior decoration. Two home management houses and a child-care center are located near the Home Economics Building. The University cafeterias are used as laboratories for students in institution economics.

On the farm are a modern dairy center and 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, and Holstein 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.

REQUIREMENTS FOR GRADUATION IN AGRICULTURE

To receive the degree Bachelor of Science in Agriculture a student is required to gain a total of 136 semester credits and 136 points. These represent the minimum requirements for graduation. There are seven curricula in agriculture and completion of the requirements of any one of these leads to the degree. In all cases the student is responsible for meeting the requirements for graduation.

Options are available in most of the curricula for students interested in certain fields. An option consists of a minimum of 14 credits in courses not open to freshmen. A student normally selects his option during the last semester of his sophomore year.

The General Curriculum in Agriculture enables the student to obtain a general education and at the same time pursue some specialization in a chosen field. In this curriculum the student has the privilege of selecting one of the following options for study during the junior and senior years: Agricultural Entomology, Agricultural Extension, Agricultural Inspection, Agricultural Journalism, Agricultural Science, Agronomy, General Agriculture, Farm Economics, Markets and Rural Finance, Rural Sociology, and Vocational Agriculture.

The curriculum in Agronomy is designed to meet the needs of students preparing for college teaching and research in soils and crops.

The Curriculum in Agricultural Economics is for students desiring to enter some phase of agricultural business.

The Curriculum in Animal Industry is for students whose primary interest is in livestock production and the livestock industry. The student in this curriculum chooses one of the following options: Animal Husbandry, Dairy Manufacturing, Dairy Production, or Poultry Husbandry. Proper use of free electives permits a student to prepare to teach Vocational Agriculture.

The Curriculum in Horticulture is for students interested in the production of fruits and vegetables and in allied industries. It provides opportunity for a student to prepare to teach Vocational Agriculture.

The Curriculum in Ornamental Horticulture prepares specialists in floriculture and landscape gardening.

The Curriculum for Teachers of Vocational Agriculture prepares students to be teachers of agriculture in high school.

Faculty advisers are appointed by the Dean to help students with academic problems such as choice of a curriculum, preparation of class schedules, selection of an option, choice of elective courses, and employment.

Farm experience or experience in the option selected is required for graduation in agriculture.

Transfer students, except those transferring from Eastern Kentucky State College, are required to take in the University a minimum of 61 credits, including 43 in agriculture. The College of Agriculture and Home Economics and Eastern Kentucky State College now have in operation a cooperative plan which recognizes all courses in agriculture taught at Eastern as carrying course and residence credit toward the degree, Bachelor of Science in Agriculture, awarded by the University of Kentucky. Acceptance of transfer credit for courses in agriculture is limited to courses numbered 1 to 99 in the University of Kentucky catalog.

Certain courses are required of all students in the various curricula; others are elective. The courses required for graduation are listed in the order they would normally be taken by students entering in the fall semester; some modification will be necessary for those entering in the spring or summer.

Changes in a curriculum to meet specific needs may be made if approved in accordance with the rules of the University Faculty. The normal academic load is 17 credits per semester; the maximum load is 23 credits; the minimum load for a full-time student is 12 credits.

General Curriculum Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Agron. 1—Elem. Farm Crops	3	*A. I. 21—Farm Dairying	3
*A. I. 1—Farm Livestock Prod.	3	*A. I. 41—Farm Poultry Prod.	3
*A. I. 21—Farm Dairying	3	Hort. 1—Genl. Horticulture	3
Bot. 1—General Botany	4	Eng. 1b—English Composition	3
**Eng. 1a English Composition	3	Geol. 3—Elem. Geology	3
***Math. 1—Basic Mathematics	3	M. S. 1b—1st Year Basic	2
M. S. 1a—1st Year Basic	2	Physical Education	0
Physical Education	0	Zool. 1—Prin. of An. Biol.	4
	18		18

* Schedule one course each semester. Two of the three courses are required for graduation.

** The requirements in whole or in part for English 1a, and 1b may be satisfied without credit by passing a departmental proficiency examination. It is recommended that students deficient in English, as indicated by the freshman tests, take English D (with no credit) before taking English 1a.

*** Students ranking in the top 25 per cent on the Kentucky classification test in mathematics are not required to take a course in mathematics.

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
*Chem. 4a—Genl. Chemistry	4	*Chem. 4b—Genl. Chemistry	4
Econ. 51—Prin. of Econ.	3	Fm. Ec. 1—Agr. Economics	3
Fm. Eng. 1—Mech. of Farmstead	3	Agron. 10—Soils	3
R. S. 10—Rural Sociology	3	A. I 81—Prin. of Animal Nutr.	3
M. S. 6a—2nd Yr. Basic	2	M. S. 6b—2nd Yr. Basic	2
		Electives	2
	15		17

* Students desiring to study advanced chemistry (except Chemistry 37) should take Chemistry 1a and 1b.

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Bact. 52—Prin. of Bacteriology	4	Group A Electives	6
Fm. Ec. 110—Farm Management	3	Electives	11
M. & R. R. 100—Agr. Marketing	3		
Group A Electives	3		
Electives	4		
	17		17

SENIOR YEAR

Electives ..... 34 credits
Total required for graduation ..... 136 credits

* The Group A electives, from which 9 hours must be selected, shall be selected from one or more of the following four general fields of generically related subject matter; Literature, Philosophy, the Arts, and Social Studies. These fields include Ancient Languages, Anthropology, Archaelogy, Art, Economics, English, Geography, German, History, Journalism, Law, Library Science, Music, Philosophy, Political Science, Psychology, Radio Arts, Romance Languages, Social Work, and Sociology.

The Group A electives are subject to the approval of the adviser and dean.

Summary of the General Curriculum

	Crs.
Required courses in agriculture	33
Required courses, non-agriculture	45
Group A electives	9
Electives in agriculture	27
Free electives	22
	136

Brief descriptions of the options follow.

Agricultural Entomology. Courses in the agricultural entomology option deal with beneficial and injurious insects, animal parasites, insects of the home and farm, 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. Other courses suggested are English, history, journalism, philosophy, political science, psychology, public speaking, radio, and courses in games and recreation.

Agricultural Inspection. Students interested in regulatory work as a career may select courses which will prepare them for such positions as inspectors of feeds, fertilizers, seed, and nursery stock, and as laboratory analysts. Courses suggested include crops, soils, horticulture, botany, chemistry, and animal nutrition.

Agricultural Journalism. Excellent opportunities exist for service in Agriculture in the expanding field of the press and radio. Students interested in Agricultural Journalism as a career should enroll in the general curriculum in Agriculture, and should elect approximately 30 credits in Journalism, Radio Arts, and Speech. Courses suggested are: Principles of News Writing, News Reporting, Copyreading and Editing, Community Journalism, Newspaper Advertising and Promotion, Publicity, Feature Writing, Radio News Scripts, Radio Today, and Essentials of Speech.

Agricultural Science. 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 masters or doctors degree.

Agronomy. Courses in agronomy comprise those in soils, crops, and plant diseases. Most students selecting this option should follow the general curriculum with the following added requirements: A. I. 61, Genetics, and a minimum of sixteen of the agricultural electives in courses in the Department of Agronomy, as approved by the major adviser. Students preparing for college teaching and research in soils or crops should follow the curriculum in Agronomy.

Curriculum in Agronomy Preparing for Graduate Work in Soils and Crops, and Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
*Chem. 1a—General Chemistry	5	Chem. 1b—General Chemistry	5
Eng. 1a—English Comp.	3	Eng. 1b—English Comp.	3
Bot. 1—General Botany	4	Bot. 2—General Botany	3
Math. 5—College Algebra	5	Agron. 1—Elem. Farm Crops	3
M. S. 1a—Basic Mil. Sci. 1	2	Hort. 1—Genl. Horticulture	3
Physical Education	0	M. S. 1b—Basic Mil. Sci. 1	2
		Physical Education	0
	19		19

* Chem. 4a, 4b and 1b may be taken in place of Chem. 1a and 1b, but only 10 credits will be allowed toward graduation.

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
A. I. 1—Farm Livestock Prod.	3	Agron. 10—Soils	3
Bact. 52—Prin. of Bact.	4	Agron. 11—Soils Laboratory	2
*Geol. 30a—General Geology	5	Agron. 23—Plant Pathology	4
Zool. 1—Prin. of Animal Biol.	4	A. I. 61—Genetics	3
M. S. 6a—Basic Mil. Sci. 1I	2	Econ. 51—Prin. of Economics	3
		Fm. Eng. 1—Mech. of Farmstead	3
		M. S. 6b—Basic Mil. Sci. 11	2
	18		20

* Geol. 3 may be taken in place of Geol. 30a, but Geol. 30a is preferable.

JUNIOR AND SENIOR YEARS

Course	Crs.	Course	Crs.
A. I. 81—Prin. Animal Nutr.	3	Electives	51
M. & R. F. 130—Agri. Statistics	3	All electives subject to approval	
Fm. Ec. 1—Agri. Economics		of major advisor.	

(Nine hours must be in Group A and Rural Sociology.)

Total requirements for graduation .....136 credits

General Agriculture. This option is for students who want a general program in agriculture. This may include work in all departments or courses may be concentrated in one department. Sixty credits of agriculture are required for graduation. Electives may be selected from any department in the University provided the necessary prerequisites are satisfied.

Farm Economics. 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.

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.

Rural Sociology: Courses in this option present the sociology of rural life, the study of the community and its development, the organization of rural groups, rural movements and social policy, and the nature and problems of rural leadership.

Vocational Agriculture. 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 Kentucky to educate teachers for this work. Students who select this option must have had farm experience. The 60 semester credits of agriculture required for qualification of teachers of vocational agriculture should be distributed throughout all departments. See the special curriculum.

Curriculum in Agricultural Economics Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Courses	Crs.	Course	Crs.
M. & R. F. 30—Sources and Uses of Agricultural Data	2	Fm. Ec. 1—Agricultural Econ.	3
Bot. 25—Plant Biology	3	Chem. 4a—General Chemistry	4
A. I. 1—Farm Livestock Prod.	3	Agron. 1—Elem. Farm Crops	3
Eng. 1a—English Composition	3	Geog. 10—Econ. Geography	3
Econ. 3—Econ. Hist. of U. S.	3	Eng. 1b—English Composition	3
Math. 17—College Algebra	3	M. S. 1b—1st Yr. Basic	2
M. S. 1a—1st Yr. Basic	2	Physical Education	0
Physical Education	0		
	19		18

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Econ. 51—Prin. of Economics	3	Com. 7a—Prin. of Accounting	3
Zool. 1—Prin. of Animal Biol.	4	A. I. 61—Genetics	3
Chem. 4b—General Chemistry	4	A. I. 81—Prin. of Animal Nutr.	3
Eng. 30—Business English	2	R. S. 10—Introd. to Rural Soc.	3
Electives	3	Agron. 10—Soils	3
M. S. 6a—2nd Yr. Basic	2	M. S. 6b—2nd Yr. Basic	2
	18		17

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
F. E. 110—Farm Management	3	F. E. 115—Farm Accounting	3
M. & R. F. 100—Agr. Marketing	3	or	
M. & R. F. 110—Agr. Prices	3	Com. 7b—Prin. of Accounting	3
M. & R. F. 130—Agr. Statistics	3	M. & R. F. 140—Agr. Policy	3
Com. 109a—Business Law	3	F. E. 120—Land Economics	3
Electives	2	Bact. 52—Prin. of Bacteriology	4
		Electives	4
	17		17

SENIOR YEAR

	Crs.
Electives in agriculture	10
Electives in Group A	12
Electives	8

Summary of the Agricultural Economics Curriculum

Required courses in agriculture	44 or 41
Required courses in other colleges	49 or 52
Electives in agriculture (54 credits required)	10 or 13
Electives in Group A	12
Electives	21
Total	136

Curriculum in Animal Industry Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
A. I. 1—Farm Livestock Prod.	3	A. I. 41—Farm Poultry Prod.	3
A. I. 21—Farm Dairying	3	Agron. 1—Elem. Farm Crops	3
Eng. 1a—English Composition	3	Eng. 1b—English Composition	3
Math. 1—Basic Mathematics	3	Zool. 1—Prin. of Animal Biology	4
Chem. 1a—Genl. Chemistry	5	Chem. 1b—Genl. Chemistry	5
or		or	
Chem. 4a—Genl. Chemistry	4	Chem. 4b—Genl. Chemistry	4
M. S. 1a—1st Yr. Basic	2	M. S. 1b—1st Yr. Basic	2
Physical Education	0	Physical Education	0
	18 or 19		19 or 20

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Bot. 1—Genl. Botany	4	Agron. 10—Soils	3
Econ. 51—Prin. of Economics	3	Fm. Ec. 1—Agr. Economics	3
Chem. 37—Organic Chemistry	4	A. I 81—Prin. Animal Nutr.	3
Fm. Eng. 1—Mech. of Farmstead	3	Bact. 52—Genl. Bacteriology	4
A. I. 61—Genetics	3	M. S. 6b—2nd Yr. Basic	2
M. S. 6a—2nd Yr. Basic	2	Electives	3
	19		18

JUNIOR AND SENIOR YEARS

	Crs.
*An. Path. 51, Animal Hygiene	3
*Fm. Ec. 110—Farm Management	3
M. & R. F. 100—Agricultural Marketing	3
Eng. or Journ.	3
A. I 2, 22, 23, or 44,.. Judging	2 or 3
Electives in Group A	6
Minimum option requirement (Courses in either Animal Husbandry, Dairy or Poultry, not open to freshmen)	14
Additional courses in Agriculture (total of 60 required)	7 to 14
Electives	16
Total	136

* Not required in the Dairy Manufacturing option.

The following options are available for students in the animal industry curriculum:

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.

Dairy Manufactures. Specialized instruction is offered in processing and marketing milk, butter, cheese, and ice cream, and the relation of microbiology to these products.

Dairy Production. Courses in dairying place special emphasis on technical subject matter as a supplement to practical experience. In this option instruction is offered in breeding, selection, feeding, and management of dairy cattle.

Poultry. The poultry option offers instruction in breeding, culling and selection, incubation and brooding, rearing of chicks, hatchery management, feeding, disease control, and marketing poultry products.

Curriculum in Horticulture Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Bot. 1—General Botany	4	Bot. 2—Genl. Botany	3
Geol. 3—Elem. Geology	3	Hort. 1—Genl. Horticulture	3
Eng. 1a—English Composition	3	Eng. 1b—English Composition	3
Math. 1—Basic Mathematics	3	Chem. 4a—Genl. Chemistry	4
M. S. 1a—1st Yr. Basic	2	Agr. Ent. 1—Agr. Entomology	3
Zool. 1—Prin. of Animal Biology	4	M. S. 1b—1st Yr. Basic	2
Physical Education	0	Physical Education	0
	19		18

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Econ. 51—Prin. of Economics	3	Fm. Ec. 1—Agr. Economics	3
Chem. 4b—Genl. Chemistry	4	Chem. 37—Organic Chemistry	4
Agron. 1—Elem. Farm Crops	3	Agron. 10—Soils	3
Bact. 52—Prin. of Bacteriology	4	Agron. 11—Soils Laboratory	2
M. S. 6a—2nd Yr. Basic	2	Agron. 23—Plant Pathology	4
		M. S. 6b—2nd Yr. Basic	2
	16		18

JUNIOR AND SENIOR YEARS

	Crs.
Hort. 102—Prin. of Spray Prac.	2
M. & R. F. 100—Agricultural Marketing	3
Group A Electives	6
Minimum option requirement (Courses in Pomology and Vegetable Gardening not open to freshmen)	14
Electives in agriculture (Subject to approval of major advisor)	20
Free Electives	21
Total	136

Curriculum in Ornamental Horticulture Leading to the Degree Bachelor of Science in Agriculture

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Art 61—Drawing	3	Art Elective	3
Bot. 1—Genl. Botany	4	Bot. 2—Genl. Botany	3
Eng. 1a—English Composition	3	Eng. 1b—Eng. Composition	3
Agr. Ent. 1—Agricul. Entomology	3	Math. 1—Basic Mathematics	3
En. Dr.fl 2—Mech. Drawing	1	Hort. 1—Genl. Hort.	3
M. S. 1a—1st Yr. Basic	2	M. S. 1b—1st Yr. Basic	2
Physical Education	0	Physical Education	0
	16		17

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Econ. 51—Prin. of Economics	3	Chem. 4b—Genl. Chemistry	4
Chem. 4a—Genl. Chemistry	4	Agron. 10—Soils	3
Geol. 3—Elem. Geology	3	Agron. 11—Soils Laboratory	2
Fm. Eng. 1—Mech. of Farmstead	3	Fm. Ec. 1—Agr. Economics	3
M. S. 6a—2nd Yr. Basic	2	Hort. 20—Floriculture	2
Electives	2	M. S. 6b—2nd Yr. Basic	2
	17		16

JUNIOR AND SENIOR YEARS

	Crs.
Hort. 102—Prin. of Spray Prac.	2
Agron. 23—Plant Pathology	4
Agron. 111—Soil Conservation	3
Agr. Ent. 103—Economic Entomology	3
Hort. 120—Landscape Gardening	3
Hort. 121—Adv. Landscape Gardening	3
Hort. 122—Floriculture	2
Hort. 123—Plant Propagation	3
Hort. 124a-c—Special Problems	9
Hort. 125—Plants and Planting Material	2
Electives in Agriculture	7
Electives	31
Total	136

*Curriculum in Vocational Agriculture Leading to the Degree Bachelor of Science in Agriculture

Requirements in the freshman and sophomore years are the same as those in the General Curriculum.

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Fm. Ec. 110—Farm Management	3	Bact. 52—Prin. of Bacteriology	4
M. & R. F. 100—Agri. Marketing	3	Group A electives	6
Group A electives	3	Fm. Eng. 4—Farm Shop	3
Fm. Eng. 3—Farm Structural Eng.	3	Electives	4
Electives	5		
	17		17

SENIOR YEAR

Either Semester: Ag. Ed. 181	15
Ag. Ed. 182	3

Electives, 17 credits in the semester in which education is not taken.

* A student may qualify to teach vocational agriculture by taking the curriculum in Animal Industry or the curriculum in Horticulture, with the slight adaptation suggested by his advisor. The same education courses will be required as above.

The 60 semester credits in agriculture should be approximately as follows: Crops, 9; soils, 6; horticulture, 6; animal industry, 21; agricultural entomology, 4; farm shop, 6; agricultural economics, 3; farm management, 3; marketing, 3.

The Group A electives from which 9 credits must be selected are the same as those listed in the General Curriculum.

Summary of the Vocational Agriculture Curriculum

The Group A electives from which 9 credits must be selected are the same as those listed in the General Curriculum.

Summary of the Vocational Agriculture Curriculum

	Crs.
Required courses in agriculture	33
Electives in agriculture (including Farm Engineering 3 and 4)	27
Group A electives	9
	45
Required courses in other subjects (not education)	
Education	*21
Other credits	1
	136

* In addition to the 18 credits listed in the senior year, Ag. Ed. 179, Determining Content, is to be taken in the first 2½ weeks of the summer school.

PRE-PROFESSIONAL PROGRAMS

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.

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 farm economics, markets and rural finance, and rural sociology.

Pre-Forestry. A general two-year plan of study which will satisfy a majority of the requirements of most professional forestry schools is available to students in the College of Agriculture and Home Economics. Advanced work in wood utilization is also available for such students as may choose to remain in the college beyond the sophomore year. The prospective student should consult with the Forestry Section regarding specialized requirements of the college at which he plans to obtain a degree.

Pre-Forestry Curriculum

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Bot. 1—General Botany	4	Bot. 2—General Botany	3
Chem. 1a—General Chemistry	5	Chem. 1b—General Chemistry	5
English 1a—English Composition	3	Eng. 1b—English Composition	3
Math. 17—College Algebra	3	Math. 3—Plane Trigonometry	3
For. 1—Elements of Forestry	3	Agr. Ent. 1—Agri. Entomology	3
M. S. 1a—First Year Basic	2	M. S. 1b—1st Year Basic	2
Physical Education	0	Physical Education	2
	20		19

SOPHOMORE YEAR

Course	Crs.	Course	Crs.
Chem. 37—Organic Chemistry	4	Agron. 10—Soils	3
		Agron. 11—Soils Laboratory	2
For. 10—Elements of Forest Mensuration	3	Bot. 19—Dendrology	2
En. Dr. 1a—Elem. Eng. Draw.	2	C. E. 12—Plane Surveying	3
Geol. 3—Elem. Geology	3	Eng. 6—Essentials of Speech	3
Phys. 51a—Intro. to Physics	3	For. 20—Seeding and Planting	3
M. S. 6a—2nd Year Basic	2	M. S. 6b—2nd Year Basic	2
	17		18

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

Pre-Veterinary. 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 two years of college work, some colleges requiring more. In general, the requirements include general chemistry, one year; English composition, one year; introductory zoology, one year; hygiene and social sciences, one year. Recommended courses include foreign language, advanced chemistry, history, political science, botany, mathematics, psychology, English literature, speech, physics, animal husbandry, and crops.

Short Courses

Short courses, conferences, and workshops, ranging in duration from one day to one week, are held for those interested in various phases of agriculture.

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.

Requirements for Graduation in Home Economics

To receive the degree Bachelor of Science in Home Economics a student is required to gain a total of 136 semester credits and 136 points. These represent the minimum requirements for graduation. There are six curricula in home economics and a student who completes the requirements of any one of these qualifies for the degree. In all casss the student is responsible for meeting requirements for graduation.

Home Economics offers education for home and family living in a contemporary society. It includes liberalizing courses in the arts, humanities, and sciences as well as technical education in the subject matter of the profession. The student in home economics receives the type of education which gives an understanding of citizenship in a community and responsibility in the family. Home economics also provides education for some of the professions that deal with the home and family living. To that end, curricula are planned to serve as guides for major emphasis in specialized fields of work.

Faculty advisors are appointed by the Dean to assist students with their academic problems. These include choice of a curriculum, selection of elective courses, preparation of class schedules, and problems of employment. The normal academic load is 17 credits per semester. The maximum load is 23 credits and the minimum load for a full-time student is 12 credits.

Transfer students are required to take a minimum of 17 credits of home economics in the University.

The general curriculum in home economics meets the needs of most students and provides the basic requirements for the curricula in major fields. It enables the student to obtain a general education and at the same time pursue some specialization in a chosen field of home economics. Certain courses are required of all students while others are elective. The courses required for graduation are listed the order they would normally be taken by students entering in the fall semester; some modification will be necessary for those entering in the spring or summer. Changes in a curriculum

to meet specific needs may be made if approved in accordance with the rules of the University Faculty.

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

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
Art 30—Intro. to Art	2	Eng. 1b—English Composition	3
*Eng. 1a—English Composition	3	H. E. 6—Foods	3
H. E. 5—Foods	4	H. E. 52—Intro. to Child Devl.	4
H. E. 51—Health of the Family	3	H. E. 26—Clothing Selection and Costume Design	3
**Psy. 1a—Intro. to Psych.	3	**Soc. 1—Intro. to Sociol. (or)	3
H. E. 25—Textiles	2	R. S. 10—Rural Sociology	3
Physical Education	0	Physical Education	0
	17		16

* The requirement in whole or in part for English 1a and 1b may be satisfied without credit by passing a departmental proficiency examination. It is recommended that students deficient in English, as indicated by the freshman tests, take English D (with no credit) before taking English 1a.

** Students deficient in mathematics, as indicated by the freshman tests, are required to pass Mathematics 1 with a grade of C before taking chemistry and should postpone either psychology of sociology.

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
*Chem. 4a—Genl. Chemistry	4	*Chem. 4b—Genl. Chemistry	4
A. & P. 5—Physiology	3	H. E. 11—Food and Nutrition	3
Econ. 51—Prin. of Econ.	3	H. E. 61—Housing	4
Hum. D—Art	2	Journalism of Oral English	3
Electives	5	Electives	3
	17		17

* Students planning to elect curricula which require advanced courses in chemistry (except Chemistry 37) should take Chemistry 1a and 1b.

JUNIOR AND SENIOR YEARS

	Crs.
H. E. 102—Dietetics	3
H. E. 129—Interior Decoration	3
H. E. 154—Family Living	4
H. E. 161—Consumer Problems	3
H. E. 162a, b—Home Management	5
Phys. 51a—Intro. to Phys.	3
Home Economics electives	18
Area electives	24
Free electives	3
	67
Total required for graduation	136

Curricula for Majors

In addition to the general curriculum, provision is made for majors in the following fields: (1) Child Development and Family Living; (2) Clothing, Costume Design, Textiles, and Interior Decoration; (3) Home Economics Extension; (4) Institution Economics; and (5) Vocational Home Economics.

Curriculum in Child Development and Family Living Leading to the Degree Bachelor of Science in Home Economics

This curriculum prepares a student for homemaking, nursery school teaching fellowships, or future specialization in the field of child development and family living.

	Crs.
Basic courses (see general curriculum)	80
Major electives in home economics	18
Select, with the advice of the major adviser, at least 18 credits from this group:	
H. E. 27—Clothing Construction	4
H. E. 150—Tech. of Guidance for Pre-School Child	4
H. E. 152—Child Care and Development	3
H. E. 155—The Child and His Clothing	3
H. E. 156—Play and Play Materials	2
H. E. 157—Infant Development	2
H. E. 158—Infant Nutrition	2
H. E. 159a-c—Special Problems	6
Major electives in supporting fields	24
Select, with the advice of the adviser, at least 24 credits of the following:	
Education	
Sociology	
Psychology	
Library Science	
Free Electives	14
Total	136

Curriculum in Clothing, Costume Design, Textiles, and Interior Decoration, Leading to the Degree Bachelor of Science in Home Economics

This curriculum is designed for students who are interested in greater concentration of study than is possible in the general curriculum. Those desiring professional or business careers will find in this curriculum an opportunity to prepare for the teaching of home economics as well as to prepare for careers in commercial fields.

	Crs.
Basic courses (see general curriculum)	80
Major electives in home economics	18
Select with advice of the major adviser, at least 18 credits from this group. The ones starred are required.	
*H. E. 27—Clothing Construction	4
*H. E. 125—Adv. Textiles	2
H. E. 126—Costume Design	3
*H. E. 127—Adv. Clothing	3
H. E. 130—Int. Decoration Projects	2
H. E. 135—Decorative Textiles	2
H. E. 137—Tailoring	2
*H. E. 134—Economics of Clothing	2
H. E. 139—Adv. Interior Decoration	2
H. E. 155—The Child and His Clothing	2
H. E. 128a-c—Special Problems	6
H. E. 136a-c—Special Problems	6
Major electives in supporting fields	24
Select, with the advice of the major adviser, at least 24 credits from this group:	
Education, Art, Journalism, Radio, History, Commerce.	
Free electives	14
Total	136

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

Basic courses (see general curriculum)	80
Electives in home economics	18
Select with advice of the major adviser at least 18 credits from the following:	
(Starred courses are required)	
H. E. 27—Clothing Construction	4
*H. E. 73—Farm Home Problems	4
H. E. 127—Adv. Clothing	3
H. E. 130—Interior Decoration Projects	2
H. E. 137—Tailoring	2
H. E. 152—Child Care and Development	3
H. E. 175—Rural Community Analysis	3
H. E. 105a-c—Experimental Cookery	3
H. E. 114—Food Preservation	3
Major electives in supporting areas	24
Select with the advice of the major adviser at least 24 credits for this group:	
Agricultural Extension, Art, Education, English, Farm Engineering, History, Horticulture, Physical Education.	
Free electives	14
Total	136

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

	Crs.
Basic courses (see general curriculum)	80
Major electives in Home Economics	18
Select with the advice of the major adviser at least 18 credits from this group:	
H. E. 41—Institution Marketing	3
H. E. 42—Institution Foods	4
H. E. 140—The School Lunch	3
H. E. 141—Institution Org. and Mgt.	3
H. E. 142a—Inst. Administration	2
H. E. 143—Inst. Equipment	3
H. E. 149a-c—Special Problems	6
H. E. 103—Community Nutr.	3
H. E. 105a—Experimental Cookery	3
H. E. 106a-d—Field Work in Nutrition	4
H. E. 107—Workshop in Nutrition	4
H. E. 111—Adv. Nutrition	4
H. E. 112—Nutrition in Disease	4
H. E. 114—Food Preservation	3
Major electives in supporting fields	24
Select with the advice of the major adviser at least 24 credits from the following:	
Chemistry, Biology, Psychology, Education	
Free Electives	14
Total	136

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

Requirements in the freshman year are the same as those in the General Curriculum.

SOPHOMORE YEAR

FIRST SEMESTER Course	Crs.	SECOND SEMESTER Course	Crs.
Chem. 4a—Genl. Chemistry	4	Chem. 4b Genl. Chemistry	4
A. & P. 5—Physiology	3	H. E. 11—Foods and Nutrition	3
Econ. 51—Prin. of Econ.	3	H. E. 61—Housing	4
H. E. 27—Clothing Construction	4	Journalism and Oral English	3
Electives	3	Electives	3
	17		17

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Crs.	Course	Crs.
H. E. 102—Dietetics	3	Ed. 160—Tech. Teach. H. E.	3
H. E. 127—Adv. Clothing	3	H. E. 162a—Home Management Lect.	2
H. E. 129—Interior Decoration	3	H. E. 130—Interior Dec. Proj.	2
H. E. 161—Consumer Problems	3	Bact. 2—Bacteriology	4
Ed. 147—The Secondary School Pupil	2	Electives in history, government, language, mathematics, or music	3
Electives in history, government, language, mathematics, or music	3	Elective	3
	17		17

SENIOR YEAR

	Crs.
*H. E. 162b—Home Management Laboratory	3
*H. E. 175—Rural Community Analysis	3
*Ed. 101—School Organization	3
*Ed. 162—Student Teaching in H. E.	7
*Ed. 165—Adult Ed. in H. E.	3
H. 154—Family Living	4
H. E. 140—School Lunch	3
Electives	7
	33
Total	136

* Should be scheduled the same semester; either semester in senior year.

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 1918 by the consolidation of the College of Civil Engineering which was established in 1889, the College of Mechanical and Electrical Engineering established in 1891, and the College of Mining Engineering established in 1901.

The purpose of the College of Engineering is, first, to provide engineering education; second, to promote the development and utilization of the state's resources through organized research and through consultation with industry.

Students receive training in the fundamental and applied sciences in preparation for careers in their chosen branches of engineering. They receive instruction intended to develop a strong professional consciousness and they are encouraged to broaden their education by including courses in the fields of the humanities and social sciences as a part of their elective work.

The College endeavors to keep before its students the latest developments in science with a practical engineering approach to new problems, and promotes engineering research which deals with basic knowledge put to useful purposes. Students are trained to meet the high standards of ethics required of the professional engineer and to appreciate the moral responsibility of the engineer for the effects caused by the uses or misuses of his scientific inventions.

The physical plant consists of Anderson Hall, the Mining, Aeronautical, Highway, and Coal Research Laboratories; and also a temporary classroom and laboratory building. The College is engaged in a number of research projects, and students interested in such investigation will have ample opportunity to engage in work along the lines of their special fields of interest.

Admission. In addition to meeting the general requirements for admission to the University, the applicant for admission to the freshman class of the College of Engineering shall include in high school credits one unit of plane geometry and one and one-half units of algebra. It is recommended that the student offer one-half unit in solid geometry, otherwise this subject will be added to the requirements of the freshman year.

Students whose scores on the University classification tests are in the lower one-fourth, or those lacking in the requirements for algebra, may enter the College of Engineering. The schedules of such students will be adjusted in accordance with their placement test as directed by a special orientation committee of the College of Engineering and the Personnel Office.

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 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 140 semester 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.

Outline of the First Two Semesters 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 semesters of all engineering curricula are essentially the same.

FRESHMAN YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. —Introduction to Engineering	0	Assem. 2—Engineering Problems	1
English 1a—English Composition	3	English 1b—English Composition	3
Math. 17—College Algebra	3	Math. 19—Plane Analytic Geometry	3
Math. 18—Plane Trigonometry	3	Chem. 2b—Genl. Chem. for Engr.	4
Chem. 2a—Genl. Chem. for Engr.	4	Eng. Draw. 1b—Descriptive Geometry	2
Eng. Draw. 1a—Elementary Engineering Drawing	2	*Non-Technical Elective	3
Military Science 1a	2	Military Science 1b	2
Physical Education	0	Physical Education	0
	17		18

Note.— Students expecting to take Mining or Metallurgical Engineering should take Chemistry 1a and 1b instead of Chemistry 2a and 2b.

In lieu of non-technical elective in the second semester of the freshman year, students in Metallurgical Engineering will take Met. Eng. 27, General Elementary Metallurgy, and students in Mining Engineering will take Civ. Eng. 12, Plane Surveying.

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

SOPHOMORE YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 3a—Class Society	0	Assem. 3b—Class Society	0
Math. 20a—Differential Calculus	4	Math. 20b—Integral Calculus	4
Physics 3a—General College Physics	6	Physics 3b—General College Physics	6
Civ. Eng. 12—Plane Surveying	3	Applied Mech. 3—Statics	3
**Civ. Eng. 18—Mapping and Topographic Drawing	2	Civ. Eng. 16a—Route Surveying	3
*Political Science 51—American Government	3	†English 30—Business English	2
Military Science	2	Military Science	2
Physical Education	0	Physical Education	0
	20		20

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

** Students expecting to take the Architectural Engineering Option should take Art 61 instead of Civ. Eng. 18.

† Students in Architectural Engineering Option should take Arch. Eng. 1 instead of Engl. 30.

OPTION ONE

General Civil Engineering

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Applied Mech. 100—Strength of Materials	4	Applied Mech. 4—Dynamics	2
Civ. Eng. 81—Testing Materials	1	Civ. Eng. 171b—Theory of Structures	3
Civ. Eng. 171a—Theory of Structures	3	Civ. Eng. 31—Highway Location, Const. and Maintenance	2
Civ. Eng. 174—Graphic Solutions	2	Mech. Eng. 134—Elements of Engineering Thermodynamics	3
Geology 12a—Elementary Geology for Engineers	3	Geology 12b—Elementary Geology for Engineers	3
Civ. Eng. 49—Railroad Const. and Maintenance	2	Civ. Eng. 173a—Steel Structures	3
Elec. Eng. 101—Fundamentals of Electrical Machinery	3	*Commerce 7a—Principles of Accounting	4
*Econ. 51—Principles of Economics	3		
	21		20

SUMMER TERM

Surveying Camp (6 weeks)

	Crs.
Civ. Eng. 15—General Surveying	3
Civ. Eng. 16b—Route Surveying	3
Civ. Eng. 17—Hydrographic Surveying	1

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Civ. Eng. 110a—Reinforced Concrete	4	Civ. Eng. 110b—Reinforced Concrete	3
Civ. Eng. 114—Advanced Surveying	3	Civ. Eng. 23—Seminar	1
Civ. Eng. 32—Streets and Pavements	2	Civ. Eng. 173b—Steel Structures	2
Civ. Eng. 37—Highway Materials	2	Civ. Eng. 151—Water Supply and Waterworks	2
Arch. Eng. 7—Building Construction	3	Civ. Eng. 152—Sewers and Sewage Disposal	2
Civ. Eng. 120—Hydraulics	2	Civ. Eng. 159—Design and Operation of Waterworks and Sewers	2
Civ. Eng. 123—Hydraulics Laboratory	1	Civ. Eng. 107—Soil Mechanics	3
*Non-Technical Elective	3	*Eng. Adm. 102—Engineering Administration	3
	20		18

OPTION TWO

Architectural Engineering

(For Freshman and Sophomore Years see page 99.)

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Applied Mech. 100—Strength of Materials	4	Civ. Eng. 171b—Theory of Structures	3
Arch. Eng. 8—Theory of Architecture	2	Civ. Eng. 173a—Steel Structures	3
Civ. Eng. 171a—Theory of Structures	3	Arch. Eng. 4b—Architectural Design	3
Civ. Eng. 174—Graphic Solutions	2	Art — History of Architecture	2
Arch. Eng. 4a—Architectural Design	3	Arch. Eng. 5—Building Equipment	2
Arch. Eng. 7—Building Construction	3	Elec. Eng. 101—Fundamentals of Electrical Machinery	3
Art 30—Introduction to Art	2	Art 62—Basic Design	3
*English 30—Business English	2	Civ. Eng. 81—Testing Materials	1
	21		20

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

SUMMER TERM

Surveying Camp—6 weeks

	Crs.
Civ. Eng. 15—General Surveying	3
Civ. Eng. 16b—Route Surveying	3
Civ. Eng. 17—Hydrographic Surveying	1

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Civ. Eng. 110a—Reinforced Concrete	4	Civ. Eng. 110b—Reinforced Concrete	3
Arch. Eng. 6a—Advanced Architectural Design	4	Arch. Eng. 6b—Advanced Architectural Design	4
Mech. Eng. 116—Elementary Heat., Ventil. and Air Cond.	3	*Econ. 51—Principles of Economics	3
*Civ. Eng. 120—Hydraulics	2	Civ. Eng. 23—Seminar	1
*Civ. Eng. 123—Hydraulics Laboratory	1	Civ. Eng. 173b—Steel Structures	2
Fire Prot. and Safety Eng. 101a—Fire Protection Eng.	2	Mech. Eng. 110—Heating and Ventilating Design	1
*Non-Technical Elective	3	Eng. Adm. 102—Engineering Administration	3
	19		17

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

For first two semesters see p. 99.

SOPHOMORE YEAR

(Common to Communication and Power Options)

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 3a—Class Society	0	Assem. 3b—Class Society	0
Physics 3a—General College Physics	6	Physics 3b—General College Physics	6
Math. 20a—Differential Calculus	4	Math. 20b—Integral Calculus	4
Civ. Eng. 12—Plane Surveying	3	Elec. Eng. 21—Principles of Electrical Engineering	4
Elec. Eng. 11—Electrical Laboratory	1	Applied Mech. 6—Mechanisms	2
Mech. Eng. 15a—Manufacturing Processes	2	Applied Mech. 3—Statics	3
Met. Eng. 26—Engineering Metallurgy	2	Military Science	2
Military Science	2	Physical Education	0
Physical Education	0		
	20		21

JUNIOR YEAR

(Common to Communication and Power Options)

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Elec. Eng. 114—A. C. Circuits	4	Elec. Eng. 116—A. C. Machinery	4
Elec. Eng. 115—D. C. Machinery	3	Elec. Eng. 110—Electrical Laboratory	2
Mech. Eng. 134—Elements of Engineering Thermodynamics	3	Elec. Eng. 120—Electrical Circuit Analysis	3
Applied Mech. 100—Strength of Materials	4	Elec. Eng. 161—Electronics	4
Civ. Eng. 81—Testing Materials	1	*Mech. Eng. 108—Internal Combustion Engines	3
Math. C105a—Differential Equations	2	*R. L. 5b—Elementary Spanish	3
*R. L. 5a—Elementary Spanish	3		
	20		19

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

OPTION ONE

Communications and Electronics Engineering

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Elec. Eng. 151a—Seminar	1	Elec. Eng. 151b—Seminar	1
Elec. Eng. 107—Elec. Controls	3	Elec. Eng. 108—Industrial Electronics	3
Elec. Eng. 135—Electrical Networks	4	*Civ. Eng. 120—Hydraulics	2
Elec. Eng. 162—Radio Engineering I	4	*Civ. Eng. 123—Hydraulics Laboratory	1
*English 30—Business English	2	*Eng. Adm. 102—Engineering Administration	3
*Geography 10—Economic Geography Survey	3	Non-Technical Elective	3
Applied Mech. 4—Dynamics	2	Elec. Eng. 164—Radio Engineering II	4
		Elec. Eng. 165—Radio Engineering—Fundamentals of Electric Waves	2
	19		19

OPTION TWO

Electric Power Engineering

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Elec. Eng. 151a—Seminar	1	Elec. Eng. 151b—Seminar	1
Elec. Eng. 107—Electrical Controls	3	Elec. Eng. 108—Industrial Electronics	3
Elec. Eng. 135—Electrical Networks	4	*Civ. Eng. 120—Hydraulics	2
*English 30—Business English	2	*Civ. Eng. 123—Hydraulics Laboratory	1
*Geography 10—Economic Geography Survey	3	*Eng. Adm. 102—Engineering Administration	3
Applied Mech. 4—Dynamics	2	Non Technical Elective	3
**Elec. Eng. Elective	4	**Elec. Eng. Elective	6
	19		19
**Elec. Eng. 111—Advanced Electrical Laboratory	1	**Elec. Eng. 124—Electrical Design	2
**Elec. Eng. 117—Advanced A. C. Machinery	3	**Elec. Eng. 136—Illumination Engineering	3
**Elec. Eng. 118—Electrical Power Plant Equipment	3	**Elec. Eng. 137—Electric Power Transmission and Distribution	3
**Elec. Eng. 123—Electrical Equipment Problems	2		

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

** Electric Power Courses (Electives).

Note.—With approval of the Department a student of high standing and special ability may substitute Elec. Eng. 152 (special problems) or appropriate courses in Physics for as much as 3 semester hours of the required Electrical Engineering credits.

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

For first two semesters see p. 99.

SOPHOMORE YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 3a—Class Society	0	Assem. 3b—Class Society	0
Physics 3a—General College Physics	6	Physics 3b—General College Physics	6
Math. 20a—Differential Calculus	4	Math. 20b—Integral Calculus	4
Eng. Draw. 18—Advanced Engineering Drawing	2	Met. Eng. 37—Adaptive Metallurgy for Engineers	4
Mech. Eng. 15a—Manufacturing Processes	2	Mech. Eng. 15b—Manufacturing Processes	2
Eng. Draw. 12—Graphical Computations	2	Applied Mech. 3—Statics	3
*Psychology 1a—Introduction to Psychology	3	Military Science	2
Military Science	2	Physical Education	0
Physical Education	0		
	21		21

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Math. C105a—Differential Equations	2	Mech. Eng. 100a—Machine Design	3
Applied Mech. 2—Mechanisms	3	Mech. Eng. 104b—Engineering Thermodynamics	3
Applied Mech. 7—Dynamics	3	Mech. Eng. 107—Fluid Mechanics	3
Applied Mech. 100—Strength of Materials	4	Mech. Eng. 112—Mechanical Laboratory	2
Mech. Eng. 104a—Engineering Thermodynamics	3	Elec. Eng. 105b—Electrical Engineering Circuits and Machinery	4
Elec. Eng. 105a—Electrical Engineering Circuits and Machinery	4	Civ. Eng. 12—Plane Surveying	3
Civ. Eng. 81—Testing Materials	1	*Sociology 25—Collective Behavior	3
	20		21

OPTION ONE

General Mechanical Engineering

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Mech. Eng. 109—Refrigeration	3	Mech. Eng. 105—Power Plant Engineering	3
Mech. Eng. 100b—Machine Design	3	Applied Mech. 107—Mechanical Vibrations	4
Mech. Eng. 114a—Air Conditioning, Heating, and Ventilating	3	Mech. Eng. 114b—Air Conditioning, Heating, and Ventilating Design	3
Mech. Eng. 129—Elements of Heat Transfer	4	Mech. Eng. 108—Internal Combustion Engines	3
Mech. Eng. 113a—Mechanical Laboratory	2	Mech. Eng. 113b—Mechanical Laboratory	2
Mech. Eng. 122a—Seminar	1	Mech. Eng. 122b—Seminar	1
Econ. 51—Principles of Economics	3	*Eng. Adm. 102—Engineering Administration	3
Mech. Eng. 136—Internal Combustion Engine Lab.	1		
	20		19

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

OPTION TWO

Aeronautical Engineering

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Mech. Eng. 130—Applied Aerodynamics	3	Mech. Eng. 135—Experimental Aerodynamics	3
Mech. Eng. 13a—Airplane Design	3	Mech. Eng. 131b—Airplane Design	3
Mech. Eng. 129—Elements of Heat Transfer	4	Mech. Eng. 108—Internal Combustion Engines	3
Mech. Eng. 100b—Machine Design	3	Mech. Eng. 113b—Mechanical Laboratory	2
Mech. Eng. 113a—Mechanical Laboratory	2	Applied Mech. 107—Mechanical Vibrations	4
Mech. Eng. 122a—Seminar	1	Mech. Eng. 122b—Seminar	1
Econ. 51—Principles of Economics	3	*Eng. Adm. 102—Engineering Administration	3
Mech. Eng. 136—Internal Combustion Engine Lab.	1		
	20		19

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

For first two semesters see p. 99.

SOPHOMORE YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 3a—Class Society	0	Assem. 3b—Class Society	0
Math. 20a—Differential Calculus	4	Chem. 21a—Quantitative Analysis	5
Physics 3a—General College Physics	6	Math. 20b—Integral Calculus	4
Met. Eng. 29—Metallurgy of the Ferrous Metals	3	Physics 3b—General College Physics	6
Elective	3	Met. Eng. 128—Metallurgy of Non-Ferrous Metals	3
Military Science	2	Military Science	2
Physical Education	0	Physical Education	0
	18		20

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Chem. 147a—Physical Chemistry for Engineers	4	Chem. 147b—Physical Chemistry for Engineers	4
Physics 123a—Heat and Thermodynamics	3	Physics 123b—Heat and Thermodynamics	3
Elec. Eng. 101—Fundamentals of Electrical Machinery	3	Elec. Eng. 102—Electrical Machinery	2
Met. Eng. 140—The Science of Metals	3	Met. Eng. 144—Ferrous and Non-Ferrous Metallography	3
Econ. 51—Principles of Economics	3	Met. Eng. 166—Minerals Beneficiation	5
*German 1a—Elementary German	3	Met. Eng. 167—Minerals Beneficiation Laboratory	1
		*German 1b—Simple Reading and Pronunciation	3
	19		21

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

SUMMER TERM

(To be taken between Junior and Senior Year)

	Crs.
Met. Eng. 60—Metallurgical Laboratory and Shop Practice	6
	6

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 5a—Class Society	0	Assem. 5b—Class Society	0
Applied Mech. 3—Statics	3	Applied Mech. 100—Strength of Materials	4
Physics 119—X-rays and Crystal Structure	3	Met. Eng. 132—Metallurgical Calculations	5
Met. Eng. 121—Fuel and Metallurgical Laboratory	2	Met. Eng. 143b—Physics of Metals	3
Met. Eng. 142—Heat Treatment	3	Met. Eng. 175b—Seminar	1
Met. Eng. 143a—Physics of Metals	3	*German 21b—Readings in Chemical German	3
Met. Eng. 175a—Seminar	1	*Commerce 109b—Business Law	3
*German 21a—Readings in Chemical German	3		
*Commerce 109a—Business Law	3		
	21		19

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

For first two semesters see p. 99.

SOPHOMORE YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 3a—Class Society	0	Assem. 3b—Class Society	0
Math. 20a—Differential Calculus	4	Chem. 21a—Quantitative Analysis	5
Physics 3a—General College Physics	6	Math. 20b—Integral Calculus	4
Geology 12a—Elementary Geology for Engineers	3	Physics 3b—General College Physics	6
Met. Eng. 26—Engineering Metallurgy	2	Geology 12b—Elementary Geology for Engineers	3
*English 30—Business English	2	Military Science	2
*Lib. Sci. 25—Use of Library	1	Physical Education	0
Military Science	2		
Physical Education	0		
	20		20

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

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Assem. 4a—Class Society	0	Assem. 4b—Class Society	0
Applied Mech. 3—Statics	3	Applied Mech. 100—Strength of Materials	4
Min. Eng. 126—Elements of Mining	5	Met. Eng. 121—Fuel and Metallurgical Laboratory	2
Elec. Eng. 101—Fundamentals of Electrical Machinery	3	Met. Eng. 166—Minerals Beneficiation	5
Econ. 51—Principles of Economics	3	Met. Eng. 167—Minerals Beneficiation Laboratory	1
Geology 123a—Mineralogy	3	Elec. Eng. 102—Electrical Machinery	2
*English 6—Essentials of Speech	3	Elec. Eng. 103—Electrical Laboratory for Mining Engineers	1
		Geology 123b—Mineralogy	3
		*Geog. 10—Economic Geography Survey	3
	20		21

SUMMER TERM

(Surveying Camp—6 weeks)

Civ. Eng. 15—General Surveying	3
Civ. Eng. 16b—Route Surveying	3
Min. Eng. 131—Mine Surveying	7
	7

SENIOR YEAR

FIRST SEMESTER

	Crs.
Assem. 5a—Class Society	0
Min. Eng. 127a—Mining Techniques	5
Min. Eng. 130—Mine Administration	3
Min. Eng. 175a—Seminar	1
Civ. Eng. 81—Testing Materials	1
Civ. Eng. 171a—Theory of Structures	3
Civ. Eng. 174—Graphic Solutions	2
*Com. 109a—Business Law	3
*Econ. 102—Labor Problems	3
	21

SECOND SEMESTER

	Crs.
Assem. 5b—Class Society	0
Min. Eng. 127b—Mining Techniques	4
Min. Eng. 129—Mine Ventilation and Drainage	5
Min. Eng. 132—Mine Rescue Training and First Aid	0
Min. Eng. 175b—Seminar	1
Civ. Eng. 120—Hydraulics	2
Civ. Eng. 123—Hydraulics Laboratory	1
Mech. Eng. 100a—Machine Design or Mech. Eng. 134 Elements of Engineering Thermodynamics	3
*Com. 109b—Business Law	3
	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

Elvis J. Stahr, Jr., A.B., B.A. in Jur., B.C.L., M.A. (Oxon.), Dean

INTRODUCTORY STATEMENT

The College of Law was organized in 1908 and the first class graduated in June, 1910. It was the first law school in the State to become fully accredited. It has long been fully accredited by all agencies which establish standards for law schools, including the Court of Apeals of Kentucky, the Association of American Law Schools, the American Bar Association, the Regents of the University of the State of New York, and the Courts and Bar Examiners of all forty-eight states. The College is coeducational and a number of women have entered and graduated from it.

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, trusts, commercial law, constitutional law, taxation, labor law, criminal law and procedure, and administrative law. Nearly all 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. All have had successful experience in both the practice and the teaching of law.

The Library. The Law Library is one of the finest in the South, containing some thirty-six thousand carefully selected volumes. It 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, Hawaii 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 Public Utilities Commission, the U. S. Tax Court, the N.L.R.B., the S.E.C., the F.C.C., and the Court of Customs and Patent Appeals; the Philippine Reports; the Puerto Rican Reports; the Canal Zone Reports; the English Reports; the Canadian Reports; the Irish Reports; the Australian Reports; the New Zealand Reports; the South African Reports; sets of the (English) Law Journal, Law Times and Times Law Reports; and sets of Law Times and the Journal of Comparative Legislation (legal periodicals). 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 all major legal reference works and sets of annotated cases, together with American digests, including the American Digest System, the Supreme Court Digest, the digests of Ken-

tucky and New York, a number of English digests including the English and Empire Digest, and Shepard's Citations. The Library receives regularly some one hundred legal periodicals, twelve of which are from foreign countries, and has in excess of 1,500 bound volumes of legal periodicals. It also subscribes to several important loose-leaf "services."

One of the most valuable collections in the Library is a large number of volumes and periodicals from the private library of Albert Kocourek. This collection is largely in the field of legal history, legal philosophy, and Roman law, and effort is being made to enlarge it year by year.

The Law Building. The College of Law is housed in Lafferty Hall, one of the newer law school buildings in the nation. It is named for the first Dean of the College. The building is modern in architecture, being constructed on modified classical lines. It contains offices, classrooms, a court room, the entire Law Library, a large reading room, and a student lounge. Various other rooms are provided, such as an office for the Kentucky Law Journal. The building occupies a beautiful location, across the walk and to the northwest of the Margaret I. King Library.

Admission of Regular Students. The applicant for admission to the College of Law must have, in addition to the standard high school course that will satisfy the general requirements for admission to the University, at least two years of college credit (sixty semester hours). An academic standing of at least 1.3 (1.0 being a straight "C") or the equivalent, for all prelaw college work, is required. See statement, p. 16. Prospective law students should write the Dean requesting a copy of the College of Law bulletin.

Pre-Law Work. In order to meet the two years of college credit required for entrance, no special course is prescribed except six semester hours in English. See statement, p. 16. The credits obtained in the two years of college work that are required must be completed in residence and may be taken at the University of Kentucky or at any standard university or college. Not more than ten per cent of the pre-law work neceessary for admission may be in non-theory courses. Students who expect to study law are advised to lay special emphasis on courses in English and accounting. The study of at least two of the social sciences is also recommended. Those who would like special advice concerning their work are invited to communicate with the Dean.

In the case of veterans of the recent 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 sixty semester hours of college work. Veterans may present a total of eight semester hours in military training. In this event, however, no other non-theory courses will be allowed.

An applicant who already has an A.B. or B.S. degree may be accepted with less than the 1.3 standing. Beginning law students are accepted only for the first semester of the academic year, except that degree-holders may be admitted the second semester.

No beginning students are accepted for the summer session.

Effective in September, 1952, three years of college credit will be required for admission, except that an alternative plan of two years of prelaw and four years of law is being considered.

THE DEGREE OF BACHELOR OF LAWS

Not less than three academic years of residence and 82 semester hours of courses in the College of Law, with an academic standing of 1.0 or better, are required for the LL.B. degree after admission to the College of Law.

Summer Session

A number of courses in law are offered in the summer session of the University. Credit obtained in the summer session is counted toward a degree. One-half semester of credit and of residence may be acquired in each summer session.

ORDER OF THE COIF

Out of the 167 law schools in the nation, 38 have been granted chapters by the Order of the Coif. There has been a chapter at Kentucky since 1931. A chapter is granted upon 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. Membership in the Order is extended to students achieving outstanding success in legal scholarship.

THE KENTUCKY LAW JOURNAL

The Kentucky Law Journal, published by the College of Law since 1912, 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 Journal appears on all lists of outstanding legal periodicals. It is the tenth oldest of the 50 to 60 law reviews published by various American law schools.

LAW CLUBS

Eight Law Clubs are operated by the students, with the advice and assistance of the Faculty and other members of the bar, for the purpose of affording training and experience in competitive oral argument and brief-writing. The Clubs are named for Kentuckians who are or have been members of the United States Supreme Court. The students engage in annual series of legal arguments before practicing lawyers and argument before the Court of Appeals of Kentucky. They then participate in the National Moot Court Competition sponsored by the Association of the Bar of the City of New York.

Two of the leading national legal professional fraternities, Phi Delta Phi and Phi Alpha Delta, have active chapters at the Law School. Among their activities is the sponsorship of a Legal Forum each spring.

PRACTICE COURT

The College, more than thirty years ago, became the first law school in the country to make a Practice Court an integral part of the curriculum. Law students act as judges, counsel, witnesses, and jurors, and realistic trials are conducted weekly in the large court room in the Law Building. The trials are open to the student body. All trials are recorded on wire so that critiques may be conducted by the professor with the student lawyers.

LIBRARY SCHOLARSHIPS

A number of scholarships are available for second and third year students having high scholastic standings. $100 or more per year can be earned by a student holding a scholarship, through part-time work in the Law Library.

PRIZES

Each year two prizes of $150 and $50, respectively, are offered to those seniors in the College of Law who submit the best essays on some phase of Copyright law. The prizes are donated by the American Society of Composers, Authors, and Publishers.

Each year hundreds of dollars' worth of law books are available for award to students in the College of Law for outstanding work in a variety of phases of legal study and training. Last year more than thirty students participated in these awards.

COURSES OFFERED IN THE COLLEGE OF LAW

FIRST YEAR SUBJECTS

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

SECOND YEAR SUBJECTS

Property III
Constitutional Law
Equity I
Trial Procedure
Restitution
Negotiable Instruments
Public Utilities
Insurance
Equity II
Municipal Corporations
Evidence
Wills and the Administration of Estates
Damages

THIRD YEAR SUBJECTS

Corporations
Credit Transactions
Administrative Law
Practice Court
Taxation
Trusts
Legal Research and Writing
Labor Law
Trade Regulation
Workmen's Compensation
The Legal Profession
Property IV
Conflict of Laws
Legislation
Creditors Rights
Sales
Federal Procedure
Partnership
Kentucky Practice

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

Inasmuch as the requirements of the law school 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 and in Law 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. Detailed information as to the first three years of the combined program may be obtained from the Dean of the College of Arts and Sciences or the Dean of the College of Commerce.

DEGREES AND CURRICULA IN THE COLLEGE OF EDUCATION

Frank Graves Dickey, M.A., Ed.D., Dean

INTRODUCTORY STATEMENT

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 students an opportunity to equip themselves for the kind of educational work in which they are 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 various county boards 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.

In addition to the regular graduate programs in education, 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 6 semester hours in the summer before the internship begins in September, 9 semester hours in each semester during the internship, and 6 semester hours in the summer session following the internship the student can meet the requirements for the degree of Master of Arts in Education.

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 education 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 semester prior to the student's enrollment in student teaching. Candidates for student teaching are requested to file their applications the semester before they plan to do their student teaching.

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.

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 semester hours in education as prescribed 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 17 semester 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.

REQUIREMENTS FOR GRADUATION

The College of Education grants the Bachelor of Arts in Education degree to students who major in either elementary or secondary education.

ELEMENTARY EDUCATION

A student who majors in elementary education must complete a total of 128 semester hours, with a standing of 1.0, to be graduated.

		Crs.
I.	General Requirements	
	a. English, including composition, speech, English and American Literature	15
	b. Science	12
	c. Social Sciences, including American History, Kentucky History, European History, Sociology, and Geography	21
	d. Fine Arts, including public school music and public school art	6
	e. Psychology	6
	f. Nutrition	3
	g. Health and Physical Education	6
II.	Professional Preparation	
	a. Child Growth and the Curriculum	6
	b. Industrial Arts in the Elementary School	2
	c. Teaching Arithmetic in the Elementary School	3
	d. The Teaching of Reading	3
	e. Children's Literature	3
	f. Science in the Elementary School	3
	g. Student Teaching in the Elementary School	12
III.	Electives	27

SECONDARY EDUCATION

A student who majors in secondary education must complete 128 credits with a standing of 1.0 to be graduated. Majors in secondary education have the following options in the choice of curricula leading to certificates: (1) an area of concentration, (2) two majors, (3) one major and two minors, or (4) one major and one minor when the credit in both is 48 semester hours (54 semester hours when English is included as a major).

I. Teaching Majors, Minors, and Areas of Concentration

A major shall consist of 24 credits, except a major in English which shall require 30 credits.

A minor shall require 18 credits.

An area of concentration varies with the subjects. Usually it shall be 48 credits unless otherwise specified.

Subject fields in which majors may be chosen:

Art
Biological Sciences
Chemistry
Commerce
Economics and Sociology
French
Geography and Geology
German
History
History and Political Science
Latin
Library Science
Mathematics
Music
Physical Education
Physics
Political Science
Spanish
Speech and Dramatics (30 hrs.)
English (30 hrs.)

Subject fields in which minors may be chosen:

Art
Biological Sciences
Chemistry
Commerce
Dramatics
Economics
Economics and Sociology
English
French
Geography
Geography and Geology
Geology
German
History
History and Political Science
Journalism
Latin
Library Science
Mathematics
Music
Physical Education
Physics
Political Science
Psychology, Counseling and Guidance
Sociology
Spanish
Speech

Subject fields in which areas of concentration may be chosen:

Art
Business Education
English
Music
Health and Physical Education
Social Studies
Sciences
Languages

II. General Requirements

	Crs.
English, including composition, literature, and speech	12
Health, Physical Education, and Safety	2
Psychology	6
Group requirements	27

Each candidate must present not less than 27 credits distributed among three fields with not fewer than 6 credits in any field. Two of these three groups must be in fields different from the majors and minors or area of concentration. One group may be in the same field but not in the same subject as the major or one minor. The fields from which the 27 credits may be selected are:

Fine Arts (Music, Art, and Humanities D and E)
Foreign Languages (French, German, Italian, Latin, Russian, Spanish)
Mathematics (all mathematics courses except astronomy)
Philosophy and psychology (all courses taught in the Departments of Philosophy and Psychology)
Sciences (Anatomy & Physiology, Anthropology 1, 11, 111, Astronomy, Botany, Chemistry, Geology, Physics, Zoology)
Social Sciences (Anthropology (except 1, 11, 111), Economics, Geography, History, Political Science, Sociology)
Vocational Subjects (Agriculture, Commerce, Engineering, Home Economics, Journalism, Law, Library Science, Radio Arts)

III. Professional Preparation

For Subject Matter Majors	Crs.	For Business Education Majors	Crs.	For Art, Music, and P.E. Majors	Crs.
Ed. 35	2	Ed. 148	3	Ed. 148	3
Ed. 148	3	Ed. 104	3	Ed. C44	3
Ed. C147	3	Ed. 158a	3	*P.E. 60	3
Ed. 105	3	Ed. 158b	3	Ed. C147	3
St. Tchg.	9	Ed. 105	3	Ed. 105	3
		Ed. 193	9	St. Tchg.	8

*P.E. Majors take P.E. 60 instead of Ed. C44.

Suggested Courses for Undergraduate Majors

		Crs.
Agriculture		
Agron. 1	Elementary Farm Crops	3
A. I. 21	Farm Dairying	3
A. I. 1	Farm Livestock Production	3
A. I. 41	Farm Poultry Production	3
Hort. 1	General Horticulture	3
Fm. Eng. 1	Mechanics of the Farmstead	3
Rur. Soc. 10	Intro. to Rural Sociology	3
Fm. Ec. 1	Agricultural Economics	3
Agron. 10	Soils	3
Fm. Ec. 110	Farm Management	3
M. & R. F. 100	Agricultural Marketing	3
Fm. Eng. 3	Farm Structural Engineering	3
A. I. 81	Principles of Animal Nutrition	3
Fm. Eng. 4	Farm Shop	3
Art		
Art 10a, b	Public School Art	4
Art 35	Ancient Art	2
Art 36	Medieval Art	2
Art 140	Renaissance Art	3
Art 61a	Elementary Drawing	3
Art 62	Basic Design	3
Art 65a, b or Art 64a	Painting / Intermediate Design	6 / 3
Art 142	Modern Art	3
Art 143	Contemporary Art	3
Art 155	Art in Elementary Schools	2
Art 157	Art in Secondary Schools	3
Art 160a	Seminar in Art	2
Biological Sciences		
Botany 1, 2	General Botany	7
Zoology 1	Principles of Animal Biology	4
Zoology 11	Nature Study	4
A. & P. 2	Elementary Anatomy and Physiology	3
Botany 19	Dendrology	2
Zoology 108a, b	Local Flora / Principles of Zoology	3 / 4

Business Education

Com. 13a, b	Secretarial Practice, Shorthand	6
Com. 17a, b	Secretarial Practice, Typewriting	4
Com. 14a, b	Advanced Secretarial Practice	6
Com. 7a, b	Principles of Accounting	8
Econ. 51, 52	Principles of Economics	6
Com. 60	Principles of Marketing	3
Com. 19	Office Appliances and Procedures	3
Com. 101a	Secretarial Job Training	1

Chemistry

Chemistry 1a, b	General Chemistry	10
Chemistry 21a, b	Quantitative Analysis	9
Chemistry 30a	Organic Chemistry	5

Economics and Sociology

Economics 51, 52	Principles of Economics	6
Economics 2	Economic History of Europe	3
Economics 3	Economic History of the United States	3
Sociology 1	Principles of Sociology	3
Sociology 2	Modern Social Problems	3
Sociology 3a, b	Societies Around the World	6
Sociology 109a, b	The Family	6
Sociology 40	The Community	3

English

English 1a, b	Composition	6
English 3a, b	Survey of English Literature	6
English 5a, b	Major American Writers	6
English 32	Voice Development	3
English 35	Stagecraft	2
English 6	The Essentials of Speech	3
English 108a	Principles of Literary Criticism	3
English 130b	Comparative Literature	3

Geography and Geology

Geography 2	Regional Geography of the World	3
Geography 3a, b	Societies Around the World	6
Geography 10	Economic Geography	3
Geography 22	Climatology	3
Geography 100	Regional Geography of Anglo-America	3
Geography 101	Geography of Kentucky	3
Geography 133a, b	Special Problems	2
Geology 50a, b	Outlines of Geology	6

History

History 4a, b	European History	6
History 5a, b	American History	6
History 2a, b	History of the British People	6
History 40	History of Kentucky	3
History 147	Recent History of the United States	3

Home Economics

H. E. 5	Foods	4
H. E. 6	Foods	3
H. E. 11	Food and Nutrition	3
H. E. 102	Dietetics	3
H. E. 140	The School Lunch	3
H. E. 26	Clothing Selection and Costume Design	3
H. E. 25	Textiles	2
H. E. 27	Clothing Construction	4
H. E. 127	Advanced Clothing	3
H. E. 51	Health of the Family	3
H. E. 61	Housing	3
H. E. 129	Interior Decoration	3
H. E. 130	Interior Decoration Projects	3
H. E. 162a, b	Home Management and Family Relations	5
H. E. 161	Consumer Problems	3
H. E. 52	Introduction to Child Development	3
H. E. 154	Family Living	3
	Elective in Family Living	3

French

R. L. 1a, b	Elementary French	6
R. L. 2a, b	Intermediate French	6
R. L. 6a, b	French Novel and Drama	6
R. L. 8a, b	French Phonetics	6
R. L. 113a, b	Advanced French Grammar	6

Latin

A. L. 1a	Beginning Latin	3
A. L. 1b	Elementary Latin Reading	3
A. L. 3	Cicero and Selections	3
A. L. 4	Vergil	3
A. L. 5	Latin Prose Selections	3
A. L. 6	Horace	3
A. L. 9a, b	Selections from Latin Literature	6
A. L. 17	Medieval Latin	3
A. L. 18	Plautus	3
A. L. 109a, b	Latin Literature	6
A. L. 114a, b	Latin Composition	6

Mathematics

Math. 1	Basic Math.	3
Math. 17	College Algebra	3
Math. 18	Plane Trigonometry	3
Math. 2	Solid Geometry	3
Math. 19	Plane Analytic Geometry	3
Math. 20a	Differential Calculus	4
Math. 20b	Integral Calculus	4
Math. 15	Mathematics of Finance	3

Physics

Physics 1a, b	General Elementary Physics	10
Physics 3a, b	General College Physics	12
Physics 51a, b	Introduction to Physics	6

Physical Education (for men)

P. E. 40	Professional Orientation	2
P. E. 45	Team Sports for Men	2
P. E. 48	Individual Sports for Men	2
P. E. 52	Advanced Swimming & Diving for Men	2
P. E. 56	Gymnastics for Men	3
P. E. 61	Field Trip	0
P. E. 70	Training and First Aid	2
P. E. 80	Recreation Leadership	2
P. E. 140	Organization and Administration of Physical Education	3
P. E. 143	History and Principles of Physical Education	3
P. E. 144	Physical Education in Secondary Schools	3

Physical Education (for women)

P. E. 40	Professional Orientation	2
P. E. 46	Fall Team Sports for Women	3
P. E. 47	Spring Team Sports for Women	3
P. E. 49	Individual Sports for Women	2
P. E. 53	Advanced Swimming for Women	2
P. E. 57	Gymnastics for Women	2
P. E. 61	Field Trip	0
P. E. 90	Folk, Tap, and Social Dancing	3
P. E. 140	Organization and Administration of Physical Education	3
P. E. 143	History and Principles of Physical Education	3
P. E. 144	Physical Education in Secondary Schools	3

Political Science

Pol. Sci. 51a, b	American Government	6
Pol. Sci. 52	Municipal Government	3
Pol. Sci. 80	State Government	3
Pol. Sci. 170	Political Parties	3
Pol. Sci. 173	Public Opinion	3
Pol. Sci. 172	Kentucky Government and Constitution	3
Pol. Sci. 155	Comparative Government	3
Pol. Sci. 140	Rural Local Government	3
Pol. Sci. 175	Contemporary American Political Thought	3

Spanish

R. L. 5a, b	Elementary Spanish	6
R. L. 7a, b	Intermediate Spanish	6
R. L. 9a, b	Spanish Novel and Drama	6
R. L. 10a, b	Spanish Conservation and Composition	6

Speech and Dramatics

English 6	Essentials of Speech	3
English 7	Advanced Public Speaking	3
English 11	Argumentation and Debate	3
English 146a	Discussion	3
English 159	Persuasion	3
English 164	Speech Composition	3
English 38	Oral Interpretation	3
English 157	The Teaching of Speech	3
English 134	History of the Stage	3
English 160	Theory and Technique of Acting	3
English 161	Theory and Technique of Directing	3
English 162	Theory and Technique of Production	3
English 163	Scenic Design	3
English 172	Writing the One Act Play	3
English 174	Writing the Full-Length Play	3
English 137	Stage Production in School and Community	3
English 32	Voice Development	3

Graduate Programs Leading to the Masters 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 toward the masters degree in education.

Area	Committee
Elementary Teachers	Duncan, Ginger, and Harris
Secondary Teachers	
General	Hartford, Ginger, and Adams
Agriculture	Hammonds, Tabb, and Wall
Art	Ginger, Haines, and Fitz
Business Education	Musselman, Thomas, Humphreys, and McMurtry
Home Economics	Parker and Sneed
Music	Ginger and Stalling
Physical Education	Ginger and Hackensmith
Elementary Principal	Hartford, Duncan, and Harris
Secondary Principal	Hartford and Hopper
Supervisor	Hopper, Harris, and Adams
Attendance Officer	Hopper and Meece
Superintendent	Hopper and Meece

The candidate for the masters degree must complete the requirements for this degree under one of the two plans which follow. The second plan is permissible only with the approval of the Dean of the Graduate School, the Dean of the College of Education, and the student's adviser.

Plan I

1. A minimum of 24 credits of graduate work must be completed and a thesis must be presented.
2. At least 12 credits of graduate work must be in education.
3. At least 12 credits 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 30.
7. A standing of 2.0 (an average of B) must be made on all graduate work.
8. Eight semester hours and twelve weeks of residence may be done in extension classes with the permission of the student's adviser and the Dean of the Graduate School.

Plan II

1. A minimum of 30 credits of graduate work must be completed.
2. At least 12 credits of graduate work must be in education.
3. At least 12 credits 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. No student may satisfy more than one-half of the requirements for an advanced degree by part-time work. This limitation does not apply to intensive courses.
6. The total number of credits presented in education, undergraduate and graduate, must be at least 30.
7. A standing of 2.0 (an average of B) must be made on all graduate work.
8. Ten semester hours and twelve weeks of residence may be done in extension classes with the permission of the student's adviser and the Dean of the Graduate School.

Suggested Graduate Curricula*

		Crs.
For Superintendents		
Ed. 201	Foundations in Education	5
Ed. 202	Local School Administration	3
Ed. 212	The Elementary School	3
Ed. 221a, b	Seminar in Administration	3 each
Ed. 225	Supervision and Instruction	3
Ed. 227	Principles of Curriculum Construction	3
Ed. 229	The Elementary Principal	3
Ed. 231	Business Administration and Finance of Public Education	3
Ed. 232	High School Administration	3
Ed. 245	Organization of Audio-Visual Aids	3
For Principals		
Ed. 201	Foundations in Education	5
Ed. 202	Local School Administration	3
Ed. 212	The Elementary School	3
Ed. 225	Supervision of Instruction	3
Ed. 214	The Secondary School	3
Ed. 229	The Elementary Principal	3
Ed. 232	High School Administration	3
Ed. 255a	Guidance and Counseling in Today's Schools	3

For Supervisors and Helping Teachers

Ed. 201	Foundations in Education	5
Ed. 212	The Elementary School	3
Ed. 214	The Secondary School	3
Ed. 225	Supervision of Instruction	3
Ed. 227	Principles of Curriculum Construction	3
Ed. 229	The Elementary Principal	3
Ed. 232	High School Administration	2
Ed. 292a, b	Field Problems in Curriculum and Supervision	3 each

For Critic Teachers on the Elementary Level

Ed. 201	Foundations in Education	5
Ed. 212	The Elementary School	3
Ed. 224	Organization and Supervision of Student Teaching	3
Ed. 225	Supervision of Instruction	3
Ed. 227	Principles of Curriculum Construction	3
Ed. 229	The Elementary Principal	3

For Critic Teachers on the Secondary Level

Ed. 201	Foundations in Education	5
Ed. 214	The Secondary School	3
Ed. 224	Organization and Supervision of Student Teaching	3
Ed. 225	Supervision of Instruction	3
Ed. 227	Principles of Curriculum Construction	3

For High School Teachers Majoring in Education

Ed. 201	Foundations in Education	5
Ed. 214	The Secondary School	3
Ed. 227	Principles of Curriculum Construction	3
Ed. 254	Problems in Educational Psychology	3
Ed. 255a, b	Guidance and Counseling in Today's Schools	6

For Elementary Teachers Majoring in Education

Ed. 201	Foundations in Education	5
Ed. 212	The Elementary School	3
Ed. 227	Principles of Curriculum Construction	3
Ed. 229	The Elementary Principal	3
Ed. 254	Problems in Educational Psychology	3

For Music Majors

Ed. 201	Foundations in Education	5
Ed. 251	Problems in Public School and Community Music	2
Ed. 252	Field Problems in Music	2
Ed. 253	Independent Work in Music Education	2
Ed. 254	Problems in Educational Psychology	3

For Business Education Majors

Ed. 201	Foundations in Education	5
Ed. 208a	Problems in Business Education	3
Ed. 257a	Seminar in Business Education	1
Ed. 259	The Commerce Curriculum	3
Ed. 255a	Guidance and Counseling in Today's Schools	3
Ed. 271	Administration and Supervision of Business Education	3
Ed. 256	The Social Business Subjects in High School	3

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.

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* These curricula are merely suggested. The student should work out his graduate program with his adviser during his first semester or summer of work.

DEGREES AND CURRICULA IN THE COLLEGE OF COMMERCE

Cecil C. Carpenter, M.S., Ph.D., Dean

INTRODUCTORY STATEMENT

Organization. The College of Commerce at the University of Kentucky was established in 1925. It grew out of Economics which formerly was offered in a Department of the College of Arts and Sciences. For a number of years the four subjects of Economics, Political Science, History, and Sociology were all offered in the same Department. In 1918 the Department of Economics and Sociology was established and this Department from its inception began to offer also courses in Business Administration. In the spring of 1925 all courses in Economics and Business Administration were assigned to the newly established 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 aims of the College of Commerce are twofold. In the first place the offerings in the field of Economics, together with some of the offerings in the field of Commerce or Business Administration, provide an understanding of that segment of human behavior which is concerned with securing a living. Economic activity is not only a large proportion of all human activity but it is also basic in the sense that it must be adequate before artistic and other idealistic wants can be satisfied. An analysis of human wants, utilities of goods and services, costs and sacrifices of production, values and prices of commodities, and the distribution of wealth, necessarily constitutes an essential part of a liberal education.

In the second place the offerings in the two fields of Economics and Business Administration provide professional and vocational training for a great variety of positions in business and governmental bureaus. Students are afforded the opportunity of preparing themselves as professional economists or as specialists in taxation, industrial relations, finance, statistics, accounting, management, marketing, advertising, secretarial work, or as managers of their own businesses.

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

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

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 an aggressive 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. Seniors must rank in the upper ten per cent in scholarship to be 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 semester credits required for graduation is 128, except under the Industrial Administration Curriculum, which requires 140. The scholarship standing must be at least 1.0. All commerce students are urged to take some foreign language.

The courses listed in the General Business Curriculum constitute a core curriculum, because with minor exceptions, these courses are required in all curricula. They are considered basic to all majors or fields of concentration.

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

	Sem. Hrs.	
English 1a and 1b, English Composition	6	
Economics 2, Economic History of Europe **or**		
Economics 3, Economic History of the U. S.	3	
Mathematics 17, College Algebra	3	
Commerce 7a and 7b, Principles of Accounting	8	
History, American or European	3	
Mathematics 15, Mathematics of Finance	3	
Political Science	3	
Philosophy, Psychology, Sociology	6	
Natural Science	6	
Economics 51 and 52, Principles of Economics	6	
Commerce 60, Principles of Marketing	3	
English 30, Business English	2	
Military Science (Men)	8	
Physical Education	0	
Electives (Women 12)	4	
Total		64

JUNIOR AND SENIOR YEARS

Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 117, Corporation Finance	3	
Commerce 109a and 109b, Business Law	6	
Commerce 137, Industrial Management	3	
A course in Accounting	2 or 3	
Economics 104, Public Finance	3	
Economics 110, Business Cycles	3	
Electives including three courses in Economics or Commerce	35 or 34	
		64
Total		128

BANKING AND FINANCE CURRICULUM

This Curriculum provides an arrangement of courses useful to those who seek employment in financial institutions. It emphasizes the economics of finance rather than the routines and procedures. Management decisions in this area require a knowledge of the subject matter listed below.

FRESHMEN AND SOPHOMORE YEARS

	Crs.	
Courses as required in the General Business Curriculum except electives	60	
Commerce 96a and 96b, Intermediate Accounting	6	
		66

JUNIOR AND SENIOR YEARS

Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 117, Corporation Finance	3	
Commerce 109a and 109b, Business Law	6	
Commerce 137, Industrial Management	3	
Economics 104, Public Finance	3	
Economics 110, Business Cycles	3	
Commerce 131, Investments	3	
Commerce 143, Life Insurance, **or**		
Commerce 144, Property and Casualty Insurance	3	
Economics 154, Urban Real Estate	3	
Electives	26	62
Total		128

Suggested electives:

Economics 103, Transportation (3)
Markets and Rural Finance 120, Agricultural Finance (2)
Economics 126, Economics of Public Utilities (3)
Commerce 129, Credit and Statement Analysis (2)
Commerce 133, Income Tax Procedure (3)
Commerce 156, Business Reports (2)
Economics 160, Business Combinations (2)

PERSONNEL MANAGEMENT CURRICULUM

An arrangement of courses to be taken by students wishing to enter the professional field of Personnel Management and Industrial Relations. This aspect of management requires an understanding of human values and personal objectives. The courses listed represent a minimum foundation for those wishing to qualify for the various personnel positions in industry and government. Typical positions in this field are: job wage analyst, interviewer, personnel director, industrial relations manager, job evaluator, wage and salary administrator.

FRESHMAN AND SOPHOMORE YEARS

	Crs.	
Courses as required in the General Business Curriculum		64

JUNIOR AND SENIOR YEARS

Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 117, Corporation Finance	3	
Commerce 109a and 109b, Business Law	6	
Commerce 137, Industrial Management	3	
Economics 112a and 112b, Indiv. Work in Econ. (Pers. Prob.)	2	
Economics 130, Labor Legislation	3	
Commerce 145, Office Management	3	
Economics 155, Industrial Relations	3	
Psychology 106, Industrial Psychology	3	
Electives	29	64
Total		128

Suggested electives:

Economics 115, Value and Distribution (3)
Philosophy 51, Ethics (3)
Political Science 177b, Public Personnel Adm. (3)
Psychology 8, Individual Differences (3)
Psychology 104, Social Psychology (3)
Psychology 105, Employment Psychology (3)
Psychology 114, Abnormal Psychology (3)
Sociology 25, Collective Behavior (3)
Sociology 40, The Community (3)
Commerce 143, Life Insurance (3)

MARKETING, MERCHANDISING, ADVERTISING CURRICULUM

In addition to courses in these fields offered by the College of Commerce, courses offered by the Departments of Psychology, Journalism, Art, and Home Economics, are either required or suggested as electives. The student is required to select either the Marketing and Merchandising option or the Advertising option in the junior year.

FRESHMAN AND SOPHOMORE YEARS

Courses as required in the General Business Curriculum		64

JUNIOR AND SENIOR YEARS

	Crs.
Economics 102, Labor Economics	3
Economics 105, Money and Banking	3
Economics 107, Statistical Method	3
Commerce 117, Corporation Finance	3
Commerce 109a and 109b, Business Law	6
Commerce 137, Industrial Management	3

GENERAL REQUIREMENTS:

Commerce 62, Principles of Advertising	3
Commerce 63, Salesmanship	2
Commerce 119, Retail Merchandising	3
Commerce 149, Market Research	3

MARKETING AND MERCHANDISING **option**

Commerce 118, Cost Accounting	3	
Commerce 129, Credit and Statement Analysis	2	
Commerce 61, Marketing Management	3	
Commerce 136, Sales Management	3	
Electives	21	64
Total		128

Suggested electives:

Commerce 139, Industrial Purchasing (3)
Commerce 141, Industrial Marketing (3)
Economics 103, Transportation (3)
Economics 110, Business Cycles (3)
Home Economics 15, Textiles (2)

ADVERTISING **option**

Journalism 115, Advertising Typography & Layout	3	
Journalism 21, Etymology	3	
English 2a, Advanced Composition	3	
Art 29, Advertising Art	2	
Commerce 140, Problems in Advertising	2	
Electives	19	64
Total		128

Suggested electives:

Journalism 114, Newspaper Advertising & Promotion (3)
Psychology 5, Psychology of Advertising & Selling (3)
Commerce 61, Marketing Management (3)
Commerce 136, Sales Management (3)
Commerce 141, Industrial Marketing (3)

ACCOUNTING CURRICULUM

This Curriculum is intended to prepare students for either industrial or public accounting. Students wishing to take the C.P.A. examination should consult the various state laws in order to comply with experience and residence requirements.

FRESHMAN AND SOPHOMORE YEARS

	Crs.	
Courses as required in the General Business Curriculum except electives	60	
Commerce 96a and 96b, Intermediate Accounting	6	
		66

JUNIOR AND SENIOR YEARS

Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 117, Corporation Finance	3	
Commerce 109a and 109b, Business Law	6	
Commerce 137, Industrial Management	3	
Economics 104, Public Finance	3	
Commerce 113, Auditing	3	
Commerce 118, Cost Accounting	3	
Commerce 133, Income Tax Procedure	3	
Commerce 146, Special Accounting Problems	3	
Electives	26	62
Total		128

Suggested electives:

Commerce 108, Accounting Theory (2)
Commerce 128, Advanced Cost Accounting (3)
Commerce 129, Credit and Statement Analysis (2)
Commerce 132a and 132b, C.P.A. Problems (6)
Commerce 131, Investments (3)
Commerce 159, Governmental Accounting (2)
Commerce 144, Property & Casualty Insurance (3)
Commerce 156, Business Reports (3)
Economics 124, State and Local Taxation (3)

BUSINESS MANAGEMENT CURRICULUM

This curriculum is designed to lay the groundwork for managerial positions in business. The required courses, therefore, emphasize small business problems 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 take 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

	Crs.	
Courses as required in the General Business Curriculum		64

JUNIOR AND SENIOR YEARS

Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 117, Corporation Finance	3	
Commerce 109a and 109b, Business Law	6	
Commerce 137, Industrial Management	3	
Commerce 96a, Intermediate Accounting	3	
Commerce 118, Cost Accounting	3	
Commerce 138, Cases in Management	3	
Commerce 139, Industrial Purchasing	3	
Economics 155, Industrial Relations	3	
Psychology 106, Industrial Psychology	3	
Electives	25	64
Total		128

Suggested electives:

Commerce 96b, Intermediate Accounting (3)
Economics 130, Labor Legislation (3)
Political Science 177a, Intro. to Public Adm. (3)

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

	Crs.	
English 1a and 1b, English Composition	6	
Mathematics 17, College Algebra	3	
Economics 2, Econ. Hist. of Europe or Economics 3, Econ. Hist. of the U. S.	3	
Psychology 1a and 1b, Introduction to Psychology	6	
Commerce 7a and 7b, Principles of Accounting	8	
Mathematics 18, Plane Trigonometry	3	
Mathematics 19, Plane Analytic Geometry	3	
Chemistry 1a and 1b, General Inorganic Chemistry	10	
Physics 1a and 1b, General Physics	10	
Engineering 1a, Engineering Drawing	2	
Economics 51 and 52, Principles of Economics	6	
Commerce 60 Principles of Marketing	3	
Military Science 1a, 1b, 6a and 6b, Military Science I and II	8	
Physical Education	0	71

JUNIOR AND SENIOR YEARS

English 6, The Essentials of Speech	3	
English 30, Business English	2	
Political Science	3	
Economics 102, Labor Economics	3	
Economics 105, Money and Banking	3	
Economics 107, Statistical Method	3	
Commerce 109a and 109b, Business Law	6	
Commerce 117, Corporation Finance	3	
Commerce 118, Cost Accounting	3	
Commerce 137, Industrial Management	3	
Commerce 138, Cases in Management	3	
Commerce 139, Industrial Purchasing	3	
Commerce 141, Industrial Marketing	3	
Economics 155, Industrial Relations	3	
Electives in Economics or Commerce	6	
Electives in Physics, Geology, Chemistry, or theoretical courses in Engineering	19	69
Total		140

COMMERCE-LAW CURRICULUM

The Commerce-Law Curriculum is intended for students who wish to complete the requirements for the two degrees of Bachelor of Science in Commerce and Bachelor of Laws in six years. First-year law subjects are included in the senior year of this curriculum. During the fifth and sixth years the student completes the remaining law courses necessary to receive the degree of LL.B. 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 and the student's cumulative standing on his pre-law work must be at least 1.3.

FRESHMAN AND SOPHOMORE YEARS

	Crs.	
English 1a and 1b, English Composition	6	
History 4a, Modern Europe to the French Revolution	3	
History 4b, Modern Europe Since the French Revolution	3	
History 5a, History of U.S. Through 1865	3	
History 5b, History of U.S. Since 1865	3	
Philosophy 31, Logic	3	
Commerce 7a and 7b, Principles of Accounting	8	
Economics 51 and 52, Principles of Economics	6	
Military Science (Men)	8	
Physical Education	0	
Commerce 96a and 96b, Intermediate Accounting	6	
Electives from the list below	17	66

JUNIOR YEAR

Commerce 117, Corporation Finance	3	
Economics 102, Labor Economics	3	
Economics 104, Public Finance	3	
Economics 105, Money and Banking	3	
History 131a, English Constitutional History to 1603	3	
History 131b, English Constitutional History since 1603	3	
Political Science 159a and 159b, American Constitutional Dev.	6	
Electives from the list below	10	34

SENIOR YEAR

First Year courses in College of Law		28
Total		128

Electives:

Commerce 60, Principles of Marketing (3)
English (6)
Mathematics 15, Mathematics of Finance (3)
Mathematics 17, College Algebra (3)
Philosophy 21, Introduction to Philosophy (3)
Philosophy 51, Ethics (3)
Political Science 51a and 51b, American Govern. (6)
Political Science 80, State Government (3)
Political Science 172, Kentucky Government & Constit. (3)

Political Science 176, Legislation (3)
Psychology 1a and 1b, General Psychology (6)
Sociology 103, Criminology (3)
Sociology 109, The Family (3)

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

	Crs.	
English 1a and 1b, English Composition	6	
Economics 2, Economic History of Europe or Economics 3, Economic History of the United States	3	
Commerce 7a, Principles of Accounting	4	
Commerce 6, Secretarial Accounting	3	
English: Speech, Composition, or Literature	3	
Commerce 13a and 13b, Secretarial Practice, Shorthand	6	
Commerce 17a and 17b, Secretarial Practice, Typewriting	4	
American or European History	3	
Political Science	3	
Philosophy, Psychology, Sociology	6	
Commerce 14a and 14b, Advanced Secretarial Practice	6	
Economics 51 and 52, Principles of Economics	6	
English 30, Business English	2	
Military Science 1a, 1b, 6a and 6b, Military Science I, II	8	
Physical Education	0	
Electives (Women 9)	1	64

JUNIOR AND SENIOR YEARS

Natural Science or Mathematics	6	
Commerce 60, Principles of Marketing	3	
Commerce 63, Salesmanship	2	
Commerce 19, Office Appliances and Procedures	3	
Commerce 101a, Secretarial Job Training	1	
Commerce 145, Office Management	3	
Commerce 156, Business Reports	2	
Commerce 109a, Business Law	3	
Electives including one course in Commerce	41	64
Total		128

Suggested electives:

Commerce 7b, Principles of Accounting (4)
Mathematics 17, College Algebra (3)
Mathematics 15, Mathematics of Finance (3)
Commerce 62, Principles of Advertising (3)
Economics 105, Money and Banking (3)
Economics 107, Statistical Method (3)
Commerce 117, Corporation Finance (3)
Economics 104, Public Finance (3)
Commerce 137, Industrial Management (3)
Journalism 21, Etymology (3)
English 101, Current English Usage and Grammar (3)
Foreign Language (6)

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: 115, Value and Distribution Theory 125, Evolution of Economic Institutions; 127, International Economics; 153, The Economics of Consumption.

SPECIALIZATION IN STATISTICS

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

PREPARATION FOR PUBLIC SERVICE

In view of the increased demands from federal, state, and local governments for professional economists and 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. 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.

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.

DEGREES AND CURRICULA IN THE COLLEGE OF PHARMACY

Earl Platt Slone, Ph.G., B.S., Dean

INTRODUCTORY STATEMENT

The University of Kentucky College of Pharmacy was established August 16, 1870, as the Louisville College of Pharmacy. It was incorporated by an Act of Legislature, February 6, 1873.

It was organized as an outgrowth of the apprentice and preceptorial system and was operated as a non-profit organization from its inception.

On July 1, 1947, the College became one of the divisions of the University of Kentucky. It is located at First and Chestnut Streets, Louisville, Kentucky. The freshman year of the curriculum in Pharmacy, however, is given at the Lexington campus of the University, 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. Because of the limited capacity of the College, admission to the sophomore class is restricted to sixty students each year.

The College is fully accredited by the American Council on Pharmaceutical Education and was admitted to membership in the American Association of Colleges of Pharmacy in 1917.

Room and Board — Students planning to come to Louisville should make arrangements for living quarters prior to matriculation. The Y.M.C.A. and Y.W.C.A. have been very cooperative in placing the students. Meals may be had in private homes or in the cafeterias in the city.

Placement Activities — The College maintains a complete file for prospective employment. Personnel representatives of the large pharmaceutical houses visit the College twice yearly scheduling interviews with the graduates. Each year the College has a greater demand for its graduates than it can supply.

Curriculum — The faculty of the College of Pharmacy is not in favor of specialization for the undergraduate student. The College has kept a steady pace with the progress of pharmacy and a course of study has been formulated which is thorough and comprehensive, embracing all the branches required in a complete pharmaceutical education.

The work performed by each student in the laboratories and dispensing department is arranged to insure not only a scientific training, but one that is thoroughly practical as well. Moreover, through the training received, the student is fitted to take up work in all phases of pharmacy and public health.

In recognition of the needs of industry for pharmacists trained in large scale manufacturing processes, a course in Manufacturing Pharmacy has been instituted. It is housed in a new laboratory at General Hospital under

the direct supervision of a staff member of wide commercial and manufacturing experience.

Library — The student has the complete use of the University of Kentucky Library, fifth largest library in the south, plus the College library of 3000 volumes and pharmaceutical journals.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Science in Pharmacy is offered on completion of a minimum of 136 credits, with a standing of 1.0, exclusive of the required Military Science and Physical Education.

FRESHMAN YEAR
(Given at the Lexington Campus)

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Chem. 1a—General Chemistry	5	Chem. 1b—General Chemistry	5
Eng. 1a—English Composition	3	English 1b—English Composition	3
Physics 51a—Intro. to Physics	3	Physics 51b—Intro. to Physics	3
Math. 5—Algebra	5	Botany 1—General Botany	4
Mil. Sci.	2	Math. 18—Trigonometry	3
Physical Education	0	or	
		Zoology 1—Prin. of Animal Biol.	4
		Mil. Sci.	2
		Physical Education	0
	18		20 or 21

SOPHOMORE, JUNIOR, AND SENIOR YEARS
(Given at the Louisville Campus)

SOPHOMORE YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Phar. 21—Theoretical Pharmacy	4	Phar. 24a—Phar. Preparations	4
Chem. 31a—Org. Pharm. Chem.	5	Chem. 31b—Org. Pharm. Chem.	5
M.M. 11a Anat. & Physiology	3	M.M. 11b—Anatomy & Physiology	3
Phar. 26—Phar. Calculations	3	M.M. 27a—Pharmacognosy	3
Chem. 32—Inorganic Phar. Chem.	2		
	17		15

JUNIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Phar. 24b—Phar. Preparations	4	Phar. 27—Intro. Disp.	4
Chem. 33—Quant. Pharm. Analysis	5	Chem. 102—Biochemistry	4
M.M. 27b—Pharmacognosy	3	Phar. 31—Drug. Store Mgt.	3
M.M. 131a—Bacteriology	3	M.M. 131b—Bacteriology	3
		Elective	2 or 3
	15		16 or 17

SENIOR YEAR

FIRST SEMESTER	Crs.	SECOND SEMESTER	Crs.
Phar. 111a—Dispensing Pharmacy	4	Phar. 111b—Dispensing Pharm.	4
Phar. 122—U.S.P. & N.F. Drugs	3	Phar. 123—New & Modern Pharm.	3
Chem. 103a—Adv. Quant. Pharm. Chem.	3	Chem. 103b—Adv. Quant. Phar. Chem.	3
M.M. 138a—Pharmacology & Toxicology	5	M.M. 138b—Pharmacology & Toxicol.	5
Phar. 125a—Phar. Jurisprudence	3	Phar. 125b—Phar. Jurisprudence	3
	18		18

Electives:

Freshman: Math. 18—Plane Trig.—3
Zoology, Princ. of Animal Biology — 4

Sophomore, Juniors & Seniors:

MM 133—Hygiene & Public Health—2
Phar. 25—Pharmaceutical Economics—2
Phar. 30—Manufacturing Pharmacy—3 (Jrs. & Srs. only)

STATE BOARD EXAMINATION AND EXPERIENCE REQUIREMENTS

Before being eligiple to enter practice, a pharmacist must be registered by his respective State Board. In order to qualify for this certificate, and at the same time establish broad eligibility for reciprocal licensure thereafter, the graduate of an accredited college should not make application for taking the complete or final Board examination before attaining the age of 21 years.

The graduate must also acquire at least twelve months of practical experience under the supervision of a licensed pharmacist in accordance with Board of Pharmacy regulations, but in no instance should the calendar time of experience be concurrent with the calendar time of enrollment in the College. The total time of enrollment in the College plus time spent in acquiring practical experience should equal forty-eight calendar months.

NATIONAL PROFESSIONAL FRATERNITIES

Chapters of three national, professional Greek letter fraternities are on the campus at Louisville; Alpha Zeta Omega, Kappa Psi, and Phi Delta Chi. Membership in these is open to those students having attained high scholarship with qualities of leadership.

Rho Chi Honorary Pharmaceutical Society has established a chapter at this institution. This is an honor society.

DEGREES AND REQUIREMENTS IN THE GRADUATE SCHOOL

Herman Everette Spivey, M.A., Ph.D., Dean

INTRODUCTORY STATEMENT

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

The following advanced degrees are conferred by the University:

Master of Arts
Master of Science
Master of 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 Education (Ed.D.)
Doctor of Philosophy (Ph.D.)

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

ADMISSION

A student who is a graduate of a fully accredited institution of higher learning may be admitted to the Graduate School by the Registrar of the University upon submitting an official transcript of undergraduate courses and a written application. Blanks for the latter may be obtained from the Registrar or from the office of the Graduate School.

It should be clearly understood that a graduate student may not be able to begin immediately a full graduate program leading to the degree he desires. It may be necessary for him to satisfy certain prerequisites which he omitted in his undergraduate curriculum. These will be determined by the department in which the major work is to be done. In brief it may be stated that a graduate student may begin a full program in the fields in which he has the equivalent of an undergraduate major.

If the record submitted to the Registrar entitles the applicant to admission, he should confer with the Dean of the Graduate School about general requirements and with his major professor concerning detailed requirements that he may have to satisfy.

Members of the faculty of the University of Kentucky having a rank higher than that of instructor may not be considered as candidates for advanced degrees from this institution.

GENERAL REQUIREMENTS FOR ALL ADVANCED DEGREES

Courses. 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.

Residence. A load for full-time residence comprises a minimum of 9 semester hours of graduate course work. In the Summer Session the corresponding load is 6 semester hours. Part-time residence during any semester is computed on the basis of one and one-half weeks of residence for each semester 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 six weeks in any one semester. These receive one and one-half weeks of residence per semester hour. Part-time students in the Summer Session receive one and one-half weeks per semester hour except for short courses of less than eight weeks, in which case residence shall not exceed the actual number of weeks involved.

Fees. Registration fees per semester are the same as for undergraduate students in the college in which the major work is done, that is, $60.00 for residents of Kentucky; $90.00 for non-residents who registered before September 1, 1947; $120.00 for those who registered after September 1, 1947. Part-time graduate students who are legal residents of the state pay $6.75 per semester hour; non-residents who registered before September 1, 1947 pay $10.25 per semester hour; non-residents who registered after September 1, 1947 pay $13.50 per semester hour. Students carrying full loads in the summer session pay one-half the regular semester fee. . Those taking less than full loads pay the regular semester credit hour fee.

GENERAL REQUIREMENTS FOR ALL MASTER'S DEGREES

Transfer of Credits. No transferred credits are accepted toward any master's degree in course; however, a student is not asked to repeat a course which he has satisfactorily completed at another institution.

Extension. Under certain conditions, up to one-third of the credits and residence required for any master's degree in course may be satisfied by extension courses given in person by University of Kentucky instructors. No graduate credit is given for courses taken by correspondence.

M.A. or M.S. Degree. Whether a candidate selects a Master of Arts or a Master of Science degree is left to the option of the candidate and his major department. In general it may be said that candidates with major work in the natural sciences should take the M.S. degree; others the M.A.

Examinations. A final oral examination is given all candidates for the master's degree in course, not later than fifteen days before the close of the semester. The Dean of the Graduate School 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, if one has been written, and is examined on any subject matter related to his field.

Fees. Before any master's degree is conferred a commencement fee of $20.00 must be paid at the Comptroller's Office of the University.

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

Credits. The candidate shall complete a minimum of 24 semester hours of graduate work in course with a standing of 2.0 or better. Additional courses may be assigned by the adviser.

Courses. The candidate shall have a major field which shall comprise at least two-thirds of the course work; the other one-third may be taken in that field or in fields which have graduate relationship with it. In education and agriculture only one-half of the work must be in the major field.

Residence. The minimum residence required is one academic year of 36 weeks. This residence may be fulfilled by any combination of semesters or summer sessions 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.

Thesis. A thesis is required of every candidate. Two typewritten copies of the thesis, approved by the professor in charge and in a form acceptable to the Graduate School, must be presented to the Graduate School not later than three weeks before the last day upon which grades may be reported to the Registrar's Office. **Information about this thesis deadline date may be obtained from the Graduate School Office.**

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 and approved by his adviser. The language requirement must be satisfied by an examination given by the foreign language department of the University offering instruction in the language concerned. The passing of this examination may satisfy one of the two language requirements for the doctorate if approved by the student's special committee.

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

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

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

1. Twenty-four semester 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 toward an advanced degree.
2. At the option of the department, the Master of Arts (Science) in Education may be qualified for upon the completion of 30 semester hours in graduate courses with an average standing of 2.0 or better and 36 weeks in residence, and no requirement of a thesis. At least 12 of the required semester hours must be in Education; also a minimum of 12 of the required semester hours must be in courses numbered 200 or above.

There is no language requirement for either of the professional degrees in education. No student may satisfy more than one-half of the requirements for advanced degrees in the College of Education by part time work. This limitation does not apply to intensive courses.

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

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

1. The completion of 24 semester hours of graduate work with an average standing of 2.0 or better, 36 weeks in residence, and a thesis, or the completion of 36 semester hours of graduate work with a standing of 2 or better, 45 weeks in residence, and no thesis requirement.
2. Under either plan no grade below C may be counted.
3. One-half of the work must be in one department, the remainder in any other department or departments approved by the major professor.
4. There is no language requirement for either of these professional degrees.

In either case a final oral examination is given the candidate not later than 15 days before the close of the semester in which the degree is to be secured. The candidate is expected to show a comprehensive knowledge of the subject matter related to the field of his major work and in case a thesis has been prepared to defend this thesis.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH

Students holding the bachelors degree from fully accredited institutions or the M.D. degree from recognized medical schools may obtain the degree of Master of Science in Public Health by satisfying the following requirements:

1. Twenty-four semester hours in graduate courses with an average standing of 2.0 or better.
2. No grade below C may be counted.

3. Thirty-six weeks in residence.
4. An acceptable thesis.
5. 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:

Twenty-four credits 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 bachelors degree or its equivalent in engineering from this institution or from another engineering school of recognized standing. The degrees offered are Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering, Master of Science in Metallurgical Engineering and Master of Science in Mining Engineering.

The Professional Degrees in Engineering. The professional degree of Civil Engineer (C.E.), Electrical Engineer (E.E.), Mechanical Engineer (M.E.), Metallurgical Engineer (Met.E.), or Mining Engineer (E.M.) will be granted only to a graduate of the University of Kentucky, College of Engineering, who presents satisfactory evidence of professional work of creditable quality in the engineering field of his choice, extending over a period of five years, and who submits a satisfactory thesis as further evidence of his professional attainments.

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

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

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

A thesis is required of each candidate. It may be in the field of research, design, invention, or engineering processes and methods. It must contain some original thought and be the product of the individual submitting it. Quotations and references with the proper credit may be used. In general, the thesis should be of such a nature that it will be of value to the engineering profession.

A candidate holding a bachelors degree in one field of engineering may apply for a professional degree in another field of engineering if he has attained unusual prominence and success in that field.

Fees. The fees for a professional degree in engineering are $15.00 for registration and $20.00 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 examination in the subjects, presents a satisfactory dissertation, and is deemed worthy of recognition as a scholar of high attainment in his chosen province.

The doctors degree is intended to represent not a specified amount of work covering a specified 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.

Admission. Admission to the Graduate School and acceptance of advanced credits from other institutions must first be approved by the Registrar, who will determine at the time of admission the amount of residence to which the applicant is entitled toward the degree of Doctor of Philosophy. No work is credited which has not been done in a college or university of recognized standing.

In order to be accepted as an applicant for the degree of Doctor of Philosophy, a student must present, to the Registrar, evidence that he has completed an undergraduate curriculum and has received his baccalaureate degree from a fully accredited institution.

Classification. A student wishing to become an applicant for the doctors 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. The student is expected to select his major professor as early as is practicable. He should then apply to the Dean of the Graduate School to have a special committee appointed. The 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 doctors degree is a candidate. A student is not a candidate for the degree until he has satisfied the language requirements, passed the qualifying examinations at the University of Kentucky, and been formally admitted by the Graduate School.

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

The major subject should be one on which he intends to concentrate his efforts; the minor subject or 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.

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. Time spent in study, however long; the accumulation of facts, however great in amount; and the completion of advanced courses, however numerous, cannot be substituted for independent thinking and original research.

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 at the University of Kentucky. While ordinarily French and German are acceptable, the final choice should be made under the guidance of the student's special committee, who will recommend what languages are to count. The language requirements must be satisfied before the applicant can be admitted to the qualifying examination.

Qualifying Examination. An applicant for the degree of Doctor of Philosophy is required to pass a qualifying examination. This examination probably should be taken during the second semester of the second year of residence but in no case before the special committee has recommended that the applicant is ready for the examination. The examination shall be both oral and written and shall cover both major and minor subjects. It shall be administered to the applicant by his special committee and shall be evaluated by that committee. **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 a candidate for the degree.

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 two copies of an abstract (the original bound, the first carbon unbound) 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 date on which the Registrar's Office will receive grades of candi-

dates for degrees at the next commencement. **Information regarding this deadline date may be obtained from the Graduate School Office.**

Printing of Dissertation. One hundred printed copies of the dissertation should be presented to the University within one year from the time when the degree is conferred. Not later than one week before the conferring of the degree the candidate must deposit with the Comptroller of the University the sum of $50.00, this amount to be returned if the printed copies are received within the time specified. The University does not obligate itself to publish the thesis, but if in the judgment of the Graduate Committee the thesis or an abstract of it should be published, the University reserves the privilege of so doing.

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 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 OF 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 72 semester hours is 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 University fellowships with a stipend of $500.00 each.

Fifteen University 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 nor are they permitted to perform such duties for extra pay. The award is paid in ten equal monthly installments and does not include a remission of University fees. The appointments are made for one year only but may be renewed.

These fellowships and scholarships are open to students who hold bachelors' degrees from colleges or universities in good standing. No student should apply for one of the awards 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 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 under 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 to 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.

RESEARCH PROGRAM AT THE OAK RIDGE INSTITUTE OF NUCLEAR STUDIES

The University is one of the Sponsoring Universities of the Oak Ridge Institute of Nuclear Studies located at Oak Ridge, Tennessee. Through this cooperative association with the Institute our Graduate Research Program

has at its disposal all the facilities of the National Laboratories in Oak Ridge and of the research staffs of these laboratories. When masters and doctoral candidates have completed their residence work it is possible, by special arrangement, for them to go to Oak Ridge to do their research problems and prepare their theses. In addition, it is possible for the staff members of this University to go to Oak Ridge for varying periods, usually not less than three months, for advanced study in their particular fields. Thus, both staff and students may keep abreast of the most modern and up-to-date developments in atomic and nuclear research that is in progress at the Oak Ridge laboratories.

The students will go to Oak Ridge on Oak Ridge Graduate Fellowships which have varying stipends determined by the number of dependents they have and the level of work that they are doing. Staff members may work in Oak Ridge on stipends commensurate with their present salary and rank.

For further information inquire at the office of the Graduate School or write directly to the Chairman of the University Relations Division of the Oak Ridge Institute of Nuclear Studies, Box 117, Oak Ridge, Tennessee.

DEPARTMENT OF UNIVERSITY EXTENSION

Louis Clifton, M.A., Director

The University of Kentucky, through its Department of University Extension, brings to Kentuckians the benefit of its instructional and research programs. The state of Kentucky is the campus of the University of Kentucky.

Services of the Extension Department include classes, either credit or non-credit, taught in any community where a sufficient enrollment is assured; home study courses of both college and high school level are available by mail. Speakers for special occasions and in specialized fields, forums, clinics, short courses, publications, library service, films and slides are made available to organizations, groups, and individuals. Music and speech festivals for motivating high school pupils in those fields are provided.

The Department of University Extension operates through bureaus as follows:

1. Bureau of Correspondence and Class Study.— Offers college courses in Botany, Economics, Education, English, French, Geography, German, Greek, Italian, Latin, Hygiene, Mathematics, Philosophy, Political Science, Psychology, Social Work, Sociology, and Spanish; courses in high school subjects; and a course in Citizenship for Aliens.

2. Bureau of Club and Community Service.— Furnishes club programs and package library materials as well as helps for organizations and individuals. Offers single lectures or a series of lectures; speakers for teacher's meetings, commencement addresses, memorial and dedication exercises, civic and women's clubs, etc. Acts as a clearing house for inquiries of the people of the state in general matters.

3. Bureau of School Relations.— Provides 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 Interscholastic League.

4. Bureau of Audio-Visual Materials.— Furnishes educational motion picture films and other visual aids service to schools and clubs.

Separate bulletins for each of these bureaus are available.

PART III

STATEMENT OF COURSES OFFERED AT THE UNIVERSITY

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 half of a year's course is indicated by the letter a and the second half by the letter b. Seminar courses and independent or individual work courses in which more than two semesters' work may be assigned, are indicated by letters a, b, c, d, etc.

In the statement of courses the number of the course is given first, followed by the descriptive title. The credit in semester hours is indicated by a number in parentheses, thus (4); the first, or fall semester is indicated by I, the second, or spring semester by II, and the summer session by S. Thus, German 1a, Elementary German (3) I, II, S, is an undergraduate course giving three semester hours and offered in both semesters and the summer session.

STATEMENT OF COURSES

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

Course	Page
College of Arts and Sciences	149
Anatomy and Physiology	149
Ancient Languages and Literatures	150
Greek	152
Latin	151
Anthropology	153
Art	155
Bacteriology	157
Botany	160
Chemistry	162
Economics (See Commerce)	277
English Language and Composition	167
English and American Literature	167
Dramatic Arts	171
Speech	170
Geography	172
Geology	174
German Language and Literature	177
History	179
Humanities	183
Hygiene and Public Health	184
Journalism	185
Library Science	187
Mathematics and Astronomy	189
Military Science	193
Music	196
Philosophy	201
Physical Education	202
Physics	208
Political Science	211
Psychology	214
Radio Arts	218
Romance Languages and Literatures	219
French	220
Italian	222
Russian	222
Spanish	221
Social Work	222
Sociology	224
Zoology	226

Course	Page
College of Agriculture and Home Economics	229
Agricultural Entomology	229
Agricultural Extension	229
Agronomy	229
Animal Husbandry (See Animal Industry)	232
Animal Industry	232
Animal Nutrition (See Animal Industry)	236
Animal Pathology	237
Child Development (See Home Economics)	241
Clothing, Textiles, and Related Art (See Home Economics)	239
Crops (See Agronomy)	230
Dairying (See Animal Industry)	234
Farm Economics	237
Farm Engineering (See Agronomy)	232
Foods and Nutrition (See Home Economics)	238
Forestry (See Horticulture)	244
Genetics (See Animal Industry)	236
Home Economics	238
Home Management (See Home Economics)	242
Horticulture	242
Institution Management (See Home Economics)	241
Markets and Rural Finance	244
Plant Pathology (See Agronomy)	231
Poultry Husbandry (See Animal Husbandry)	235
Rural Sociology	245
Soils (See Agronomy)	231
College of Engineering	247
Civil and Architectural Engineering	247
Civil Engineering	247
Architectural Engineering	247
Electrical Engineering	250

STATEMENT OF COURSES — Continued

Course	Page
Engineering — General	253
Applied Mechanics	253
Engineering Administration	253
Engineering Drawing	254
Fire Protection and Safety Engineering	254
Student Assemblies	254
Mechanical Engineering	255
Metallurgical and Mining Engineering	258
Mining Engineering	260
Metallurgical Engineering	258
College of Law	262
College of Education	266
Agricultural Education	273
Business Education	269
Curriculum and Instruction	270
Division of Administration	266
Division of Foundations of Education	267
Division of Instruction and Placement	269
Division of Vocational Education	273
Distributive Education	274
Elementary Education	271
Home Economics Education	274
Industrial Education	275
Music Education	272
Secondary Education	272
Vocational Education	276
College of Commerce	277
College of Pharmacy	283

Page
on 270
n.. 266
of
.... 267
nd
.... 269
.... 273
.... 274
.... 271
on 274
.... 275
.... 272
.... 272
.... 276
.... 277
.... 283

COLLEGE OF ARTS AND SCIENCES

AGRICULTURE

A student in the College of Arts and Sciences may elect toward the A.B. and the B.S. degree a total of 30 credits from other colleges of the University.

ANATOMY AND PHYSIOLOGY

Richard S. Allen, James William Archdeacon, Louis L. Boyarsky, Robert L. Jasper, and Joseph Wm. Pryor.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits 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. 10; Zoology 1; Botany 1; Physics 1a and 1b; Chemistry 1a and 1b. **Required:** A minimum of 4 elective credits of advanced work in Anatomy and Physiology plus A. & P. 107, 108, 109, and 116a and b, and passing a comprehensive examination in senior year.

*2 **ELEMENTARY ANATOMY AND PHYSIOLOGY.** (3) I, II, S — Jasper
The course is designed to present to the student who has no scientific background a thorough survey of the arrangement and general functions of various systems that make up the human body. Lectures, three hours.

4 **ELEMENTARY ANATOMY.** (5) I — Jasper and Assistant
A course for Physical Education majors; others also. Muscles in the monkey are carefully dissected and results compared with the human body. Lectures, two hours; lab., six hours. **Prereq.: Zoology 25.**

5 **ELEMENTARY PHYSIOLOGY.** (3) I, II — Jasper
Emphasis is placed upon the physiology of muscle, circulation, respiration, digestion, absorption, energy metabolism, and excretion. Lectures, two hours; lab., two hours. Unavailable to students having A. & P. 10. **Prereq.: Home Economics, Physical Education Curriculum.**

6a **GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES.** (3) I — Jasper
The following topics are studied: physico-chemical phenomena of protoplasm; general structure of the body; osteology; myology; and neurology. Lectures, two hours; lab., two hours. **Prereq. or concurrent: General Chemistry.**

6b **GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES.** (3) II — Jasper
A continuation of 6a. The course covers the vascular, respiratory, digestive and excretory systems. Metabolic phenomena are also considered. Lectures, two hours; lab., two hours. **Prereq.: 6a.**

10 **GENERAL PHYSIOLOGY.** (5) I, II, S — Allen, Archdeacon, and Boyarsky
This is a study comparing the human with lower animals and plants. Physical and chemical fundamentals are emphasized. Lectures, three hours; lab, four hours. **Prereq: Chemistry 1a and 1b. Physics taken concurrently.**

103a-d **INDEPENDENT WORK IN ANATOMY.** (3 ea.) I, II, S — Staff
The pursuit of some advanced problems in anatomy under the direct supervision of the instructor. Discussion period, one hour; lab four hours. **Prereq: A. & P. 10 or the equivalent.**

104a-d **INDEPENDENT WORK IN PHYSIOLOGY.** (3 ea.) I, II, S — Staff
A study of some advanced problem in physiology under the direct supervision of the instructor. Discussion period, one hour; lab, four hours. **Prereq: A. & P. 10 or the equivalent; Chemistry 1a and 1b.**

* Open to Freshmen.

105 ARCHITECTURE OF THE HUMAN SKELETON. (4) II, S Allen
A course for students of Anthropology and Art and for Pre-meds. Each bone is studied in detail with respect to its architecture, function, joint combination, and muscular relations. Lectures, two hours; lab, four hours. **Prereq: Junior standing.**

106 INTRODUCTION TO ENDOCRINOLOGY. (3) I, S Allen and Archdeacon
Introductory study to endocrine glands in which general development, anatomical location, structure, and fundamental functions of organs are presented. Lectures, three hours. **Prereq: A. & P. 10 or equivalent; Zoology 7b; Chemistry 1a and 1b; Instructor's consent.**

107 COMPARATIVE NEURO-PHYSIOLOGY. (4) II Allen
A comparative study of Anatomy and Physiology of human nervous system with the lower animals'. Valuable to students of biology, physiology, psychology, and pre-medicine. Lectures, two hours; lab, four hours. **Prereq: A. & P. 10 or equivalent.**

108 CIRCULATION, RESPIRATION AND METABOLISM. (3) II, S Archdeacon
A comprehensive study of chemical and physical phenomena of respiration, circulation, and metabolic phases. Emphasis is on circulatory and respiratory mechanisms of higher mammals. Lectures, two hours; lab, two hours. **Prereq: A. & P. 10 or equivalent.**

109 CELLULAR PHYSIOLOGY. (3) II, S Boyarsky
This is a more intensive study of general physiological principles. Special emphasis is on chemistry and physics of the cell. Lectures, two hours; lab, two hours. **Prereq: A. & P. 10 or equivalent, Physics, and General Chemistry.**

110 INTERMEDIATE METABOLISM. (3) I Archdeacon
The role of vitamins in oxidation-reduction enzyme systems and intermediate metabolic phenomena of carbohydrates, proteins, and fats are considered. Lectures, two hours; lab, two hours. **Prereq: A. & P. or equivalent, Physics and Organic Chemistry.**

116a, b SEMINAR IN ANATOMY AND PHYSIOLOGY. (1 ea.) I, II Boyarsky
This course is for Departmental majors and serves to prepare them for the comprehensive examination. It is open only to Seniors. One two-hour period a week. **Prereq: A. & P. 10, other Departmental requirements.**

201a-l RESEARCH IN PHYSIOLOGY. (3 ea.) I, II, S Allen, Archdeacon, and Boyarsky
The pursuit of an assigned problem in which students have the opportunity to demonstrate their originality. Conference and laboratory six hours. **Prereq: A. & P. 10 or equivalent; Chemistry 130a, 130b; Physical Chemistry desirable; Physics, one year.**

202 PHYSIOLOGICAL TECHNIQUES. (2) I, II Archdeacon
This course offers training in techniques used in physiological research. Operational procedures are undertaken in gastro-intestinal, hemodynamic, and respiratory systems. Lecture, one hour; lab, two hours. **Prereq: A. & P. 10 or equivalent.**

203 EXPERIMENTAL ENDOCRINOLOGY. (2) I, II Allen
Abnormalities of various endocrine glands are produced experimentally. Results are very closely followed and recorded. Reports are handed in to instructor upon completion of each case. Lecture, one hour; lab, two hours. **Prereq: A. & P. 106.**

204a-l GRADUATE SEMINAR IN ANATOMY AND PHYSIOLOGY. (1) I, II Staff
Required of all graduate students. Discussion period, one hour.

205 ADVANCED NEUROPHYSIOLOGY. (3) II Boyarsky
Electrical analyses of nerve fibres and synapse are considered; also, nerve impulse theories, reflexes, metabolism; and central nervous function from the cybernetic viewpoint. Lectures, two hours; lab, two hours. **Prereq: A. & P. 107, 109. Instructor's consent.**

ANCIENT LANGUAGES AND LITERATURES

Jonah W. D. Skiles, Wilbert L. Carr, and T. T. Jones.

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

Requirements in the Field of Concentration: 40 credits 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 or college Greek. **Required:** A minimum of 15 credits of advanced work in Ancient Languages and Literatures; Tutorial Seminar; comprehensive examination in the senior year.

Note.— The student who presents one unit of high school foreign language will be permitted to enroll in first year work in the same language for full credit.

The student who presents two units of high school foreign language will be permitted to enroll in first year work in the same language, but will receive credit only if he makes at least a B standing in this course.

Latin

***1a BEGINNING LATIN. (3) I, II, S**
Emphasis on learning to read simple Latin, with attention to the basic elements of Latin grammar. Much attention to English words derived from Latin and to a basic understanding of Roman civilization. Vocabulary building.

***1b ELEMENTARY LATIN READING. (3) I, II, S**
Selections relating to Roman life and literature, including Caesar. Emphasis on learning to read Latin. **Prereq: A. L. 1a or one year of high school Latin.**

3 CICERO AND SELECTIONS. (3) I
Selections from Cicero, showing the orator, statesman, and humanist, from Ovid's **Metamorphoses**, studied as myths and short stories, and from other writers. **Prereq: A. L. 1b or two years of high school Latin.**

4 VERGIL. (3) II
Selections from the Aeneid, studied as a masterpiece of epic poetry and as a product of the Augustan Age. The influence of the **Aeneid** on Western literature. **Prereq: A. L. 1b or two years of high school Latin.**

5 LATIN PROSE SELECTIONS. (3) II, S
Selections from Livy's **History**, Cicero's **de Senectute**, and such other prose as may meet the needs of the class. **Prereq: Three years of high school Latin or three semesters of college Latin or consent of instructor.**

6 HORACE. (3) I
Selections to show the poetic genius and the thought of the poet. **Prereq: Three years of high school Latin, or three semesters of college Latin, or consent of instructor.**

9a, b SELECTIONS FROM LATIN LITERATURE. (3, 3) I, II
An author or authors or selections will be used to develop both the student's ability to read Latin and his acquaintance with classical ideas. **Prereq: Three years of high school Latin, or three semesters of college Latin or, consent of instructor.**

17 MEDIEVAL LATIN. (3) I
Selections of prose and poetry down to the Renaissance. Introduction to the thought and life of the Middle Ages. **Prereq: Three years of high school Latin, or three semesters of college Latin, or consent of instructor.**

18 PLAUTUS. (3) II
Selected plays of Plautus. Lectures on Greek and Roman comedy. Introduction to the comedy of manners. **Prereq: Three years of high school Latin or three semesters of college Latin or consent of instructor.**

109a, b LATIN LITERATURE. (3 ea.) On demand
Courses in various authors, periods, or types to suit the needs of the class. **Prereq: Twelve semester hours of Latin, or the equivalent, and permission of the instructor.**

114a, b LATIN COMPOSITION. (1, 1) On demand
The writing of Latin prose of moderate difficulty. **Prereq: A. L. 3 or consent of instructor.**

* Open to Freshmen.

121 ROMAN CIVILIZATION. (2) II, S
Special reference to the relation to modern life. Topics in literature, art, philosophy, and religion, as well as in political history. No knowledge of Latin necessary.

150 THE TEACHING OF LATIN. (3) I, II, S
The place of Latin and the classical humanities in general education. Objectives, materials, and methods. The reading approach to learning Latin. Evaluation of textbooks and other materials. **Prereq: Senior standing.**

202 THE WORKS OF VERGIL. (3) I
A careful study of the entire **Aeneid** with emphasis upon the last six books and the relation of the **Aeneid** to its sources and to the other works of Vergil. **Prereq: A. L. 4 or consent of instructor.**

203 ROMAN COMEDY. (3) II
Several plays of Plautus and/or Terence. The history of comedy. The subsequent development of comedy. Introduction to Old Latin. **Prereq: A. L. 18 or consent of instructor.**

Greek

***51a BEGINNING GREEK. (3) I**
Easy excerpts from Greek literature. The basic elements of Greek grammar. Emphasis on learning to read Greek, but attention will be given to some understanding of Greek civilization. Vocabulary building.

***51b SELECTIONS FROM THE GREEK NEW TESTAMENT. (3) II**
Easier parts of the New Testament read to introduce the Greek Testament and to give facility in reading Greek. **Prereq: A. L. 51a.** This course does not duplicate any course in classical Greek.

52 SELECTIONS FROM GREEK WRITERS. (3) I, S
Selections from various writers, such as Xenophon, Herodotus, Plutarch, etc. **Prereq: A. L. 51b or consent of instructor.**

53 HOMER. (3) I
Readings to give some idea of the greatness of the **Iliad** and the **Olyssey** as epics and some idea of their place in the background of Greek literature and of Western literature as a whole. **Prereq: A. L. 51b or consent of instructor.**

54 PLATO. (3) II
Selections, with an attempt to evaluate their philosophy in its relation both to ancient and modern thought. **Prereq: A. L. 51b or consent of instructor.**

70 GREEK MYTHOLOGY. (2) I, S
The Greek myths studied both from the standpoint of their meaning to the Greeks and Romans and from the standpoint of their use in later literature and in everyday life. No knowledge of Latin or Greek required.

120 GREEK CIVILIZATION. (2) II, S
Special reference to relations to modern life. Emphasis placed on literature, art, philosophy, and religion, rather than on political history, and the student may concentrate his reading in any fields. No knowledge of Greek necessary.

156 GREEK TRAGEDY. (3) I
Selected plays from Aeschylus, Sophocles, and Euripides. Lectures on Greek tragedy and its effects on the Western World. **Prereq: A. L. 53 or 54 or consent of instructor.**

157 GREEK COMEDY. (3) II
Selected plays of Aristophanes. Lectures on Greek comedy and its effect on the Western World. **Prereq: A. L. 156 or consent of instructor.**

204 THE GREEK OF THE NEW TESTAMENT. (3) I, S
Class and/or individual work. Reading or research in the vocabulary and syntax of the **Koine**, in the text of the Testament, and in other fields. **Prereq: Two years of college Greek or consent of instructor.**

Classical Languages

90a, b TUTORIAL SEMINAR. (1 ea.) I, II
Conferences, readings, and reports in preparation for the comprehensive examination. Required of all senior majors in Ancient Languages and Literatures.

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* Open to Freshmen.

122a **CLASSICAL EPIC IN ENGLISH TRANSLATION.** (3) I
The Iliad, The Odyssey, and **The Aeneid,** with some attention to epics of lesser importance. No knowledge of Greek or Latin necessary.

122b **CLASSICAL DRAMA IN ENGLISH TRANSLATION.** (3) II
Selected tragedies and comedies of both Greek and Roman dramatists. No knowledge of Greek or Latin necessary.

151a-h **INDEPENDENT WORK IN ANCIENT LANGUAGES.** (3 ea.) **On demand**
Courses to meet the needs of the students will be arranged in various areas of classical philology, e.g. in Greek or Latin writers, in classical civilization, in Greek or Latin linguistics, etc. **Prereq: Consent of instructor.**

200 **RESEARCH IN THE TEACHING OF CLASSICAL LANGUAGES.** (3) **On demand**
Problems in the teaching of Latin and/or Greek in secondary and/or higher education. Objectives, methods, preparation of materials, development of curricula, or the history of the field. **Prereq: A. L. 150 or equivalent.**

ANTHROPOLOGY

William S. Webb, Frank J. Essene, Charles E. Snow, and Richard B. Woodbury.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits of advanced work in the Social or Biological Sciences groups during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Anthropology 1 and 2; Anthropology, Sociology, or Geography 3a. **Required:** A minimum of 24 credits of advanced work including Anthropology 107; 115; 125; 150a, h; plus a comprehensive examination in the Senior year.

*1 **INTRODUCTION TO PHYSICAL ANTHROPOLOGY.** (3) I, II, S — Snow
An outline of the biological aspects of man. Demonstration lectures on man's origin and development, the primates, fossil man, races, race mixture, human biology, and growth.

*2 **INTRODUCTION TO CULTURAL ANTHROPOLOGY.** (3) II, S — Essene
Archeological remains of prehistoric man and the arts, industries, social organization, languages, and religions of modern primitive peoples.

*3a **SOCIETIES AROUND THE WORLD.** (3) I, II, S — Staff
Meets Social Studies requirements. Comparative study of Eskimo, Navajo, and Baganda as preliterate, primitive societies in difficult environments. Same as Geography and Sociology 3a.

11 **ANTHROPOMETRY.** (2) I, S — Snow
A laboratory course teaching the technique of measuring and describing the human body or skeleton from anatomical landmarks with emphasis upon the practical application to human engineering.

60 **PRIMITIVE INVENTIONS.** (3) I — Essene
Ancient and modern inventions of primitive peoples. Theoretical approach combined with handling and manufacturing artifacts. **Prereq: Anthro. 2.**

103a-d **INDEPENDENT WORK IN ANTHROPOLOGY.** (3 ea.) I, II — Staff

107 **ETHNOLOGY OF THE NEW WORLD.** (3) II — Essene
Cultures and physical types of the American Indians during and after White settlement. (Northwestern North America is not included).

111 **ARCHEOLOGICAL THEORY AND METHOD.** (3) II — Woodbury
The concepts and aims of archeology, its history as a scientific discipline and its present role in the social sciences. Attention to basic principles in field work, and to recent advances.

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* Open to Freshmen.

112 ARCHEOLOGY OF KENTUCKY. (3) II, S Woodbury
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.

114 PREHISTORIC MESO-AMERICA AND PERU. (3) I Woodbury
An intensive study of the native American civilizations, their origins, development, and achievements.

115 NORTH AMERICAN ARCHEOLOGY. (3) I Woodbury
Origin and growth of prehistoric American Indian cultures north of Mexico as revealed by archeological data.

116 BEGINNINGS OF CIVILIZATION. (3) I Woodbury
Prehistory of the near East, the earliest evidences of agriculture, pastoralism, pottery, smelting, writing, law codes, irrigation, astronomy, kingship, building of stone, priesthood, temples, coined money. **Prereq: One course in Anthro.**

117 DIFFUSION OF CIVILIZATION. (3) II Essene
Prehistory of the Far East, Europe, and Negro Africa and ethnology of primitive tribes in these areas. The spread of Near Eastern civilization provided the basis for higher culture developments. **Prereq: Anthro. 116.**

118 CULTURES OF THE SOUTHWESTERN UNITED STATES. (3) II Woodbury
Development of sedentary and nomadic Indian peoples, from earliest times to the present. Emphasis on Puebloan, Mogollon, and Hohokam archeology and continuity with modern Indians.

125 PHYSICAL ANTHROPOLOGY. (4) II Snow
A lecture-laboratory course on the biological nature of man. The fields of the primates, fossil man, races, race mixture, constitutional anthropology and human growth with supplementary laboratory exercises will be covered. **Prereq: Anthro. 1 or 3 hours in any other Biol. Sci.**

126 HUMAN ANCESTRY. (4) I Snow
A lecture-laboratory course on human origins and the fossil remains of Pleistocene man throughout the world. The lineage, formation and inter-breeding of modern racial groups will be stressed. **Prereq: Anthro. 125 or special permission.**

130 NORTH PACIFIC COAST CULTURES. (3) I Essene
Ethnology of the maritime peoples of western North American and Northeast Asia. Cultural connections between America and Asia will be stressed. **Prereq: Anthro. 1 and 2.**

131 ETHNOLOGY OF OCEANIA. (3) I Essene
A survey of the various cultures to be found on the islands of the Pacific Ocean. Both aboriginal and modern acculturated societies will be considered. **Prereq: Anthro. 1 and 2.**

140 MYTHOLOGY. (3) II Essene
The unwritten literature of primitive peoples. Themes, diffusion, style, literary devices, and function of myths.

141 APPLIED ANTHROPOLOGY. (3) II Essene
Application of anthropological methods to contemporary practical problems such as acculturation, colonial administration, intercultural education, and race relations. **Prereq: Anthro. 2.**

142 CULTURE AND PERSONALITY. (3) II Essene
The cultural basis of personality. Personal character considered as the result of culturally fostered patterns. The ideal personality in several selected societies. (Also listed as Sociology 142).

150a-d TUTORIAL SEMINAR. (2 ea.) I, II Staff
Anthropological methods and theory. **Prereq: Major in anthropology.**

180 ANTHROPOLOGY: MAN AND HIS WORKS. (3) I, S Staff
Survey of the major fields of anthropology, physical, prehistory, and ethnology and a guide to source material. Designed for students not contemplating further work in anthropology.

201a-b SEMINAR. (1 ea.) I, II Staff
Intensive work in particular fields of anthropology. All students during a given semester will be assigned related phases of the same problem. Designed primarily for students working toward a master's degree in anthropology.

ART

Edward W. Rannells, Clifford Amyx, C. Raymond Barnhart,
Anne W. Callihan, Dord Fitz, Anne G. Green,
Philip P. Johnston, and Janis Sternbergs.

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

Requirements in the Field of Concentration: 40 credits 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 30 and 61 (drawing). 62 (design), 35 or 36 (history of art). **Required:** A minimum of 26 credits of advanced work in art — 12 credits in studio courses, 12 credits in history of art, 2 credits in the senior seminar plus a comprehensive examination in the Senior year.

Requirements for a Major in Art Education. Prerequisites: Art 30 and 61, 62. **Required:** A minimum of 18 credits in Art — Art 10a, b, 36, 65a, 65b or 64a, 143, 157 — and 22 credits in Education — Edu. 16, C44, 105, 110, 142, C147.

*30 **INTRODUCTION TO ART. (2) I, II** Staff
(1) Forms of art (2) essentials of design, theory of color, analysis of forms. Given in illustrated lectures, assignments, notebooks and reports. Required of all prospective majors in art.

Drawing and Painting

*51a **PAINTING. (For non-art majors) (2) I, II, S** Fitz
A general studio course for students not intending to major in art. Study of color, form, and space as expressive elements in the making of pictures. Instruction in the various media: pastel, water-color, tempera, oil. Six studio hours.

*51b **PAINTING. (For non-art majors) (2) I, II** Fitz
Continuation of 51a. Six studio hours.

*61 **ELEMENTARY DRAWING. (2) I, II, S** Barnhart and Green
Representation of forms in space through analytical seeing; line and tone in pencil, pen, and brush. This is the basic course for prospective majors in art. Six studio hours.

63 **INTERMEDIATE DRAWING. (2) I, II** Sternbergs
Creative representation based on analytical study of the structure and movement of forms in space. Drawing from the figure in graphic media. Six studio hours. **Prereq: 65a.**

65a **PAINTING. (3) I, S** Amyx and Barnhart
Fundamental procedures in oil painting. Introduction to the material. Basic principles of space and color construction through still life and landscape. Nine studio hours. **Prereq: 61, 62.**

65b **PAINTING. (3) I, II, S** Amyx and Barnhart
Continuation of 65a. Nine studio hours.

116a **PRINTMAKING. (2) I, II** Sternbergs
Technical instruction in printmaking processes: lithography, etching, wood cut. Six studio hours. **Prereq: 65a and 63.**

116b **PRINTMAKING. (2) I, II** Sternbergs
Continuation of 116a. Six studio hours.

165 **INTERMEDIATE PAINTING. (3) I, II, S** Amyx
Advanced problems in space and color construction. Introduction to figure and portrait. Individual development of basic painting procedures. Nine studio hours. **Prereq: 63, 65b.**

* Open to Freshmen.

165b INTERMEDIATE PAINTING. (3) I, II, S — Amyx
Continuation of 165a. Nine studio hours.

167 PROFESSIONAL PAINTING TECHNIQUES. (3) I, II — Amyx
Advanced problems in painting media. Historical and contemporary procedures. Open only to advanced students. Nine studio hours. **Prereq: 165b.**

177a-d INDEPENDENT WORK: PAINTING, PRINTMAKING. (3 ea.) — Staff
Individual research and experimental work in technical and theoretical problems of drawing and painting, printmaking, etc. Each semester's work is subject to review by the staff. Open only to advanced students.

Design

***62 BASIC DESIGN.** (3) I, II, S — Barnhart and Green
Training in basic design skills. Creative construction in common materials; logical development of unified forms. Required of all prospective majors in art. Nine studio hours.

64a INTERMEDIATE DESIGN. (3) I, II, S — Barnhart
Wood carving in the round. Individual expression controlled by design principles. Nine studio hours. **Prereq: 65a.**

64b INTERMEDIATE DESIGN. (3) II, S — Barnhart
Creative construction adapted to the individual. Carving, modeling, and experimental forms involving space, color, light, etc. Nine studio hours. **Prereq: 64a.**

66 DESIGN IN DECORATION. (3) I, II — Green
Interior design; problems in color; projects in textile design, ornament, etc., adapted to the individual. Nine studio hours. **Prereq: 61, 62.**

29 ART IN ADVERTISING. (2) I, II — Barnhart
Advertising as a problem in vision and expression; its relation to art forms and concepts. Four studio hours and weekly problems. **Prereq: Junior standing in Commerce, Journalism, or Art.**

68a GRAPHIC DESIGN. (2) I, S — Barnhart
Basic training in the design of printing, lettering, illustration; layout and presentations. Six studio hours. **Prereq: 29, 63.**

68b GRAPHIC DESIGN. (2) II, S — Barnhart
Continuation of 68a. Individual problems for actual use in posters, publications, advertising, etc. Six studio hours. **Prereq: 68a.**

179a-d INDEPENDENT WORK: DESIGN, CONSTRUCTION. (3 ea.) I, II — Staff
Individual research and experimental work in technical and theoretical problems of design and construction of forms, including sculpture. Each semester's work is subject to review by the staff. Open only to advanced students.

History of Art

35 ANCIENT ART. (2) I — Johnston
The arts in the ancient cultures of the Mediterranean and West-Asian world through Greek and Roman times. Emphasis on classical art. Illustrated lectures, conferences, and reports.

36 MEDIEVAL ART. (2) II — Johnston
The arts of Byzantium and the near East and of the Latin and Germanic cultures in the West; Romanesque and Gothic art in northern Europe. Emphasis on Christian art. Illustrated lectures, conferences and reports.

46 THE DECORATIVE ARTS. (2) II — Green
A survey of the decorative arts, with special reference to the major styles developed in France and England in the eighteenth and early nineteenth centuries. Illustrated lectures, discussions, and reports.

140 RENAISSANCE ART. (3) I — Johnston
The arts of the Renaissance in Italy from the late middle ages through the sixteenth century. Italian humanism; analyses of style; study of individual masters. Illustrated lectures and reports.

138 RENAISSANCE IN THE NORTH. (2) I — Johnston
The arts of the Renaissance and Reformation outside Italy from the late middle ages through the sixteenth century. Northern humanism; analyses of style; study of individual masters. Illustrated lectures and reports.

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* Open to Freshmen.

141 BAROQUE ART. (3) II Johnston
The arts of the Reformation and Counter-Reformation in Europe from the mid-sixteenth century through the eighteenth century. The Baroque and Rococo styles; study of individual masters. Illustrated lectures and reports.

142 MODERN ART. (3) I Johnston
The arts in Europe and America from the mid-eighteenth century through the nineteenth century. Consideration of social and economic changes in relation to art; study of individual artists. Illustrated lectures and reports.

143 CONTEMPORARY ART. (3) II Amyx and Rannells
The arts of the twentieth century in Europe and the Americas. Consideration of social and technological changes in relation to art; study of individual artists. Illustrated lectures and reports.

147 ART IN AMERICA. (2) S Rannells
A survey of American architecture, sculpture, painting, illustration, handicrafts, industrial design, etc., from Colonial times to the present. American museums, exhibitions, sales. Illustrated lectures and reports.

151 CRITICISM OF ART. (3) I Amyx
Analyses, interpretations, evaluations. Fundamentals of aesthetics and criticism in history, and in the contemporary arts. Discussions and reports. Open only to senior and graduate majors in Philosophy, Literature, Music, and Art.

160a, b SEMINAR IN ART. (1 ea.) I, II Staff
Current problems in art; correlations of theory and practice; discussions and reports. For seniors and graduates majoring in art. The seminar is prerequisite to the comprehensive examination required for graduation.

175a-d INDEPENDENT WORK: HISTORY, CRITICISM. (3 ea.) Staff
Individual research and writing: history, criticism, aesthetics, etc. Collaboration with other humanistic disciplines. Each semester's work is subject to review by the staff. Open only to advanced students.

Art Education

10a PUBLIC SCHOOL ART. (2) I, II, S Fitz
Essentials in art: elementary skills in drawing, design, and lettering. For students in elementary education, to meet teaching certificate requirements. Lectures, four studio hours, weekly problems.

10b PUBLIC SCHOOL ART. (2) I, II, S Fitz
Application of art essentials to the teaching of art in the elementary grades. For students in elementary education, to meet teaching certificate requirements. Lectures, four studio hours, weekly problems.

155 ART IN ELEMENTARY SCHOOLS. (2) II Fitz
An advanced course for in-service teachers in elementary schools. Programs of instruction related to the developmental levels of vision and expression in the child. Lectures, conferences, studio work, and reports.

157 ART IN SECONDARY SCHOOLS. (3) S Amyx and Rannells
Art for teachers in secondary schools. The literature of art education. Courses of study. Teaching materials. Lectures, conferences, and reports.

BACTERIOLOGY

Morris Scherago, Ogden F. Edwards, Mary M. Hardin, L. C. Harrison, Margaret Hotchkiss, James C. Humphries, Elmer S. Maxwell, Ida Mary Scharfschwerdt, and R. H. Weaver.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits 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; Bacteriology 2b, or 52 and 104. **Required:** Two credits in Seminar and a min-

imum of 13 additional credits of advanced work in Bacteriology, including Bact. 125.

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.

Courses 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. (4) I, II** Weaver and Scharfschwerdt
The fundamental nature of bacteria and other microorganisms. Morphology of microorganisms. Recommended for Bact. majors and for those taking Bact. to fulfill a biological science requirement. Lecture two hours; lab four hours.

***2b ELEMENTARY MICROBIOLOGY. (4) I, II** Weaver and Scharfschwerdt
Continuation of Course 2a. A cultural study of bacteria. Microbial physiology. Relationship of microorganisms to soil fertility, foods, industrial fermentations, disease, etc. Lecture, two hours; lab, four hours. **Prereq: Bact. 2a.**

***6a BACTERIOLOGY FOR NURSES. (4) I, II, S** Scherago, Hotchkiss, and Scharfschwerdt
A study of the characteristics and habits of microorganisms and of their relation to medicine, surgery, and public health. Lecture and recitation, two hours; lab, four hours.

***6b PATHOLOGY FOR NURSES. (2) I, II, S** Scherago, Hotchkiss, and Scharfschwerdt
A study of the causes of disease, the nature of disease processes, the securing and preserving of specimens for the laboratory. Lecture and recitation, one hour; lab, two hours.

52 PRINCIPLES OF BACTERIOLOGY. (4) I, II, S Scherago and others
An alternative course for students who do not have the prerequisites for 102. Lecture and recitation, two hours; lab, four hours. **Prereq. or concurrent: Chem. 1b or 4b.**

56 BACTERIOLOGY OF FOODS. (For Sophomores.) (4) I, S Weaver and Hardin
Dairy and miscellaneous food products; food preservation; food poisoning. Standard methods for official food and public health laboratories. Lecture, two hours; lab, four hours. **Prereq: Bact. 102 or 52; or 2b and Chem. 1b.**

57 BACTERIOLOGY OF WATER AND SEWAGE. (For Sophomores.) (4) II, S Weaver and Hardin
Microbiology of water; methods of purification. Sewage disposal methods. Operation of swimming pools. Standard and other methods for examination. Lecture, two hours; lab, four hours. **Prereq: Bact. 102 or 52; or 2b and Chem. 1b.**

102 GENERAL BACTERIOLOGY. (4) I, II, S Scherago or Hotchkiss and others
Microorganisms; their morphology, classification, physiology, relation to certain fermentations, to food, to soil fertility, and to disease. Lecture and recitation, two hours; lab, four hours. **Prereq: Chem. 1b or 4b.**

103 PATHOGENIC BACTERIOLOGY. (4) I, S Scherago, Humphries, and Edwards
Human and animal pathogenic microorganisms, especially their morphological, cultural, and pathogenic properties. Lecture, two hours; lab, four hours. **Prereq: Bact. 102 or 52; or 2b and Chem. 1b.**

104 APPLIED BACTERIOLOGY. (2) I, II, S Hotchkiss and others
A course in bacteriological analysis to supplement Courses 52 and 102. Lab, four hours. **Prereq: Bact. 102 or 52; or 2b and Chem. 1b.**

110a LABORATORY DIAGNOSIS. (3) I, S Hotchkiss
Laboratory methods employed in diagnostic and public health laboratories. Designed primarily for medical technology students. Examination of sputum, urine, and blood. Lab, six hours. **Prereq: Preceded or accompanied by Bact. 103.**

110b LABORATORY DIAGNOSIS. (3) II, S Hotchkiss
Continuation of 110. Examination of blood continued. Laboratory diagnosis of parasitism and infectious diseases. Lab, six hours. **Prereq: Preceded or accompanied by Bact. 103.**

111 GENERAL PATHOLOGY. (4) I, S Maxwell, Scherago, and Hotchkiss
Effects of disease will be studied at autopsies and by the examination of fresh

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* Open to Freshmen.

and museum specimens and histological sections. Lecture, two hours; Lab, four hours. **Prereq: Anat. and Physiol. 10; Zool 7b, 101b, and 106; Bact. 103.**

115a-f **INDEPENDENT WORK.** (3 ea.) I, II, S — Staff
Students will be assigned special problems in laboratory work and reference reading. Lab, six hours. **Prereq: Any bacteriology course above 2b.**

120a-b **HOSPITAL LABORATORY PRACTICE.**
(4, 6) I, II, S — Maxwell, Harrison, and others
Students will be required to carry out, under supervision, the laboratory work in one of the hospitals in Lexington. Lab, twelve hours, and eighteen hours, respectively. **Prereq: Bact. 110a and 110b.**

125 **IMMUNOLOGY AND SEROLOGY.** (5) II, S — Scherago, Humphries, and Edwards
The theories and mechanism of infection and immunity; preparation, standardization, and uses of biological products; serology. Lectures, two hours; lab, six hours. **Prereq: Bact. 103.**

150a-d **SEMINAR.** (1 ea.) I, II — Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all seniors. Two hours.

201a-j **RESEARCH IN BACTERIOLOGY.** (5 ea.) I, II, S — Senior Staff
Lab, ten hours.

203a **PUBLIC HEALTH BACTERIOLOGY.** (3 ea.) I, S — Scherago and others
Public health aspects of bacteriology including the etiology, epidemiology, immunology, and lab. diagnosis of infectious diseases. Lectures, one hour; lab, four hours. **Prereq: Open only to physicians and health officers or those with equivalent training.**

203b **PUBLIC HEALTH BACTERIOLOGY.** (3) II, S — Scherago and others
Continuation of 203a. Lectures and recitations, one hour; lab, four hours. **Prereq: Bact. 203a.**

206 **BACTERIOLOGY OF FOODS.** (4) I, S — Weaver and Hardin
Dairy and miscellaneous food products; food preservation; food poisoning. Standard methods for official food and public health laboratories. Lecture, two hours; lab, four hours. **Prereq: Bact. 102 or 52; or 2b and Chem. 1b.**

207 **BACTERIOLOGY OF WATER AND SEWAGE.** (4) II, S — Weaver and Hardin
Microbiology of water; methods of purification. Sewage disposal methods. Operation of swimming pools. Standard and other methods for examination. Lecture, two hours; lab, four hours. **Prereq: Bact. 102 or 52; or 2b Chem. 1b.**

210 **CLINICAL MYCOLOGY.** (2) I, S — Hotchkiss
Methods and techniques for isolating and propagating pathogenic actinomycetes and fungi. Laboratory diagnosis of fungous infections. Lab, four hours. **Prereq: Chem. 130b; reading knowledge of one foreign language; Bact. 125.**

220 **HISTORY OF BACTERIOLOGY.** (2) II, S — Weaver
Conferences, two hours. **Prereq: Bact. 125.**

222 **ADVANCED GENERAL BACTERIOLOGY.** (4) I, S — Weaver
Bacterial cytology; theories of staining. Microbial genetics. Toxonomy and nomenclature. Lectures and conferences, two hours; Lab, four hours. **Prereq: Bact. 125 and Chem. 130.**

224 **DISINFECTANTS AND ANTIBIOTICS.** (3) II, S — Hotchkiss
Chemical agents injurious to microorganisms. Practical applications and methods of testing. Conferences, one hour; Lab, four hours. **Prereq: Bact. 2b, or 52 and 104; Chem. 130b.**

226a **METABOLISM OF MICROORGANISMS.** (4) I — Hardin
Chemical changes produced by microorganisms; properties of their enzymes; the physiology of their growth. Lectures or conferences, two hours; lab, four hours. **Prereq: Chem. 130b; reading knowledge of German or French.**

226b **METABOLISM OF MICROORGANISMS.** (4) II — Hardin
Continuation of 226a. Lectures or conferences, two hours; lab, four hours. **Prereq: Bact. 226a.**

235 **IMMUNOCHEMISTRY AND ADVANCED IMMUNOLOGY.**
(4) II, S — Scherago or Humphries
Chemistry of antigens and antibodies; of the reaction between them in vitro and

in vivo; immune and hypersensitive reactions. Lectures and conferences, two hours; lab, four hours. **Prereq: Bact. 125b; Chem. 130b and 143b.**

250a-j SEMINAR. (1 ea.) I, II Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all graduate students. Two hours.

270 ELECTRON MICROSCOPY. (3) I, S Edwards
Theory, operation and uses of the magnetic electron miscroscope and the vacuum unit for metal shadow casting. Lecture, one hour; lab, four hours. **Prereq: Physics 3a and 3b.**

272 VIRUSES AND RICKETTSIAE. (4) II, S Edwards
Natures, activities, and methods of laboratory cultivation of viruses and rickettsiae; their relation to bacteria, plants, and animals. Lectures, two hours; lab, **four hours. Prereq: Bact. 125.**

BOTANY

Herbert P. Riley, Carl E. Henrickson, Frank T. McFarland, and Berthus B. McInteer.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits 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 1 and 2 or equivalents. **Required:** A minimum of twenty credits of advanced work in Botany and the passing of a comprehensive examination.

***1 GENERAL BOTANY. (4)** Staff
Principles of botany. Cells and tissues; the structure and functions of the root, stem, and leaf; reproduction in flowering plants. Two lectures and two two-hour lab periods per week.

***2 PLANT KINGDOM. (3)** Staff
Structure, life cycles, and biological relationships of typical lower plants and gymnosperms. Two lectures and one two-hour lab period per week. **Prereq: Botany 1 or 25.**

15 LOCAL FLORA. (Systematic Botany) (3) II McFarland
A course designed to teach beginners how to identify unknown vascular plants. Introductions on use of manuals, herbarium and principles of taxonomy. Six hours of lab per week. **Prereq: Botany 1 or 25.**

19 DENDROLOGY. (2) I, II McFarland
Primarily a field course in which a student is taught how to identify and recognize trees by their bark, bud and leaf characters. Summer and winter conditions studied. Two lectures per week. **Prereq: Botany 1 or 25.**

***25 GENERAL PLANT BIOLOGY. (3) I, II, S** Staff
The principles underlying the structure and functions of green plants; reproduction. To satisfy part of the group requirement in biology for those who do not plan a science major. Three lectures per week. **No prereq.**

30 INTRODUCTION TO HEREDITY. (3) I, II, S Riley
Chromosomal cytology and the principles of heredity; three lectures per week. **Prereq: Four credits in the Biological Sciences.**

103a PLANT PHYSIOLOGY. (4) I Henrickson
Basic chemical and physical principles of plant physiology. Water relations of plants including internal movement, transpiration, and absorption. Two lectures and two two-hour lab periods per week. **Prereq: Six credits of Botany.**

103b PLANT PHYSIOLOGY. (4) II Henrickson
A continuation of 103a, covering the chemical processes and organic materials.

* Open to Freshmen.

Photosynthesis; synthesis and digestion of food; respiration; growth. **Prereq: Botany 103a or equivalent.**

106a, b, c SPECIAL PROBLEMS. (3 ea.) I, II Staff
Independent work in some phase of advanced Botany. **Prereq: Eighteen credits** of courses in Botany not open to freshmen.

107 MORPHOLOGY OF ALGAE. (3) I McInteer
The economic value of algae and the structure and life histories of representative forms of the various groups. Three two-hour lab periods per week. **Prereq: Six credits of botany.**

114 ECOLOGY. (4) II McInteer
The relationships existing between plants and their various factors of environment. Three lectures and one two-hour lab period per week. **Prereq: Six credits of botany.**

115a, b SEMINAR. (1, 1) I, II Staff
Readings and reports on special topics. Required of all senior botany majors.

125a MORPHOLOGY OF THE FUNGI. (4) I McFarland
Structure, method of reproduction of the Myxomycetes, Phycomycetes and the simplier Ascomycetes. Two lectures and two two-hour lab periods per week. **Prereq: Botany 2 or its equivalent.**

125b MORPHOLOGY OF THE FUNGI. (4) II McFarland
A continuation of Botany 125a. The remainder of the Ascomycetes, the Basidomycetes, and the Fungi Imperfecti. Two lectures and two two-hour lab periods per week. **Prereq: Botany 125a.**

130 INTRODUCTION TO HEREDITY. (3) I, II, S Riley
This course is similar to Botany 30, except that extra work will be required for graduate credit. Credit will not be given for both 30 and 130. **Prereq: Four credits of Biological Sciences.**

132 GENES AND THEIR ACTION. (3) I Riley
The nature, and action, of genes. Physiological genetics. Three lectures per week. **Prereq: Botany 30 or 130 or equivalent.**

134 CYTOGENETICS. (4) II Riley
Chromosome aberrations and their importance in heredity and evolution. Three lectures and one two-hour lab period per week. **Prereq: Botany 30 or equivalent.**

135 PLANT CYTOTAXONOMY. (3) I Riley
Cytogenetic, geographical, ecological, and other factors that have influenced the origin and development of species of plants. Three lectures per week. **Prereq: Botany 15 and 134 or equivalents.**

150a ADVANCED SYSTEMATIC BOTANY. (3) I McFarland
Qualified students will study assigned family groups from the standpoint of relationships. A detailed study of keys and various systems of Taxonomy. One lecture and two two-hour lab periods per week. **Prereq: Botany 15.**

150b ADVANCED SYSTEMATIC BOTANY. (3) II McFarland
A continuation of Botany 150a. One lecture and two two-hour laboratory periods per week. **Prereq: Botany 150a.**

160 PLANT MICROTECHNIQUE. (3) II McFarland
The principal methods used in the preparation of permanent slides for the compound microscope. Not open to students who have had Botany 6. Three three-hour lab periods per week. **Prereq: Six credits of botany.**

206a, b RESEARCH IN PLANT MORPHOLOGY. (4, 4) McFarland
Graduate students prepared for independent work will be assigned to investigations in anatomy, histology, or special morphology of plants.

207a, b RESEARCH IN MYCOLOGY. (4, 4) McFarland
Those desiring to carry on investigations in mycology should have had Botany 125b or the equivalent. Suitable work will be suggested to students desiring to enter this field.

210a, b RESEARCH IN PLANT PHYSIOLOGY. (4, 4)
Graduate students with adequate preparation in plant physiology, physics, and chemistry may carry on independent investigations in plant physiology.

213a, b **RESEARCH IN SYSTEMATIC BOTANY.** (4, 4) McFarland
Graduate students may carry on independent work that may be used in the preparation of their theses. **Prereq: Botany 150b.**

215a, b **RESEARCH IN CYTOGENETICS.** (4, 4) Riley
Independent investigations in cytogenetics. In connection with his investigations, the student will be expected to master the literature and present a report.

CHEMISTRY

Lyle R. Dawson, Charles Barkenbus, J. Charles Cavagnol, Albert C. English, R. Ray Estes, Gordon R. Leader, Jacob R. Meadow, John R. Mitchell, James M. Schreyer, Olus J. Stewart, Burris D. Tiffany, William F. Wagner, and Howard K. Zimmerman, Jr.

LOWER DIVISION REQUIREMENTS — **Freshman and Sophomore Years**

For a major in chemistry the lower division requirements of the College of Arts and Sciences must be fulfilled.

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

Registration in chemistry courses of juniors or seniors majoring in chemistry is restricted to students having a grade-point average of 1.5 or higher in all subjects exclusive of military training, except that this regulation may be set aside by action of the faculty of the Department.

Requirements in the Field of Concentration: Forty credits 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, 21a, 21b, and mathematics through the calculus. **Required:** 130a, 130b, 140a, 140b, 144a, 144b, 110a, 110b, 111, 188a, 188b, and eleven credits to be chosen from the field of physical science.

Special Charges That May be Made by the Department of Chemistry. The Department assesses small charges for certain expendable materials used in the courses, non-returnable items in the laboratory desk equipment, and for breakage of apparatus used by students in the laboratory courses. Each student is required to purchase at the Comptroller's office a five-dollar chemical breakage punch card which is valid until exhausted, or for a period of two years. Refund of the unused portion of the deposit may be obtained when the student's account with the department is closed. The amount charged may vary from seventy-five cents to several dollars each semester.

*1a, b **GENERAL CHEMISTRY.** (5, 5) I, II, S Staff
Chemistry of the non-metallic elements and the metals, including a study of the qualitative analysis scheme for the metallic ions. Lecture two hours; recitation, one hour; lab, four hours. **Prereq: Proficiency in arithmetic and elementary algebra.**

*2a, b **GENERAL CHEMISTRY FOR ENGINEERS.** (4, 4) I, II, S Staff
Subject matter similar to 1a, b, except that topics of importance to engineers are given special emphasis. Lecture, two hours; recitation, one hour; lab, two hours. **Prereq: Proficiency in arithmetic and algebra.**

* Open to Freshmen.

*3 **CHEMISTRY FOR NURSES.** (5) I, II — Estes
This course deals with those general principles of chemistry which give the necessary foundation for practical work in nutrition, materia medica, and other subjects. Lecture and recitation, three hours; lab, four hours.

*4a, b **GENERAL CHEMISTRY FOR STUDENTS IN AGRICULTURE AND HOME ECONOMICS.** (4, 4) I, II, S — Staff
Subject matter similar to 1a, b, with emphasis on topics of importance to students in the College of Agriculture. Lecture, two hours; recitation, one hour; lab, two hours. **Prereq: Proficiency in arithmetic and elementary algebra.**

21a, b **QUANTITATIVE ANALYSIS.** (5, 4) I, II, S — Stewart and Wagner
A laboratory course accompanied by lectures and classroom exercises. Gravimetric and volumetric methods of analysis are studied in detail. Lecture, two hours; lab, six and four respectively. **Prereq: Chemistry 1b or 2b.**

30a, b **ORGANIC CHEMISTRY.** (5, 5) I, II, S — Barkenbus
Lecture, three hours; lab, four hours. **Prereq: Chemistry 1b or 2b.**

37 **ORGANIC CHEMISTRY.** (4) I, II, S — Cavagnol
An elementary course for non-professional students. Lecture, three hours; lab, two hours. **Prereq: Chemistry 1b, 2b, or 4b.**

110a, b **ADVANCED INORGANIC CHEMISTRY.** (2, 2) I, II, S — Schreyer
A systematic course in inorganic chemistry with especial emphasis upon the preparation and reactions of various types of inorganic compounds. Lecture, two hours. **Prereq: Quantitative analysis and organic chemistry,**

111 **ADVANCED INORGANIC LABORATORY.** (1) II, S — Schreyer
Laboratory exercises are chosen to illustrate the methods of preparation of the different classes of inorganic compounds, and to provide training in the newer techniques in the field. **Prereq: Chemistry 110a.**

114 **NON-AQUEOUS SOLUTIONS.** (2) II — Dawson
A study of the properties of non-aqueous solutions and of reactions in non-aqueous media. **Prereq: Chemistry 140b.**

115a, b **NUCLEAR CHEMISTRY.** (2, 2) I, II — Leader
The chemistry of the radio elements and other substances involved in nuclear reactions. Lecture, two hours. **Prereq: Chemistry 140b.**

120 **ADVANCED QUALITATIVE ANALYSIS.** (3) I — Schreyer
A study of qualitative analysis for the anions and the separation and detection of the less common elements, employing a physico-chemical method of approach to the theory of separation. Lecture, one hour; lab, six hours.

121 **SEMIMICRO QUANTITATIVE ANALYSIS.** (3) II — Cavagnol
A laboratory course devoted to the quantitative analysis of both organic and inorganic substances by the use of semimicro techniques. Lecture, one hour; lab, six hours. **Prereq: Chemistry 140b.**

125 **ADVANCED QUANTITATIVE ANALYSIS.** (3) II — Wagner
The applications of microscopic, colorimetric, spectrophotometric, polarographic, and electrometric methods. Lecture, one hour; lab, six hours. **Prereq: Chemistry 21b.**

125 **ADVANCED QUANTITATIVE ANALYSIS.** (3) II — Wagner
The complete analysis of a silicate mineral or ore, and the alloys of iron, copper, and aluminum. Lecture, one hour; lab, six hours. **Prereq: Chemistry 21b.**

126 **INDUSTRIAL ANALYSIS.** (2) II
The use of special industrial control methods for the analysis of water, coal, petroleum, fuel gases, and atmospheric constituents. Lab, six hours. **Prereq: Chemistry 21a.**

127 **MICROSCOPIC ANALYSIS.** (2)
Qualitative and semi-quantitative analysis of microgram. Amounts of various cation groups in a single drop under a microscope. Lab, six hours. **Prereq: Chemistry 21b.**

129 **SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS.** (3) Stewart and Wagner
Lab, nine hours. **Prereq: Chemistry 21b.**

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* Open to Freshmen.

130a, b ORGANIC CHEMISTRY. (5, 5) I, II, S Barkenbus and Estes
A systematic study of organic compounds. Lecture, three hours; lab, four hours. **Prereq: Chemistry 1b or 2b.**

133 QUALITATIVE ORGANIC ANALYSIS. (3) I, S Barkenbus and Estes
A systematic study of the separation and identification of organic compounds. Lecture, one hour; lab, nine hours. **Prereq: Chemistry 130b, or 30b.**

136 SYNTHETIC ORGANIC CHEMISTRY. (3) II, S Barkenbus
A critical comparison of preparation methods accompanied by laboratory work and reports. Lab, nine hours. **Prereq: Chemistry 130b or 30b.**

140a, b PHYSICAL CHEMISTRY. (3, 3) I, II, S Dawson
The fundamental principles of chemistry are studied with emphasis upon the applications of these in the correlation of natural phenomena. Lectures, three hours. **Prereq: Quantitative Analysis, Mathematics 20b and Physics 3b.**

141 CHEMICAL THERMODYNAMICS. (3) II Dawson
Principles and applications of chemical thermodynamics. Lecture, three hours. **Prereq: Chemistry 140b.**

143 PHYSICAL CHEMISTRY. (5) I
For students in Agriculture and the Biological Sciences. Lecture and recitation, three hours; lab, six hours. **Prereq: Chemistry 1b or 4b, and 37; Physics 1b.**

144a, b PHYSICAL CHEMISTRY LABORATORY. (2, 2) I, II, S Leader
Laboratory studies in physical chemistry to accompany 140a, b, Lab, six hours. **Prereq: Quantitative Analysis, Mathematics 20b, Physics 3b.**

145 COLLOID CHEMISTRY. (2) II Schreyer
Lectures, recitations, and assigned readings on the chemistry of colloids. Lectures and recitations, two hours. **Prereq: Chemistry 140b.**

147a, b PHYSICAL CHEMISTRY FOR ENGINEERS. (4, 4) I, II
The principles of physical chemistry are studied with emphasis upon the application of these in mining and metallurgical engineering. Lecture and recitation, three hours; lab, three hours. **Prereq: Chemistry 21a, Mathematics 20b, and Physics 3b.**

150a, b PHYSIOLOGICAL CHEMISTRY. (4, 4) I, II Tiffany
A study of the chemistry of living processes. Lectures and recitations, three hours; lab, three hours. **Prereq: Chemistry 1b or 4b, and 21a.**

160 INDUSTRIAL CHEMISTRY. (3) I Meadow
A survey of the chemistry of manufacturing processes. Lecture, three hours. **Prereq: Chemistry 140b.**

161 INDUSTRIAL CHEMICAL CALCULATIONS. (2) II Meadow
Lecture and recitations, two hours. **Prereq: Chemistry 140b.**

181 CHEMICAL LITERATURE. (1) I Stewart
Training in the use of chemical literature. One hour per week. **Prereq: Junior or Senior standing.**

182 LABORATORY ARTS. (2) I, II
The fabrication of chemical apparatus of glass, metal, and plastics. **Prereq: Major in the Department of Chemistry with Junior standing.**

188a, b SEMINAR. (0, 1) I, II Staff
Reports and discussions on recent research and current chemical literature. Required of all seniors. Attendance at the seminar for two semesters is required before the one hour of credit is earned.

210 TOPICS IN INORGANIC CHEMISTRY. (2) II Schreyer
The chemistry of the rare earths and other less common elements. Selected topics dealing with recent advances in the field. Lecture, two hours. **Prereq: Chemistry 110b.**

220 THE CHEMICAL POLARIZING MICROSCOPE. (2) II
The theory and practice in the use of the polarizing microscope as a means of identifying crystalline chemical substances. Lab, six hours. **Prereq: Chemistry 140b.**

221 QUANTITATIVE MICROANALYSIS. (2) I Cavagnol
The quantitative analysis of organic and inorganic substances in the microgram and submicrogram range. Lab, six hours. **Prereq: Chemistry 21b.**

222 **ELECTROMETRIC ANALYSIS.** (2) I — Wagner
The theory and application of potentiometric, polarographic, and conductometric measurements. Lecture, one hour; lab, three hours. **Prereq: Chemistry 122 and Chemistry 140b.**

230a, b **SYNTHESIS OF ORGANIC COMPOUNDS.** (2, 2) I, II — Barkenbus
A thorough study of the types of reactions used in organic synthesis with emphasis on the conditions and reagents that can be used. Lecture, two hours. **Prereq: Chemistry 130b.**

232 **STEREOISOMERISM OF CARBON COMPOUNDS.** (3) II — Estes
Optical isomerism; polarimetry; stereochemistry of biphenyls and related compounds; cistrans isomerism; and stereochemistry of the sugars. Lectures, three hours. **Prereq: Chemistry 130b.**

234a, b **THE ELECTRONIC THEORY AS APPLIED TO ORGANIC REACTIONS.** (2, 2) I, II — Estes
A study of the modern viewpoints of valence and their application to the interpretation of organic reactions. Lecture, two hours. **Prereq: Chemistry 130b and 140b.**

238 **SURVEY OF ORGANIC CHEMISTRY.** (4) I — Barkenbus
A general survey of the field of organic chemistry. Lecture, four hours. **Prereq: Chemistry 130b or equivalent.**

239a, b **TOPICS IN ORGANIC CHEMISTRY.** (2, 2) I, II — Staff
Selected topics which may include heterocylic organic compounds, natural and synthetic dyes, carbohydrates, introgen compounds, and other recent advances in the field of organic chemistry. Lecture, two hours. **Prereq: Chemistry 130b.**

240 **ELECTROCHEMISTRY.** (3) I — Dawson
Modern theories of solutions. Applications of electrochemical methods in determining the properties of solutions. Polarization. Electrolysis. Equilibrium in solutions of electrolytes. Lectures, three hours. **Prereq: Chemistry 140b.**

244 **PHASE RULE.** (2) II — Schreyer
Lectures and assigned readings on the theory and application of the phase rule. Lecture, two hours. **Prereq: Chemistry 140b.**

245 **CATALYSIS.** (2) II
Theories of homogeneous and heterogeneous catalysis and applications in chemical processes. Lecture, two hours. **Prereq: Chemistry 140b.**

246 **CHEMICAL KINETICS.** (3) — Leader
Studies of chemical reactions from the standpoint of velocity and mechanism. Lecture, three hours. **Prereq: Chemistry 140b.**

248 **CHEMICAL PRINCIPLES.** (4) I — Dawson
An advanced course dealing with the fundamental principles of physical chemistry. Lecture, four hours. **Prereq: College physics, integral calculus, and one course in physical chemistry.**

249a, b **TOPICS IN PHYSICAL CHEMISTRY.** (2, 2)
Selected topics which may include photochemistry, structure of crystals, molecular spectra, and other recent advances in the field of physical chemistry. Lecture, two hours. **Prereq: Chemistry 140b and Mathematics 105.**

288a-h **GRADUATE SEMINAR.** (1 ea.) I, II — Staff
Reports and discussions on recent research and current literature. Required of all graduate students.

290a-1 **RESEARCH IN CHEMISTRY.** (5 ea.) I, II, S — 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, or Physical Chemistry.

ECONOMICS

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits of advanced work in the field of Social Studies during the junior and senior years, including the major work.

Requirements for a Major. Prerequisite: Two courses in Economics, including Economics 51 and 52. **Required:** A minimum of 18 credits of advanced work in Economics, including Economics 102, 104 or 110, and 105; the remainder of credits to be selected from the Arts and Sciences list of Economics courses numbered above 100. In addition tutorial course 16 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. 277 and include the following: 51 and 52 — 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; 16 — Tutorial Work in Economics; 102 — Labor Economics; 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 Economics; 130 — Labor Legislation; 134 — Advanced Economic History of the United States; 142 — Index Numbers; 147 — American Business Leader; 148 — European Business Leaders; 153 — The Economics of Consumption.

Education. A student in the College of Arts and Sciences may elect toward the A.B. or B.S. degree a total of 30 credits from other colleges of the University.

Engineering. A student in the College of Arts and Sciences may elect toward the A.B. or B.S. degree a total of 30 credits from other colleges of the University.

ENGLISH, SPEECH, AND DRAMATIC ARTS

William S. Ward, Gordon Bigelow, Ben Black, Gifford Blyton, Lawrence E. Bowling, George K. Brady, Wallace N. Briggs, Louis J. Budd, Arthur L. Cooke, Alfred L. Crabb, John L. Cutler, Lehre L. Dantzler, E. F. Farquhar, George P. Faust, Richard R. Griffith, A. B. Guthrie, Jr., Lelia G. Harris, Maurice A. Hatch, Ray L. Heffner, William H. Jansen, Grant C. Knight, Arthur K. Moore, Ernest L. Rhodes, Lolo L. Robinson, Hill Shine, Herman E. Spivey, Jack Reid Sterrett, Thomas B. Stroup, Hollis Summers, Betty Warnick, and Guy Whitehead.

Requirements for a Major:

1. English: **Prerequisites:** 1a, 1b, 3a, and 3b.
2. Speech: **Prerequisites:** 1a, 1b, 3a, 3b, and 6.
3. Dramatic Arts: **Prerequisites:** 1a, 1b, 3a, 3b, 35 or 36, 6 or 32 or 38.

Required for an English major: A minimum of 18 additional credits of advanced work in English.

Required for Speech and Dramatic Arts majors: A minimum of 18 additional credits of advanced work in Speech and Dramatic Arts plus 6 additional credits of advanced work in English.

* Open to Freshmen.

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

English Language and Composition

***D ENGLISH COMPOSITION.** (0) Staff
A remedial grammar course which freshmen are advised to enter on the basis of (a) classification tests or (b) first papers written in English 1a.

***1a ENGLISH COMPOSITION.** (3) Staff
A course designed to teach students to develop and express their own ideas in clear, sensible English. The principal means are the reading and discussion of essays and articles, and practice in writing. Required of all freshmen.

***1b ENGLISH COMPOSITION.** (3) Staff
A continuation of English 1a.

***1bR ENGLISH COMPOSITION.** (3) Staff
A variant of 1b designed for especially qualified students. In the reading assignments, imaginative literature is substituted for factual essays and articles. Elective for students recomended by their instructors and approved by a committee.

2a ADVANCED COMPOSITION. (3) Staff
A course intended for those who feel the need of further instruction and practice in writing. The emphasis is upon thoughtful organization of material and clear writing. **Prereq: English 1a and 1b.**

2b THE SHORT STORY. (2) Summers
A course in imaginative writing. **Prereq: English 1a, 1b, and consent of the instructor.**

30 BUSINESS ENGLISH. (2) Cutler and others
Primarily for juniors and seniors in the College of Commerce and Engineering. A study of the forms of business correspondence and practice in writing them. **Prereq: English 1a and 1b.**

117 WORKSHOP IN IMAGINATIVE WRITING. (2) Guthrie
Chief attention will be directed to the short story, but time also will be given to the novel. 2b is a prerequisite except for those with successful writing experience. **Prereq: English 1a and 1b and consent of the instructor.**

101 CURRENT ENGLISH USAGE AND GRAMMAR. (3) Faust
The aims are to develop a scholarly approach to language, especially American English, and to establish the relationship of grammar and punctuation to clear idiomatic writing. **Prereq: English 1a and 1b.**

102 INTRODUCTION TO THE STUDY OF THE ENGLISH LANGUAGE. (3) Cutler
Phonetics, stymology, semantics, syntax, and inflection; and the special characteristics (phonetic and lexical) of American English. **Prereq: English 1a, 1b, 3a, 3b.**

203 OLD ENGLISH. (3) Moore
A study of Old English language and literature.

204 MIDDLE ENGLISH AND MODERN ENGLISH. (3) Cutler and Moore
The transition from Old to Middle English; the major ME dialects; reading in prose and poetry. The transition to Modern English; phonetic changes, sources of the vocabulary, rhetoricians and grammarians, etc.

English and American Literature

3a SURVEY OF ENGLISH LITERATURE. (3) Staff
A survey of English literature from Beowulf to the beginnings of the Romantic movement. The emphasis is upon the more important writers with some attention given to their cultural background. **Prereq: English 1a and 1b.**

3b SURVEY OF ENGLISH LITERATURE. (3) Staff
A study of major English writers of the 19th and early 20th centuries. English 3a is not a prerequisite for 3b, and either may be taken for credit without the other. **Prereq: English 1a and 1b.**

* Open to Freshmen.

4 INTRODUCTION TO LITERATURE. (3) Spivey and others
An analytical rather than historical approach to literature, intended to deepen the student's insight into the nature and purpose of literature and to develop literary taste and judgment. **Prereq: English 1a and 1b.**

5a MAJOR AMERICAN WRITERS. (3) Spivey and others
The approach is aesthetic and analytical, rather than historical. Writers for the first semester are selected from these: Franklin, Irving, Poe, Longfellow, Hawthorne, Emerson, Thoreau, and Melville. **Prereq: English 1a and 1b.**

5b MAJOR AMERICAN WRITERS. (3) Spiveys and others
Whitman, Twain, Howells, James, Frost, Robinson, Eliot, O'Neill, and Maxwell Anderson. 5a is not a prerequisite for 5b, and either may be taken without the other. **Prereq: English 1a and 1b.**

104 MILTON. (3) Stroup
A study of all of Milton's poetry and of his more important prose; readings from contemporary thinkers; studies in thought currents of the time and Milton's relation to them. **Prereq: English 1a, 1b, 3a, 3b.**

105 CHAUCER. (3) Moore and Cutler
Extensive reading in the chief works of Chaucer with assigned problems relating to Chaucer and his age. **Prereq: English 1a, 1b, 3a, 3b.**

106a ENGLISH ROMANTIC POETRY. (3) Ward
The philosophical, critical, social, and political backgrounds of romanticism are examined. The emphasis is on Wordsworth, Coleridge, Byron, Shelley, and Keats. **Prereq: English 1a, 1b, 3a, 3b.**

106b ENGLISH ROMANTIC PROSE. (3) Ward
The novel, the essay, literary criticism, and periodical literature are studied, with special attention to Lamb, Hazlitt, DeQuincey, Scott, Jane Austen, and to the critical prose of Wordsworth, Coleridge, and Shelley. **Prereq: English 1a, 1b, 3a, 3b.**

107a VICTORIAN POETS. (3) Brady and Shine
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. **Prereq: English 1a, 1b, 3a, 3b.**

107b VICTORIAN PROSE. (3) Brady and Shine
A study of Carlyle, Ruskin, Newman, Spenser, Arnold, Huxley, and related writers of the period in the field of prose. Special emphasis is placed on Carlyle's SARTOR RESARTUS. **Prereq: English 1a, 1b, 3a, 3b.**

108a PRINCIPLES OF LITERARY CRITICISM. (3) Farquhar
A course designed to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature. **Prereq: English 1a, 1b, 3a, 3b.**

108b PRINCIPLES OF LITERARY CRITICISM. (3) Farquhar
A continuation of 108a, which is not prerequisite although desirable. **Prereq: English 1a, 1b, 3a, 3b.**

109 PRE-SHAKESPEAREAN DRAMA. (3) Staff
A course in English dramatic origins; a study of the works of Lyly, Kyd, Greene, Peele, and others. **Prereq: English 1a, 1b, 3a, 3b.**

110a SHAKESPEARE' THE COMEDIES. (3) Hatch and Staff
Shakespeare's comedies will be studied in detail. **Prereq: English 1a, 1b, 3a, 3b.**

110b SHAKESPEARE: THE TRAGEDIES. (3) Hatch and Staff
A continuation of English 110a, which is not prerequisite, although desirable. Special attention to the great tragedies. **Prereq: English 1a, 1b, 3a, 3b.**

111a THE EIGHTEENTH CENTURY NOVEL. (3) Cooke
A study of the novel from its beginning in English Literature to the advent of Scott. **Prereq: English 1a, 1b, 3a, 3b.**

111b THE VICTORIAN NOVEL IN ENGLAND. (3) Knight
A continuation of English 111a, although the latter is not prerequisite. The course aims to acquaint the student with the development of the novel from Dickens through Gissing. **Prereq: English 1a, 1b, 3a, 3b.**

116 THE CONTEMPORARY DRAMA. (3) Staff
A course designed to show the development and tendencies in Continental,

British, and American dramatic literature, 1850 to date. **Prereq: English 1a, 1b, 3a, 3b.**

123a **AMERICAN LITERATURE BEFORE 1830.** (3) Knight
A survey intended to show the development of American life, thought, and letters up to the Transcendental movement. **Prereq: English 1a, 1b, 3a, 3b.**

123b **AMERICAN LITERATURE AFTER 1830.** (3) Knight
The triumphant years of American romanticism, with especial attention to Emerson, Thoreau, Hawthorne, Melville, Poe, and Whitman. 123a is not a prerequisite. **Prereq: English 1a, 1b, 3a, 3b.**

124a **ENGLISH LITERATURE: 1500-1600.** (3) Stroup
Literature of the Elizabethan period exclusive of the drama. Foreign sources of the English Renaissance. Major writers such as More, Ascham, Wyatt, Sidney, Spenser, Raleigh, and Marlowe. **Prereq: English 1a, 1b, 3a, 3b.**

124b **ENGLISH LITERATURE: 1600-1660.** (3) Stroup
Selected non-dramatic works of such writers as Bacon, Donne, Ben Jonson, George Herbert, Izaak Walton, Herrick, Sir Thomas Browne, Vaughan, Traherne, and Milton. **Prereq: English 1a, 1b, 3a, 3b.**

127a **LITERATURE OF THE BIBLE.** (3) Farquhar
A literary study of the Bible. The purpose of the course is to develop an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling. **Prereq: English 1a, 1b, 3a, 3b.**

127b **LITERATURE OF THE BIBLE.** (3) Farquhar
A continuation of English 127a, which is not prerequisite, although desirable. **Prereq: English 1a, 1b, 3a, 3b.**

130a **COMPARATIVE LITERATURE.** (3) Brady
Extensive reading of literary masterpieces from Homer to the present day. The readings are in English translations, but a reading knowledge of at least one foreign language is desirable. **Prereq: English 1a, 1b, 3a, 3b.**

130b **COMPARATIVE LITERATURE.** (3) Brady
A continuation of English 130a, which is not prerequisite, although desirable. **Prereq: English 1a, 1b, 3a, 3b.**

131a-c **INDEPENDENT WORK.** (3 ea.) Staff
For advanced students of high standing. Each pursues a course independently, under the guidance of a staff member, writes a paper embodying the results of his study, and takes an examination. **Prereq: English 1a, 1b, 3a, 3b.**

133 **THE DEVELOPMENT OF AMERICAN REALISM.** (3) Knight
Traces American realism from Yankee and pioneer humorists through the local color school, leading novelists of the eighties and nineties, their contemporaries in drama and poetry. **Prereq: English 1a, 1b, 3a, 3b.**

143 **EDGAR ALLAN POE.** (3) Farquhar
A comprehensive study of Poe's works, poetry, and prose. **Prereq: English 1a, 1b, 3a, 3b.**

145 **ELIZABETHAN DRAMA, EXCLUSIVE OF SHAKESPEARE.** (3) Stroup
A survey of English drama during the period of Elizabeth. Special study of foreign drama and its influence upon the Elizabethan material. **Prereq: English 1a, 1b, 3a, 3b.**

147 **AGE OF JOHNSON.** (3) Cooke
From 1740 to 1789. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, Cowper. The Pre-Romantic movement. **Prereq: English 1a, 1b, 3a, 3b.**

148 **A GENERAL INTRODUCTION TO FOLKLORE.** (3) Jansen
An introduction — on a world-wide scope — to the types of folklore: the folktale, legend, anecdote, ballad, riddle, folk beliefs, folk games, etc. The development of the science of folklore. **Prereq: English 1a, 1b, 3a, 3b.**

149 **AMERICAN FOLKLORE.** (3) Jansen
A study of the lore of professional, regional, national, racial groups. The use of this material in other forms. Experience in collecting and cataloging materials. English 148 is not a prerequisite. **Prereq: English 1a, 1b, 3a, 3b.**

152 **THE AGE OF POPE.** (3) Cooke
Addison and Steele, Swift, Pope, Defoe, and other contemporary figures. **Prereq: English 1a, 1b, 3a, 3b.**

153 THE DRAMA OF THE RESTORATION AND EIGHTEENTH CENTURY. (3) Cooke
A study of the dramatic types that arose between the closing of the theatres in 1642 and the death of Sheridan. **Prereq: English 1a, 1b, 3a, 3b.**

155a CONTEMPORARY AMERICAN POETRY. (3) Farquhar
An examination of the forces which have modified poetry in England and America since 1900 and a study of the major poets. **Prereq: English 1a, 1b, 3a, 3b.**

155b CONTEMPORARY BRITISH POETRY. (3) Farquhar
A continuation of 155a, which is not prerequisite, although desirable. **Prereq: English 1a, 1b, 3a, 3b.**

156a THE MODERN AMERICAN NOVEL. (3) Budd
Dreiser, Cather, Lewis, Hemingway, Wolfe, and Faulkner are emphasized. Novels chosen for their enduring value rather than historical importance; attention to shifting techniques of fiction and to contrasting interpretations of the American scene. **Prereq: English 1a, 1b, 3a, 3b.**

156b THE MODERN BRITISH NOVEL. (3) Staff
A study of the content and technique of the best twentieth-century British novels, with some consideration of these in relation to significant social, philosophical and literary trends. **Prereq: English 1a, 1b, 3a, 3b.**

205 SURVEY OF MIDDLE ENGLISH LITERATURE. (3) Cutler and Moore
Romance, drama, lyrics, and ballads. **Prereq: English 204.**

206a-d SEMINAR: STUDIES IN THE ENGLISH ROMANTIC PERIOD. (3 ea.) Ward

210 SEMINAR: BIBLIOGRAPHICAL STUDIES. (3) Brady
This course is required of all candidates for the M.A. degree. It should be taken at the beginning of graduate work.

212a-d SEMINAR: STUDIES IN MEDIEVAL LITERATURE. (3 ea.) Moore and Cutler

213a-d SEMINAR: STUDIES IN EIGHTEENTH CENTURY LITERATURE. (3 ea.) Cooke
Emphasis upon one: Johnson and his circle, Swift, the Romantic Revolt, the foreign relations of English Literature in the eighteenth century, or the theory and practice of Neoclassicism.

214a-d SEMINAR: STUDIES IN VICTORIAN LITERATURE. (3 ea.) Brady and Shine
Intensive studies in the social and literary significance of Arnold, Browning, Carlyle, and Ruskin.

215a-d SEMINAR: STUDIES IN LITERARY CRITICISM. (3 ea.) Graduate Staff
These seminars seek primarily to present the problems of criticism, structural and historical. Critical backgrounds will be stressed so that critical studies in English literature may be made.

216a-d SEMINAR: STUDIES IN AMERICAN LITERATURE BEFORE 1900. (3 ea.) Spivey and Knight

217a-d SEMINAR: STUDIES IN CONTEMPORARY AMERICAN LITERATURE. (3 ea.) Spivey and Knight

224a-d SEMINAR: STUDIES IN ENGLISH LITERATURE FROM 1500 TO 1660. (3 ea.) Stroup
A preliminary survey of the literary and cultural trends of the period is followed by directed research based upon the work of one writer, one group of writers, or one literary type.

500, 1-2-3 THESIS. (0) Graduate Staff

Speech

***6 THE ESSENTIALS OF SPEECH.** (3) Blyton, Robinson, and Sterrett
The course is designed to give the student platform experience in the fundamentals of effective public address. Emphasis will be placed upon correct enunciation, correction of speech defects and other requisite aspects of delivery.

7 ADVANCED PUBLIC SPEAKING. (3) Blyton and Sterrett
This course is designed to carry further the work begun in English 6, which is prerequisite for this work. **Prereq: English 1a, 1b, and 6.**

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* Open to Freshmen.

11 **ARGUMENTATION AND DEBATE.** (3) Blyton
Intended to familiarize the student with the theory of argumentative techniques and to provide him with the opportunity to exercise skill in making logical defenses or refutations. **Prereq: English 6 or consent of instructor.**

*14 **PARLIAMENTARY USAGE.** (2) Blyton
The theory and practice of parliamentary procedure as it applies both to governmental and non-governmental organizations. Ample time is allotted for practice in organizing groups and conducting meetings.

38 **ORAL INTERPRETATION.** (3) Sterrett
A course in the study, appreciation, and oral interpretation of selected masterpieces of literature. Recommended for those who plan to teach English literature. **Prereq: English 1a and 1b.**

*40a-b **INTERCOLLEGIATE DEBATING.** (1 ea.) Blyton
Preparation for participation in competitive debates. Many opportunities are offered for actual practice in local and off-campus debates. Previous debating experience is beneficial, but not necessary.

40c-f **INTERCOLLEGIATE DEBATING.** (1 ea.) Blyton
Preparation for and participation in intercollegiate debating.

138 **ADVANCED ORAL INTERPRETATION.** (3) Sterrett
The cutting and reading of three-act plays.

146a **DISCUSSION.** (3) Blyton
The essentials of discussion, with emphasis upon the thinking process as it operates in group situations. Participation in the various forms of discussion. **Prereq: English 6 or consent of instructor.**

146b **ADVANCED DISCUSSION.** (3) Blyton
A continuation of 146a. An intensive study of discussion as democracy in action. Ample time devoted to practice discussions. **Prereq: English 146a.**

150 **WORKSHOP IN SPEECH EDUCATION.** (6) Blyton
Designed for advanced students, especially teachers and prospective teachers. Individual and group research projects pertaining to the teaching of speech.

157 **TEACHING OF SPEECH AND ORAL ENGLISH.** (3) Blyton
Discussions dealing with practical problems in teaching. Intended for teachers and prospective teachers.

158 **ADVANCED ARGUMENTATION AND DEBATE.** (3) Blyton
The function of argumentation and debate in a democracy, plus a much more detailed and critical examination of the logic and argument than is covered in English 11. **Prereq: English 11.**

159 **PERSUASION.** (3) Blyton
The principles and methods of persuasion, of particular benefit to teachers, lawyers, business majors, and other persons whose work is concerned with motivating human conduct. **Prereq: English 11 or 146a.**

164 **SPEECH COMPOSITION.** (3) Sterrett
A study of speech structure and oral style. The analysis of model contemporary speeches. Preparation and discussion of speech manuscripts. **Prereq: English 1a, 1b, 6, 7.**

Dramatic Arts

32 **VOICE DEVELOPMENT.** (3) Briggs
An analysis of each student's voice and articulation, and a pointing out of methods to correct speech faults. Exercises for flexibility, range, relief from tension, and articulation. **Prereq: English 1a and 1b.**

*34 **HISTORY OF THE STAGE.** (3) Rhodes
Designed to give the student a knowledge of dramatic history in relation to the problems of staging. Laboratory work is offered to acquaint the student with the present-day developments of historic devices and technique of staging.

*35 **STAGECRAFT.** (2) Rhodes
Laboratory work which presents the technical problems of construction, painting of scenery, properties, and costuming. Recommended for those interested in public school and community theatre staging.

* Open to Freshmen.

*36 **STAGING TECHNIQUES.** (2) Rhodes
35 is not prerequisite, but desirable. Advanced problems of stage management, stage lighting and equipment. Instruction in model-building and experimental stage design.

137 **STAGE PRODUCTIONS IN SCHOOL AND COMMUNITY.** (3) Briggs
Designed for teachers and community theatre workers. The problems of staging under circumscribed conditions, minimum essentials of play production, and means of constructing or supplying these needs. Individual student problems.

160 **THEORY AND TECHNIQUE OF ACTING.** (3) Briggs
Development of skill and grace in the use of the body. Attention to establishing mood, reactions between characters, suspense through voice modulations, pause and other modes of emphasis, projecting voice and characterization. **Prereq: English 1a and 1b.**

161 **THEORY AND TECHNIQUE OF DIRECTING.** (3) Briggs
Stury of movement, interpretation of lines, creation of atmosphere, use of stage areas, use of levels, methods of achieving a climax, handling of groups, planning of mob scenes. **Prereq: English 1a and 1b.**

162 **THEORY AND TECHNIQUE OF THEATRE PRODUCTION.** (3) Rhodes
Application of modern aesthetic principles and theories of the theatre. Attention to coordination of the playwright, designer, technical director, electrician, stage manager, actor, etc. **Prereq: English 1a, 1b, 34, 35.**

163 **SCENIC DESIGN.** (3) Rhodes
A study of form, line, and color as applied to the stage. Practical work in the building of model sets and in the application of these models to the major productions. **Prereq: English 1a, 1b; 35 or 36.**

172 **WRITING THE ONE-ACT PLAY.** (3) Robinson and others
This course is designed for those students interested in the creative drama. The completion of at least one one-act play is required during the semester.

174 **WRITING THE FULL-LENGTH PLAY.** (3) Robinson and others
Prereq: English 172.

GEOGRAPHY

Joseph Raymond Schwendeman, Thomas P. Field, John F. Foley, and Richard L. Tuthill.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits, including the major work, in advanced courses in the field of Social Studies and certain closely allied physical science fields.

Requirements for a Major. Prerequisites: Geography 1, 2, 3a-b, or 10. **Requirements:** A minimum of 18 credits of advanced work in Geography varied according to the curriculum elected by the student, but including at least three credits in Geography 132a-d.

*1 **ELEMENTS OF GEOGRAPHY.** (3) I, II, S Schwendeman and Field
An orientation course to the field of geography, certain basic facts and geographical tools. Major emphasis upon elements of weather, climate, and earth processes.

*2 **REGIONAL GEOGRAPHY OF THE WORLD.** (3) II, S Field
A study of the geography of the climatic regions of the world, an explanation of their (1) position, (2) extent, and (3) influence upon people. (Required of students in Education for elementary certification.)

*3a **SOCIETIES AROUND THE WORLD.** (3) I, II, S Schwendeman and Field
Meets Social Studies requirements. Comparative study of the Eskimo, Navajo, and Baganda as preliterate, primitive societies in difficult environments. (Same as Anthropology and Sociology 3a.)

* Open to Freshmen.

*3b **SOCIETIES AROUND THE WORLD.** (3) I, II — Schwendeman and Field
Meets Social Studies requirements. Comparative study of the Chinese Peasant, Cotton South and British Midlands as more highly developed societies living in more moderate environments. (Same as Sociology 3b.)

*10 **ECONOMIC GEOGRAPHY SURVEY.** (3) I, II, S — Tuthill and Foley
A survey of the factors of the natural environment and their relationships to selected agricultural, manufactural, and mineral commodities including both national and world patterns of distribution.

20 **INTRODUCTION TO METEOROLOGY.** (3) I — Foley
A study of the atmosphere directed toward elementary understanding of weather, its elements and controls. Attention is given to instruments, maps and observation techniques. **Prereq: Geography 1, for Freshmen.**

22 **CLIMATOLOGY.** (3) II — Foley
A study of elements and controls of climate and of world climatic patterns. **Prereq: Geography 1, for Freshmen.**

100 **REGIONAL GEOGRAPHY OF ANGLO-AMERICA.** (2) I, S — Tuthill
A regional interpretation of the physical features and productive capacities of the various geographical areas of the United States, Canada, and Alaska. **Prereq: One geography course.**

101 **GEOGRAPHY OF KENTUCKY.** (2) II, S — Schwendeman
A study of how the people of Kentucky adjust themselves to the location, surface, climate of their state and utilize their natural resources. **Prereq: One geography course.**

102 **REGIONAL GEOGRAPHY OF LATIN AMERICA.** (2) I — Schwendeman
A study of the countries and geographic regions of Mexico, Central America, and South America. **Prereq: One geography course.**

103 **REGIONAL GEOGRAPHY OF EUROPE.** (2) I — Field
A study of the Western Europe major geographic regions, climatic, soil, terrain, mineral, and biotic factors. Population problems, economic adjustments, and political significance of resources. **Prereq: One geography course.**

104 **REGIONAL GEOGRAPHY OF ASIA.** (2) II — Tuthill
A regional study of the countries of the Orient; major emphasis upon Soviet Russia, China, Japan, and India. Role of the Orient in the international landscape. **Prereq: One geography course.**

105 **REGIONAL GEOGRAPHY OF AUSTRALIA AND THE PACIFIC ISLANDS.** (2) II — Field
A study of the geographic problems and adjustments of the peoples and countries of the Pacific area. Reference to the strategic nature of their location. **Prereq: One geography course.**

106 **REGIONAL GEOGRAPHY OF AFRICA.** (2) II — Field
A study of Africa as a complete continent and not as an example of European imperialist policy; as a series of geographic regions. **Prereq: One lower division course in geography.**

110 **ADVANCED ECONOMIC GEOGRAPHY.** (2) II — Tuthill
An analysis of the patterns of interrelationships between natural factors and economic production with particular attention and field trips to local agricultural and industrial developments. **Prereq: Geography 10.**

112 **CONSERVATION OF NATURAL RESOURCES.** (2) I — Tuthill
A general study of the needs for and problems of conserving the natural resources of the United States including the development of the conservation movement and resource use. **Prereq: Geography 10.**

122 **APPLIED CLIMATOLOGY.** (2) II — Schwendeman
The purpose of this course is to acquaint students with the applicability of climatic data to specific economic activities, such as agriculture, ranching, silviculture, manufacturing, transportation, recreation. **Prereq: Geography 22 or equivalent.**

130 **REGIONAL FIELD OBSERVATION.** (3) S — Staff
A comparative study of selected regions on any one field trip. Work consists of preliminary reading, traveling over the regions with close inspection of selected features, and a written report. **Prereq: One course in geography.**

* Open to Freshmen.

132a-d INDEPENDENT WORK IN GEOGRAPHY. (3 ea.) I, II, S Staff
Individual research involving such problems as: (a) Materials and methods in teaching geography; (b) the Historical Evolution of Geography; (c) map reading and interpretation; (d) special area studies; (e) other topics may be elected by consent of instructor.

133a-k SPECIAL PROBLEMS. (1 ea.) I, II, S Staff
Designed for advanced students who undertake minor research problems to be conducted in regular consultation with the instructor. It can only be taken concurrently with a related upper division course in Geography.

134 CARTOGRAPHY. (3) I, II Foley
A course in the construction and interpretation of maps. **Prereq: Geography 1.**

140 GEOGRAPHICAL FOUNDATIONS OF WORLD POWER. (2) I Schwendeman
The influence of such factors as location, size, form, surface, climate, and natural resources, on the rise and fall of nations. Consideration given to geopolitics. **Prereq: One geography course.**

202 SEMINAR — GEOGRAPHY OF THE CARIBBEAN REGION. (3) I Tuthill
Principal emphasis on the islands of the Caribbean. A study of their geographical bases for economic livelihood, their resource contributions and locative significance. **Prereq: Geography 102.**

203 SEMINAR — GEOGRAPHY OF THE MEDITERRANEAN BASIN AND THE MIDDLE EAST. (3) I Schwendeman
Geographical problems arising in the crucial Mediterranean area. Attention is directed to the unique locative influences and their effects upon geographical developments. **Prereq: Geography 103.**

204 SEMINAR — GEOGRAPHY OF THE U.S.S.R. (3) II Tuthill
A study of the regional structure, relationships, and problems within Soviet Russia. An evaluation is made of the resource basis of modern Soviet development and of present trends in Soviet land expansion. **Prereq: Geography 104.**

500-1-2-3 THESIS. (0) I, II, S Staff

GEOLOGY

A. C. McFarlan, William R. Brown, Irving S. Fisher, Lynn Jacobsen, Ann Livesey, Vincent E. Nelson, John Stokely, and Maurice J. Terman.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

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

Requirements for a Major. Required: Geology 10a, 10b, 101a, 101b, 112, 107a, 107b, 123a, 123b, 118a, 129, 130, 126a, 126b. **Field Work:** A summer field course, Geology 118a, is required of major students for graduation. 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. (3)** Staff
A course in general geology including the common minerals and rocks, geologic processes, and a brief discussion of historical geology. Lecture and recitation, two hours; one lab. conf.

10a FIELD GEOLOGY. (2)
An introduction to field methods involving the identification and tracing of formations, areal mapping, and structure contouring. **Prereq: Geol. 30a, 30b.** For special fee see page 19.

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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 catalog, p. 19.

10b FIELD GEOLOGY. (2)
Topographic mapping. Six hours of field work a week. **Prereq: Geol. 30a, 30b; Math. 18, and CE 12.** For special fee see page 19.

12a ELEMENTARY GEOLOGY FOR ENGINEERS. (3) Stokely
An introduction to the principles of geology. Lecture and recitation two hours; one lab conference.

12b ELEMENTARY GEOLOGY FOR ENGINEERS. (3) Stokely
The practical application of geology to engineering work. A treatment of metallic and non-metallic mineral resources. Geologic maps. Two lectures, one lab conference. **Prereq. Geol. 12a.**

***14a-d ELEMENTARY FIELD GEOLOGY. (1 ea.)**
Visits are made to localities in the vicinity of Lexington to study local geologic phenomena. For special fee see page 19.

***20a, b LABORATORY WORK IN ELEMENTARY GEOLOGY. (1 ea.)**

***23a-b ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. (6 ea.)** McFarlan and Nelson
Eight weeks in the field. The party works along with that in Geol. 118a. **Prereq: Elementary Geol.** For special fee see page 19.

30a GENERAL GEOLOGY. (5) Nelson

30b GENERAL GEOLOGY. (5) Nelson
Historical Geology. Lecture, four hours; lab, two hours.

***50a OUTLINES OF GEOLOGY. (3)** Staff
An introduction to general geology. Lecture, three hours.

***50b 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. **Prereq: Geol. 50a.**

***53 PHYSIOGRAPHY OF NORTH AMERICA. (3)**
A regional study of the physical regions of North America, land forms, their nature and origin. Lecture, four hours. **Prereq: a course in Elem. Geol.**

101a PALEONTOLOGY. (3) McFarlan
A study of fossil invertebrates, their nature, classification, and geological distribution. Lecture, one hour; lab, four hours. **Prereq: Geol. 30a, 30b and Gen. Zoology.**

101b PALEONTOLOGY. (3) McFarlan
A study of geologic faunas. Practice in determining stratigraphic horizons. Lecture, one hour; lab, four hours. **Prereq: Geol. 101a.**

105a-f INDEPENDENT WORK IN GEOLOGY. (3 ea.)
Directed work in independent investigations. Thesis required.

107a-f ADVANCED FIELD GEOLOGY. (2 ea.) McFarlan and others
A field course in geologic mapping involving problems of local structure and stratigraphy. Six hours a week in the field. **Prereq: Geol. 10a, 10b.** For special fee see page 19.

112 ECONOMIC GEOLOGY. (4) Brown
Mineral deposits other than petroleum and natural gas. Distribution, mode of occurence, origin, methods of search for and uses. Lect., three hours; lab, two hours. **Prereq: Geol. 30a, 30b, 123a, and 123b.**

118a-d FIELD WORK IN REGIONAL GEOLOGY. (8 ea.) McFarlan and Nelson
Eight weeks in the field in Colorado. The course is an effort to bring the student into contact with diverse geological phenomena and problems. Practice in geological field methods. See special announcement. Required of major students at the end of junior year. **Prereq: Geol. 30a, 30b.**

120a GEOLOGY OF KENTUCKY. (3) 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.

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* Open to Freshmen.

120b GEOLOGY OF KENTUCKY. (3) McFarlan
The mineral resources of the state, their distribution, origin, and uses. Fossil records.

123a MINERALOGY. (3) Fisher
A study of geometrical crystallography and other physical properties useful in mineral identification. Lecture, one hour; lab, four hours. **Prereq: Geol. 30a, 30b; Chem. 1a and 1b, or a background in Chemistry.**

123b MINERALOGY. (3) Fisher
The determination of minerals by physical properties, blowpipe analysis, and the petographic microscope. A study of their origin, occurrence, and associations. Lect., one hour; lab, four hours. **Prereq: Geol. 123a.**

127 PETROLEUM GEOLOGY. (2) Jacobsen
The origin and accumulation of petroleum and natural gas. A study of geological methods used in exploratory work. Geology of principal producing fields. Lect., two hours; lab, two hours. **Prereq: Geol. 30a, 30b, and Physics 1a, 1b.**

126a-d SEMINAR. (1 ea.) **I, II, S** Staff
Required of all senior majors.

129 ELEMENTARY PETROLOGY. (3) Terman
A megascopic study of the common rocks with emphasis on the sedimentary rocks and processes of sedimentation.

130 ELEMENTARY STRUCTURAL GEOLOGY. (3) Terman
An introduction to Earth structures. Advanced geologic map interpretation, handled from the regional point of view.

208 STRUCTURAL GEOLOGY. (3) 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. Lect., three hours; or lect., two hours; lab, two hours. **Prereq: Physics 1a, 1b; Geol. 30a, 30b, 130.**

210a STRATIGRAPHIC PALEONTOLOGY. (3) McFarlan
Regional stratigraphy. Succession of faunas and the use of fossils for stratigraphic correlation. Lect., one hour; lab, four hours. **Prereq: Geol. 30a, 30b, 101a, 101b.**

210b STRATIGRAPHIC PALEONTOLOGY. (3) McFarlan
A continuation of 210a. Lect., one hour; lab, four hours. **Prereq: Geol. 210a.**

212a OPTICAL MINERALOGY. (3) Brown
A study of the optical properties of minerals by means of the petographic microscope. Lect., one hour; lab., four hours. **Prereq: Geol. 123a and 123b; Physics 1a, 1b.**

212b SEDIMENTARY PETROLOGY. (3)
A study of sedimentary rocks based on microscopical analysis. Lect., one hour; lab, four hours. **Prereq: Geol. 212a.**

212c PETROLOGY OF THE IGNEOUS ROCKS. (3) Brown
The occurrence, origin, and classification of igneous rocks. Identification with the petographic microscope. An introduction to the metamorphic rocks. Lect., one hour; lab, four hours. **Prereq: Geol. 212a.**

213 ADVANCED ECONOMIC GEOLOGY. (3) Nelson
Lecture, two hours; lab, two hours.

215 ADVANCED PETROLEUM GEOLOGY. (4) Jacobsen
The use of well cuttings, electrical logs, radioactive logs and other methods and principles of exploratory geology. A study of sedimentation and sedimentary rocks. Lect., two hours, lab conference, two hours.

216 ENGINEERING AND GROUNDWATER GEOLOGY. (3)
Professional training in the work of the geologic consultant and staff geologist in engineering work. Exploratory work for industrial and farm groundwater supplies.

217a-d SEMINAR. (1 ea.)

GERMAN LANGUAGE AND LITERATURE

A. E. Bigge, Norman H. Binger, Daniel V. Hegeman, John H. Ubben, and Paul K. Whitaker.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: 40 credits in the field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen. With the approval of the head of the department and the dean, courses in related fields may be counted in the field of concentration.

Requirements for a Major. Prerequisite: Junior standing, 1a, 1b, 2a, 2b. **Required:** A minimum of 18 credits of work, independent of Junior and Senior Tutorial Courses. Majors must also pass a final comprehensive examination.

The student who presents one unit of high school foreign language will be permitted to enroll in first year work for full credit.

The student who presents two units of high school foreign language will be permitted to enroll in first year work, but will receive credit only if he makes at least a B standing in this course.

Note.— No credit will be given for German 1a until German 1b has been completed. No student should enroll in two beginning language courses at the same time.

*1a **ELEMENTARY GERMAN.** (3) I, II, S — Staff
The essentials of grammar with practice in reading and writing German. No credit is given for course 1a until course 1b is completed.

*1b **SIMPLE READING AND PRONUNCIATION.** (3) I, II, S — Staff
Continuation of German 1a with more extended exercise in easy reading, writing, and pronunciation. **Prereq: German 1a or one high school unit.**

2a **TRANSLATION AND RAPID READING.** (3) I, II, S — Staff
Certain selected texts are read intensively with emphasis upon translation, while others, particularly in the second semester, are read with emphasis upon the development of rapid reading and comprehension of content. **Prereq: 1b.**

2b **TRANSLATION AND RAPID READING.** (3) I, II, S — Staff
Continuation of German 2a. **Prereq: German 2a.**

8 **ELEMENTARY AURAL-ORAL PRACTICE.** (1) — Staff
A course designed to improve pronunciation and comprehension of spoken German. Aural-Oral drills, dictation, recordings, etc. Class will be limited to permit individual attention. **Prereq: German 1a.**

9 **INTERMEDIATE AURAL-ORAL PRACTICE.** (1) — Staff
Continuation of the elementary course on a more advanced level. May be taken only in conjunction with courses on or beyond the second year level. **Prereq: German 8 or permission of instructor.**

10a **ELEMENTARY CONVERSATION AND COMPOSITION.** (3) I, II, S — Staff
This course is conducted mainly in German. The first semester's work will be held to simple every-day terms which any student having had German 1b should be able to master without difficulty. **Prereq: 1b or approval of the Department.**

10b **ELEMENTARY CONVERSATION AND COMPOSITION.** (3) I, II, S — Staff
Continuation of German 10a. **Prereq: German 10a.**

20a **READINGS IN MEDICAL GERMAN.** (3) I, II, S — Staff
This course is designed specifically to meet the needs of Pre-Medical and Med. Tech. students as well as Bact. majors. The text used provides reading and builds up a graduated vocabulary in Biological Sciences. **Prereq: German 1b.**

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*Open to Freshmen.

20b READINGS IN MEDICAL GERMAN. (3) I, II, S — Staff
Continuation of German 20a. **Prereq: German 20a.**

21a READINGS IN CHEMICAL GERMAN. (3) I, II, S — Staff
This course is designed to meet the needs of Industrial Chemists and Chemistry majors. The material provides a vocabulary in Chemistry and an intimate acquaintance with the style which is characteristic of German scientific writing. **Prereq: German 1b.**

21b READINGS IN CHEMICAL GERMAN. (3) I, II, S — Staff
Continuation of German 21a. **Prereq: German 21a.**

52 INTRODUCTION TO CLASSICAL AND 19th CENTURY GERMAN LITERATURE. (3) I, II, S — Bigge
The emphasis in this course will be on the development of reading facility and the acquisition of vocabulary through extensive reading. Selections from the less difficult works of authors of this period will be read. **Prereq: German 2b.**

53 INTRODUCTION TO MODERN GERMAN LITERATURE. (3) I, II, S — Bigge
Readings from some of the less difficult works of Hauptmann, Mann, Schnitzler, and other late 19th and 20th Century writers. **Prereq: German 2b.**

75 SURVEY OF GERMAN LITERATURE IN ENGLISH TRANSLATION. (2) Hegeman
More than a thousand years of German literature, from the "Song of Hildebrand" to "The Magic Mountain", are covered in this course. No knowledge of German is required. Lectures and reports on outside reading.

105a-f INDEPENDENT WORK IN GERMAN. (3 ea.) I, II, S — Staff
This course is designed for students who wish to do advanced work in German on any subject. It is not limited to majors in the Department.

106a, b ADVANCED SCIENTIFIC GERMAN. (3 ea.) I, II, S — Whitaker
This course is designed 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. **Prereq: German 20b or 21b.**

PROSEMINARS IN THE 18th, AND 20th CENTURY GERMAN LITERATURE
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.
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: six semesters of German.

112 PROSEMINAR IN KLEIST. (3) I

113 PROSEMINAR IN HAUPTMANN. (3) II

114 PROSEMINAR IN SCHILLER. (3) I

115 PROSEMINAR IN GRILLPARZER. (3) II

116 PROSEMINAR IN THOMAS MANN. (3) I

117 PROSEMINAR IN LESSING. (3) II

118 PROSEMINAR IN HEBBEL. (3) I

119 PROSEMINAR IN SUDERMANN. (3) II

120a, b JUNIOR TUTORIAL. (1 ea.) I, II, S — Staff
History of German Literature from its beginning to 1500.

130a, b SENIOR TUTORIAL. (3 ea.) I, II, S — Staff
Development of the German Epic and Lyric is studied during the first semester and development of the German Drama during the second semester.

143a, b LIFE AND WORKS OF GOETHE. (3 ea.) I, II, S — Hegeman
This course follows the unfolding of Goethe's genius from his first lyrics through Faust. His principal literary works will be read and attention devoted to autobiographical material, letters, and diaries. **Prereq: six semesters of German.**

150 ORIGIN AND DEVELOPMENT OF THE GERMAN LANGUAGE. (3) I, II Staff
This course in Germanic Philology acquaints the student with the position of German in the European language group and traces the development of the language to the present. Special emphasis is given to the relationship of German and English words. **Prereq: six semesters of German.**

151 INTRODUCTION TO MIDDLE HIGH GERMAN. (3) I, II Staff
This is a literary course with a necessary minimum of Middle High German grammar. Selections will be read from epic and lyric poetry of the period and reports will be given on assigned topics. **Prereq: six semesters of German.**

152 ADVANCED GERMAN CONVERSATION AND COMPOSITION. (3) I, II Ubben
This course is primarily for German majors, particularly those planning to teach. It involves intensive practice in the writing of German prose, with some review of German grammar. **Prereq: six semesters of German.**

204a GERMAN DRAMA OF THE 19th CENTURY. (3) I Whitaker
This course is a study of the German Drama from Schiller's "Die Braut von Messini" to 1870. **Prereq: six semesters of German.**

204b THE GERMAN NOVELLE. (3) II Whitaker
This course traces the origin and development of the German Novelle from Goethe to Thomas Mann. **Prereq: German 204a or permission of the Department.**

205a, b 20th CENTURY LITERATURE. (3 ea.) I, II Bigge
Extensive readings, discussions, and comprehensive reports on the leading literary minds and movements of this Century. **Prereq: six semesters of German.**

206 THE AGE OF GOETHE. (3) I, II Hegeman
A seminar devoted to the investigation of one or more topics in the literature and social development of Germany during the period 1750 to 1825. **Prereq: six semesters of German.**

500-1 THESIS. (0) I, II, S

500-2 THESIS. (0) I, II, S

500-3 THESIS. (0) I, II, S

HISTORY

Thomas D. Clark, Carl D. Cone, W. Clement Eaton, J. Merton England, Will D. Gilliam, James F. Hopkins, A. D. Kirwan, E. E. Kraehe, Robert G. Lunde, Shelby T. McCloy, Robert S. Maxwell, Hambleton Tapp, Rhea A. Taylor, Edward Tuthill, and Bennett H. 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 and sophomores in subsequent courses in history, commerce, law, education, journalism, literature, and general liberal arts.

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

Requirements in the Field of Concentration: Forty credits of advanced work in the field of social or humanistic studies, during the Junior and Senior years, including the major work.

Requirements for a major. Prerequisite: History 2a and 2b, or 4a and 4b, 5a and 5b. **Required:** A minimum of 18 credits of advanced courses in history plus the Senior Seminar.

2a HISTORY OF BRITISH PEOPLE TO THE RESTORATION. (3) I, II Cone
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 BRITISH PEOPLE SINCE THE RESTORATION. (3) I, II Cone
From the Stuart period to the present. A continuation of 2a.

***4a MODERN EUROPE TO THE FRENCH REVOLUTION. (3) I, II** Staff
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. (3) I, II** Staff
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. (3) I, II** Staff
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. (3) I, II** Staff
A continuation of Course 5a, from 1865 to the present.

28 THE ANCIENT WORLD. (3) I
The near East and Pre-Grecian Feriod. Egypt, Babylonia, Assyria, Persia, Palestine, Greece and Rome.

40 HISTORY OF KENTUCKY. (3) I, II 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. (3) I Hopkins
A survey designed to acquaint the student with the principles of American foreign policy and its historical evolution. **Prereq: Course 5a or equivalent.**

100b THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES SINCE 1898. (3) II Hopkins
A continuation of course 100a. Foreign policy after the United States becomes a world power. **Prereq: Course 5b or equivalent.**

105a COLONIAL AMERICA. (3) I Gilliam
A study of the origins and development of the English colonies; their relations with England and European states. Emphasis on imperial policies and colonial autonomy. **Prereq: One year of American or European History.**

105 THE AMERICAN REVOLUTION, 1763-1789. (3) II Taylor
This course deals with the American Revolution and the beginning of the United States as a sovereign nation. **Prereq: One year of American or European History.**

106a COLONIAL LATIN AMERICA. (2) I
A survey of the origins and development of Latin American Colonies and their struggle for independence.

106b LATIN AMERICAN REPUBLICS. (2) II
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) I, II Staff
A course for seniors designed to present the bibliography and literature in selected fields of history.

124a SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES TO 1865. (3) I England
The development of American life and thought.

124b SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES SINCE 1865. (3) II England
A continuation of course 124a.

140a-f INDEPENDENT WORK. (2 ea.) Staff
Under special conditions selected students may investigate problems, with weekly reports to the instructor.

146 RECENT HISTORY OF THE UNITED STATES, 1877-1901. (3) I Wall
A study of the transformation of America from a rural society "isolated" from

* Open to Freshmen.

world affairs into a highly industrialized power. **Prereq: History 10a and 10b or equivalent.**

147 **RECENT HISTORY OF THE UNITED STATES.** (3) II — Wall
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. **Prereq: One year of American History.**

151a **THE AMERICAN FRONTIER.** (3) I — Eaton and Clark
A course dealing specifically with American westward expansion. **Prereq: History 5a and 5b or equivalent.**

151b **THE AMERICAN FRONTIER.** (3) II — Eaton and Clark
A continuation of Course 151a. It will consider the Trans-Mississippi West.

180a **HISTORY OF THE OLD SOUTH.** (3) I — Eaton and Kirwan
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. **Prereq: History 5a.**

180b **THE SOUTH IN THE CIVIL WAR AND RECONSTRUCTION.** (3) II — Eaton and Kirwan
The political, social, and constitutional history of the Confederacy and the Reconstruction of the Southern States.

180c **HISTORY OF THE NEW SOUTH.** (3) II — Clark
The evolution of southern life and society, agrarian politics, relationships with other sections, industrial growth, and new leadership. **Prereq: History 180a.**

II. England and the British Empire

131a **ENGLISH CONSTITUTIONAL HISTORY TO 1603.** (3) I — Cone
A study of the backgrounds of the English constitution. **Prereq: History 2a or equivalent.**

131b **ENGLISH CONSTITUTIONAL HISTORY SINCE 1603.** (3) II — Cone
A continuation of Course 131a. The constitutional struggle between the Stuart kings and Parliament; triumph of constitutional monarchy; rise of the Cabinet; effect of democracy in recent times. **Prereq: History 2b or equivalent.**

134 **HISTORY OF CANADA.** (3) — Cone
A brief survey of Canada under the French; the development under British control; evolution of the Dominion; relation with the United States and British Commonwealth of Nations. **Prereq: One year of college history.**

135a **THE BRITISH EMPIRE TO 1860.** (3) I — Cone
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.** (3) II — Cone
A continuation of 135a. Great Britain and the growth of the Dominions and the Commonwealth since 1860. **Prereq: 2a and 2b.**

138 **BRITISH SOCIAL HISTORY DURING THE TUDOR PERIOD. 1485-1603.** (2) II — Cone
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. **Prereq: History 2a.**

139 **BRITISH HISTORY SINCE 1815.** (3) I — Cone
A detailed study of Britain's political, social, and diplomatic and industrial development during the modern period. Special consideration of Britain in World War I and World War II, and her position in the contemporary world.

III. Europe

115 **THE RENAISSANCE AND REFORMATION.** (3) I — McCloy
This course is designed for a study of the birth of modern spirit and institutions. **Prereq: History 8a or 4a.**

118 **SOCIAL HISTORY OF EUROPE IN THE EIGHTEENTH CENTURY.** (3) II — McCloy
A study of the life and manners of the people of Europe in the 1700's. Especial attention will be given to Western and Southern Europe. **Prereq: History 4a and 4b or 8a and 8b.**

119a THE FRENCH REVOLUTION AND NAPOLEON. (3) I — 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 changes under Napoleon.

119b EUROPE IN THE NINETEENTH CENTURY. (3) II — Kraehe
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.

120 EUROPE IN THE TWENTIETH CENTURY. (3) I — Kraehe
A study of the origins and consequences of the two World Wars together with the revolutionary movements of fascism and communism and their challenge to liberal democracy.

145 RUSSIA SINCE 1900. (3) II
This course will trace the development of Russia through the revolutionary upheavals of the present century, to a proletarian and industrial state under the soviet regime.

171 EUROPE IN THE EIGHTEENTH CENTURY. (3) I — Lunde
A study of the development of absolute monarchies from Louis XIV; the European rivalries at home and abroad; benevolent despotism, and the Age of Enlightenment. **Prereq: History 4a or equivalent.**

179 MODERN EUROPE. (3) — Kraehe
This course is offered to meet a demand for a broader course which will equip students who are going out to teach European history in the present high school curriculum. **Prereq: History 4a and 4b.**

185a CULTURAL HISTORY OF SEVENTEENTH CENTURY EUROPE. (3) I — McCloy
A history of the development of culture in various fields. Intended, without serious duplication of the content of other courses, to furnish a background for further study in a number of directions.

185b CULTURAL HISTORY OF EIGHTEENTH CENTURY EUROPE. (3) II — McCloy
This course is designed to give a survey of European culture during the 1700's, treating the sciences, literature, history, philosophy, the fine arts, and the industrial arts.

IV. The Far East

190a THE FAR EAST TO 1900. (2) I — Vandenbosch
The Portuguese, Dutch, French, and British colonial and trading empires in the Central East (India, Burma, Indo-China and the East Indies). **Prereq: History 8a or equivalent.**

190b THE FAR EAST SINCE 1900. (2) II — Vandenbosch
The contacts of Europe and America with the Far East (China, Japan, Korea, and the Philippines) in the 19th and 20th centuries. **Prereq: History 8b or equivalent.**

194 THE UNITED STATES IN THE PACIFIC AND THE FAR EAST SINCE 1898. (2) 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.

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.

202 THE AMERICAN REVOLUTION. (3) — Staff
Seminar.

206 THE CONFEDERATION OF THE UNITED STATES. (3) II — Clark

247a-d SEMINAR IN UNITED STATES HISTORY. (3 ea.) — Clark
Intensive studies in the political, social, and cultural history of the U.S. since 1914. Different topics will be stressed in rotation.

280 EUROPEAN HISTORIOGRAPHY. (3) I — McCloy

281 **AMERICAN HISTORIOGRAPHY.** (3) II — Clark, Eaton, and Kirwan

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-d **SEMINAR IN AMERICAN FOREIGN POLICY.** (3 ea.) I, II — Hopkins
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.

315a-d **HENRY CLAY AND HIS TIMES.** (3 ea.) I — Eaton

320a-d **SEMINAR IN MODERN EUROPEAN HISTORY.** (3 ea.) — Kraehe

331 **SEMINAR IN MODERN BRITISH HISTORY.** (3) — Cone

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.

350a-d **SEMINAR IN THE FRENCH REVOLUTION.** (3 ea.) 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.

365 **THE AMERICAN CIVIL WAR.** (3) II — Eaton

366 **RECONSTRUCTION.** (3) II — Eaton and Kirwan

500-1 **THESIS.** (0) I, II, S — Staff

500-2 **THESIS.** (0) I, II, S — Staff

500-3 **THESIS.** (0) I, II, S — Staff

HOME ECONOMICS

Home Economics. A student in the College of Arts and Sciences may elect toward the A.B. or B.S. degree a total of 30 credits from other colleges of the University.

HUMANITIES

To satisfy the lower division requirement in the Humanities, students in the College of Arts and Sciences must take two courses in literature and philosophy (Humanities A, B, or C) and one course in art or music (Humanities D or E). Work in the Humanities has not been organized into a distinct department, but a faculty of instructors interested in the humanistic approach to literature, philosophy, and the fine arts has been assembled from the related departments.

A. **CLASSICISM: GRAECO-ROMAN; MODERN EUROPEAN.** (2)
Lecture and discussion, and required reading from representative works. Typical of the writers to be considered are Plato, Aristotle, Decartes, Lessing, Goethe. **Prereq: Sophomore standing.**

B. THE RENAISSANCE: ROMANTICISM. (2)
Lecture and discussion, and required reading from representative works. Typical of the writers to be considered are Bacon, Machiavelli, Rousseau, Kant, Shelley. **Prereq: Sophomore standing.**

C. REALISM AND NATURALISM: THE CONTEMPORARY. (2)
Lecture and discussion, and required reading from representative works. Typical of the writers to be considered are Zola, Hardy, Huxley, O'Neill, Kafka. **Prereq: Sophomore standing.**

D. ART: THE RENAISSANCE TO THE PRESENT. (2)
Illustrated lectures and discussions, with required reading from the literature of art history and criticism. Intensive critical study of selected masterworks. **Prereq: Sophomore standing.**

E. MUSIC: THE RENAISSANCE TO THE PRESENT. (2)
Lectures and discussions, with illustrations by performance and from recordings. Study of musical forms; required reading and listening; analyses of selected masterworks. **Prereq: Sophomore standing.**

HYGIENE AND PUBLIC HEALTH

John S. Chambers, J. D. Farris, W. Brooks Hamilton, and Wilbur A. Heinz.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: 40 credits 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: 12 credits in Biological Sciences. **Required:** A minimum of 15 credits of advanced work in Hygiene and Public Health.

***1 PERSONAL AND COMMUNITY HEALTH.** (1) **I, II** — Heinz and Hamilton
Lectures and recitations. An introduction to the principles of personal and community health.

7 FIRST AID. (2) **II** — Staff
Meets the standard Red Cross requirements in first aid and leads to a Red Cross certificate. Lectures, discussions, demonstrations.

***9 FUNDAMENTALS OF HEALTH.** (2) **I, II, S** — Heinz and Hamilton
A course designed to meet the health requirements for Elementary or Secondary School certification.

51 PERSONAL HEALTH PROBLEMS. (2) **I, II, S** — Heinz and Hamilton
A course involving the detailed study of certain practical health problems of the present day. Not available for credit to students who have had Hygiene 1. Not open to Freshmen.

100a PUBLIC HEALTH. (3) **I, S** — Heinz and Hamilton
A consideration of the cause, prevalence, transmission, and control of preventable diseases.

100b PUBLIC HEALTH. (3) **II, S** — Heinz
A continuation of 100a. Administrative and organizational approach to disease prevention.

104 MATERNAL AND CHILD HEALTH. (2) **II, S**
Problems in Maternal and Child Health.

110 HEALTH EDUCATION. (3) **II, S** — Heinz
A course dealing primarily with principles of health education, health service and health protection.

111a-d INDEPENDENT WORK IN HYGIENE AND PUBLIC HEALTH. (3 ea.) **I, II, S** — Heinz

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Open to Freshmen.

115 COMMUNICABLE DISEASES. (3) II, S — 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. **Prereq: Bacteriology 52 or equivalent.**

118 VITAL STATISTICS. (3) I, S — Heinz
Statistics of population, deaths, births, and morbidity; the collection and analysis of vital statistics.

120a MENTAL HYGIENE. (3) I, II, S
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.

122 SCHOOL AND COMMUNITY HEALTH. (2) II, S — Heinz
A course designed to develop an idea of the cooperative nature of school health work and the importance of connecting it up with adult health work.

150a, b PROBLEMS IN HEALTH EDUCATION. (2, 2) I, S — 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 are given from time to time.

JOURNALISM

L. Niel Plummer, J. Ardery McCauley, Marguerite McLaughlin, William M. Moore, and Victor R. Portmann.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in Field of Concentration: Forty credits 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, 101, 105, 106, 108, 109, 114, 123, and 127.

The Degree of A.B. in Journalism. Four sequences leading to the degree of A.B. in Journalism are outlined on page 65.

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.** (2) I, II — Plummer
A course of lectures and readings designed to introduce prejournalism students to the opportunities in journalism and advertising, the qualifications and training implicit in journalism as a profession.

10 SURVEY OF JOURNALISM. (3) I, II, S — 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. (3) I, II, S — Plummer
A study of words and their fundamental values with reference to development of a writing vocabulary.

22 PRINCIPLES OF NEWS WRITING. (3) I, II, S — Moore
Lectures and readings on the development of the modern news style. Practice in effective writing.

100a NEWS REPORTING. (3) I, II, S — McCauley
Instruction and practice in news gathering, news evaluation, and news writing. **Prereq: Journalism 22.**

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*Open to Freshmen.

100b NEWS REPORTING. (3) I, II, S — McCauley
A continuation of Journalism 100a with emphasis on special fields of information. **Prereq: Journalism 100a.**

101 COPYREADING AND EDITING. (3) I, II — McCauley
Instruction and practice in newspaper deskwork. Preparation of local, state, telegraph, and radio news and features; picture editing, and page make-up. Lab, six hours. **Prereq: Journalism 100a.**

102 COMMUNITY JOURNALISM. (3) I, S — Portmann
A study of the problems which confront the community weekly and the small city daily.

103 NEWSPAPER ADMINISTRATION. (3) II — Portmann
A study of the business, circulation, advertising, and accounting divisions of the newspaper with special emphasis on the community newspaper. **Prereq: Journalism 22.**

105 LAW OF THE PRESS. (2) II, S — Plummer
A study of the special laws of libel, copyright, and regulatory provisions that pertain to the press.

106 INFLUENCE OF THE NEWSPAPER. (3) I — Moore
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. **Prereq: Senior standing.**

107 EDITORIAL WRITING. (2) I — McCauley
A study of editorials, editorial columns, and editorial pages. Publication of copy encouraged. **Prereq: Journalism 22.**

108 HISTORY OF JOURNALISM. (3) II — Portmann
A study of the rise and development of American journalism and newspapers. **Prereq: Senior standing.**

109 TYPOGRAPHY. (2) I — Portmann
Instruction and practice in typographic composition. Use of type faces in news editing. Study of typography in the make-up of American newspapers. Lab, four hours.

110 SUPERVISION OF HIGH SCHOOL PUBLICATIONS. (3) S — Portmann
A study of the problems that confront the adviser of the high school newspaper or magazine. Open to advisers or prospective advisers with consent of the instructor.

111 VERBAL CRITICISM. (3) II, S — McCauley
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. (3) I, II, S — McLaughlin
The function of criticism in journalism. Reviewing of motion pictures, plays, concerts, and books for newspapers with emphasis upon student work in Kentucky newspapers.

114 NEWSPAPER ADVERTISING AND PROMOTION. (3) I, II, S — 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. (3) II — 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, one hour; lab, four hours.

118 PUBLICITY. (3) II, S — Plummer
Lectures and practice dealing with the aims and methods of writing news and special articles for public relations programs of business, schools, colleges, libraries, and of social service organizations.

120 SEMINAR IN PUBLIC OPINION. (3) — Moore
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. **Prereq: Senior or graduate standing.**

123 **FEATURE WRITING.** (3) I, II — Plummer and Moore
Instruction and practice in writing features. Lectures, readings, and reports directed toward discovering, gathering, organizing, writing, and marketing feature articles. **Prereq: Senior standing or consent of instructor.**

125 **MAGAZINE ARTICLE WRITING.** (3) II, S — Moore
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. **Prereq: Senior or graduate standing, or consent of instructor.**

127 **REPORTING PUBLIC AFFAIRS.** (3) II — Plummer
Instruction and practice in reporting the news originating in courts and other public institutions. **Prereq: Journalism 100b and senior standing.**

150 **RADIO NEWS SCRIPTS.** (2) I, II — Moore
Instruction and practice in writing news and feature material for radio presentation. **Prereq: Journalism 22.**

LAW

A student in the College of Arts and Sciences may elect toward the A.B. or B.S. degree a total of 30 credits from other colleges of the University. For the combined Arts-Law curriculum consult the Dean of the College of Arts and Sciences.

LIBRARY SCIENCE

Leslie I. Poste, Laura K. Martin, Margaret Roser, Joseph N. Whitten, and Azile M. Wofford.

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

Requirements in Field of Concentration: Forty credits of advanced work in the Field of Literature, Philosophy, and the Arts, or acceptable equivalent, including the major work.

Requirements for a Major. Prerequisite: Junior or senior standing, with average scholastic record during the first two college years. Prospective majors should consult with the Head of the Department regarding courses to be taken during the first two years of college. A broad academic program is recommended. **Required:** A minimum of 18 semester hours.

General Courses

*25 **USE OF THE LIBRARY.** (1) I, II — 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, S — Staff
Conferences, assigned readings, reports, etc. **Prereq: L. S. 129, 133a, 145, 152, and either 110 or 121.**

110 **THE LIBRARY IN THE SCHOOL.** (3) I, II, S — 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.

121 **INTRODUCTION TO LIBRARY WORK.** (3) I, II, S — Martin
An orientation course designed to give students a general understanding of libraries and library work.

* Open to Freshmen.

127a BOOKS AND RELATED MATERIALS FOR CHILDREN AND YOUNG PEOPLE. (3) I, S — Wofford
Designed primarily for school librarians but open to any students preparing to work with children and young people. Emphasis on library materials to supplement the curriculum and encourage recreational reading.

127b BOOKS AND RELATED MATERIALS FOR CHILDREN AND YOUNG PEOPLE. (3) II, S — Wofford
A continuation of L.S. 127a.

129 CATALOGING AND CLASSIFICATION. (3) I, S — Whitten
Emphasis on functions with sufficient practice to enable students to handle cataloging in the average library situation. Dewey Decimal classification and simplified cataloging emphasized with use of printed cards and other aids.

133a REFERENCE AND BIBLIOGRAPHY. (3) I, II, S — Poste
A study of the essential reference works, including dictionaries, encyclopedias, atlases, yearbooks, and periodical indexes; of the more important subject and trade bibliographies.

133b REFERENCE AND BIBLIOGRAPHY. (3) II, S — Poste
A continuation of L.S. 133a. Emphasis is placed on reference books in subject fields and on the national and subject bibliographies. **Prereq: L.S. 133a.**

139 LIBRARY PRACTICE. (3) II, S — Poste and Roser
Observation and supervised practice in a school library. This course fulfills a requirement of the Southern Association for school librarians.

145 ORGANIZATION OF LIBRARY MATERIALS. (3) I, II, S — Whitten and 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.

152 BOOK SELECTION. (3) I, S — Martin
A general study of book selection principles and methods, with emphasis on printed materials as they interpret modern problems.

212 THE PUBLIC LIBRARY. (2) I, II, S — Martin
A study of the public library as a functioning institution. The course will include case studies of specific libraries.

214 THE COLLEGE AND UNIVERSITY LIBRARY. (2) I, II, S — Poste and Whitten
A study of the college and university library as a functioning institution. The course will include case studies of specific libraries.

227 READING FOR YOUNG PEOPLE. (2) II, S — Wofford
This course will consider reading needs and interests of young people together with current studies in the field. Designed for those working with young people who wish further study in the field. **Prereq: 127a, b, or equivalent.**

229 ADVANCED CATALOGING AND CLASSIFICATION. (3) II, S — Whitten
Expansion of the principles and methods of classification and cataloging books and related materials. Attention given to more advanced problems in cataloging. **Prereq: 129 or equivalent.**

232 LIBRARY WORK WITH CHILDREN. (4) I, S — Martin
A study of the origin and present status of library work with children in school and public libraries.

233 SUBJECT BIBLIOGRAPHY. (3) II — Poste
A comprehensive study of basic reference materials in the humanities, social sciences, and natural sciences. This course emphasizes reference service in research libraries. **Prereq: 133a, b, or equivalent.**

235 GOVERNMENT PUBLICATIONS. (2) II — Whitten
A study of the problems of acquisition, preparation, and use of United States federal, state, and local government publications. Some consideration is given to documents of the United Nations. **Prereq: 133a, b, or equivalent.**

242 HISTORY OF BOOKS. (2) I — Poste
This course considers the records of early man, invention of the alphabet, early writing materials, manuscript books, the invention of printing, and book production in modern times.

250 ADULT READING GUIDANCE. (3) II, S — Martin
Survey of the significant published studies of adult reading, as a guide to book

selection through knowledge of adult needs and interests commonly satisfied through printed materials.

252 ADVANCED BOOK SELECTION. (4) II, S Martin
Emphasis on the more imaginative and creative forms of literature, especially the place of fiction in the modern public library. **Prereq: 152 or equivalent.**

254 SEMINAR. (2) II, S Staff
Discussions and reports on current problems and trends in library service. Consideration of methods of investigating library problems. Assistance in the preparation of the thesis.

MATHEMATICS AND ASTRONOMY

Harold H. Downing, Virginia S. Baskett, Leo F. Boron, Paul P. Boyd, Marion C. Brown, Ralph C. Brown, Elsie T. Church, Vincent F. Cowling, Douglas L. Daly, Morris S. Davis, James C. Flack, A. E. Foster, Adolph W. Goodman, Carolyn S. Leo, Tadeusz Leser, Cordell B. Moore, Sallie E. Pence, Sara L. Ripy, Donald C. Rose, Wimberly C. Royster, Dudley E. South, Richard H. Sprague, Layton O. Thompson, Sherman B. Vanaman, Jr., James A. Ward, Ruric E. Wheeler, and Wilson M. Zaring.

Mathematics

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

Requirements in the Field of Concentration: Forty credits of advanced work in the field of Physical Science during the junior and senior years, including the major work.

Requirements for a Major. Prerequisite: Math and Ast. 2, 5 or 17, 18, 19, 20a, 20b. **Required:** A minimum of 18 credits of advanced work in mathematics, including Math. and Ast. 25, 26 or 36, 27, and one course in Applications.

Requirements for Graduate Work. Graduate students must have had at least 12 credits of mathematics beyond integral calculus before counting work toward an advanced degree.

***1 BASIC MATHEMATICS. (3) I, II, S** Staff
Contents: Common and decimal fractions, percentages, averages, powers and roots in arithmetic; formulas, simple equations, and graphs in algebra; simple problems in geometry; and solutions of triangles in trigonometry.

***2 SOLID GEOMETRY. (3) I, II, S** Staff
A study of lines, planes, cubes, spheres, cones, and cylinders. For the student who has not had this subject in high school. Prerequisite for Math. and Ast. 20a. **Prereq: 1 unit of high school plane geometry.**

4 ELEMENTARY THEORY OF STATISTICS. (3) Wheeler and South
Contents: Arithmetic mean, geometric mean, median, mode, standard deviation, skewness and linear correlation; applications with emphasis on assumptions and interpretations. **Prereq: 1½ units of high school algebra.**

***5 COLLEGE ALGEBRA. (5) I, II, S** Staff
Review of high school algebra, and topics given in a standard college course. **Prereq: Math. and Ast. 1 or its equivalent as determined by the Department of Mathematics and Astronomy from the University placement tests.**

***15 MATHEMATICS OF FINANCE. (3) I, II, S** Staff
A study of simple interest, simple discount, compound interest and annuities. Applications to solutions of problems in amortization, sinking funds, valuation of bonds. **Prereq: Math. and Ast. 5 or 17.**

* Open to Freshmen.

***17 COLLEGE ALGEBRA. (3) I, II, S** Staff
Standard course. **Prereq: 1 unit or more of high school algebra and adequate preparation for a standard course in college algebra as determined from the University placement tests.**

***18 PLANE TRIGONOMETRY. (3) I, II, S** Staff
Study of the triangle with applications. Also a study of analytic trigonometry. **Prereq: 1 unit of high school plane geometry, and qualifications admitting to Math. and Ast. 17 or having passed Math. and Ast. 5.**

***19 PLANE ANALYTIC GEOMETRY. (3) I, II, S** Staff
A brief study of coordinate systems; sketching curves from their equations; conic sections, parametric equations. **Prereq: Math. and Ast. 5 or 17 and 18.**

20a DIFFERENTIAL CALCULUS. (4) I, II, S Staff
A study of rates of changes of elementary functions through use of the derivative and differential. Applications to problems of physics, chemistry, engineering, etc. Simple integration. **Prereq: Math. and Ast. 2 and 19.**

20b INTEGRAL CALCULUS. (4) I, II, S Staff
Indefinite and definite integrals. Determination of area, volume, pressure, work, centroid, moment of inertia. More differentiation. Solid analytic geometry. **Prereq: Math. and Ast. 20a.**

25 INTERMEDIATE CALCULUS. (3) II South and Royster
Contents: Limits, continuity, curvature, mean value theorem, indeterminate forms, series expansions, hyperbolic functions, partial differentiation, definite integrals, advanced forms of integrals. **Prereq: Math. and Ast. 20b.**

26 ADVANCED COLLEGE ALGEBRA. (3) I Foster
Topics include mathematical induction, determinants, systems of enumeration, binomial and multinomial theorems, Diophantine equations, and partial and continued fractions. **Prereq: Math. and Ast. 5 or 17.**

27 ADVANCED ANALYTIC GEOMETRY. (3) Pence
General equations of the second degree, translation and rotation of axes, invariants, simple transformations in the plane, tangents and normals, polar reciprocation, inversion. **Prereq: Math. and Ast. 20a.**

36 INTRODUCTION TO MODERN ADVANCED ALGEBRA. (3) Ward
An elementary discussion of properties of integers, bases of notation, greatest common divisor, fields, polynomials, matrices. **Prereq: Math. and Ast. 20a.**

101a-f INDEPENDENT WORK IN MATHEMATICS. (3 ea.) I, II, S Staff
Reading courses for upper division and graduate students of high standing. **Prereq: Consent of the Department.**

102 VECTOR ANALYSIS. (3) Cowling
Contents: The algebra and calculus of vectors; applications to geometry, electricity, and physics; harmonic functions and potentials. **Prereq: Math. and Ast. 20b.**

103 THEORY OF EQUATIONS. (3) Downing
Topics included: Solutions of cubic and quartic equations; ruler and compass constructions; roots of unity; solutions of numerical equations, systems of linear equations, symmetric functions, and resultants. **Prereq: Math. and Ast. 20a.**

105a DIFFERENTIAL EQUATIONS. (3) I, II, S Staff
A first course including first order linear differential equations, homogeneous equations, exact equations, second order equations with constant coefficients, and numerous applications. **Prereq: Math. and Ast. 20b.**

105b DIFFERENTIAL EQUATIONS. (3) Leser
Further study of ordinary differential equations, special types, similar solutions, and integration in series. **Prereq: Math. and Ast. 105a.**

106a, b ADVANCED CALCULUS. (3, 3) Goodman and Downing
Continuous functions, differentiable functions, infinite series, implicit functions, Riemann integral, the gamma and beta functions, line, surface and space integrals. **Prereq: Math. and Ast. 25 or equivalent.**

107 PROJECTIVE GEOMETRY. (3) Pence
Contents: Harmonic forms, projectively related primitive forms, curves and

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* Open to freshmen.

pencils of rays of second order, ruled surfaces of second order, theory of poles and polars, involution, inversion. **Prereq: Consent of instructor.**

109a, b FUNCTIONS OF A COMPLEX VARIABLE. (3, 3) Cowling and Goodman
Differentiation and integration, contour integration, poles and residues, the linear fractional transformation, conformal mapping, series, Riemann surfaces, applications. **Prereq: Math. and Ast. 106b.**

116 ANALYTIC MECHANICS. (3) Leser
Topics included: Composition and resolution of forces, statics of a particle, moments, couples, center of gravity, friction, simple harmonic motion, work, energy, and constrained motion. **Prereq: Math. and Ast. 20b.**

118 SOLID ANALYTIC GEOMETRY. (3) Brown
Contents: Systems of planes, plane coordinates, the concept of infinity, transformation of coordinates, types of surfaces, quadric surfaces, tetrahedral coordinates. **Prereq: Math. and Ast. 20a.**

119 COLLEGE GEOMETRY. (3) Baskett
Introduction to a wide and extensive body of synthetic geometry. It concerns the geometry of the triangle and the circle, and requires only the known Euclidean concepts. **Prereq: Consent of the instructor.**

120 MATHEMATICAL STATISTICS. (3) II South
Topics considered: Averages, coefficients of dispersion and skewness, correlation and regression lines, curve fitting, Bernouli Theorem, DeMoivre-Laplace Theorem, generating functions, sampling. **Prereq: Math. and Ast. 20b.**

122 ACTURIAL MATHEMATICS. (3) South
Theory of mortality tables, life annuities, premiums, terminal reserves, joint-life annuities and insurance. **Prereq: Math. and Ast. 20b.**

123 CURVE TRACING. (3) I Pence
A study of various methods for sketching algebraic curves. Emphasis on the analytic polygon in finding approximations to the form of the curve in the finite portion of the plane and at infinity. **Prereq: Consent of instructor.**

126a, b INTRODUCTION TO HIGHER ALGEBRA. (3, 3) Ward
Integral domains, fields, rings, polynomials, groups, vector spaces, matrices. **Prereq: Math. and Ast. 36, or consent of instructor.**

127a, b INTRODUCTION TO HIGHER GEOMETRY. (3, 3) Pence
Emphasis on fundamentals common to all geometry. Geometries associated with the projective group and the group of circular transformations. **Prereq: Math. and Ast. 27, or its equivalent.**

128a INTRODUCTION TO APPLIED MECHANICS. (3) Leser
Included in topics studied are infinite series, complex numbers, Fourier series, linear differential equations, Laplace transforms and applications to electrical oscillations. **Prereq: Math. and Ast. C105a.**

128b INTRODUCTION TO APPLIED MECHANICS. (3) Leser
Further applications of Laplace transforms. Bessel functions, Legendre differential equations, the gamma, beta, and error functions. **Prereq: Math and Ast. 128a.**

129 PROBABILITY. (3) South
Theorems of total and compound probability, Bernoulli's theorem, Bayes' theorem, Poisson Law, Expected value, Law of large numbers. Distribution functions and characteristic functions. **Prereq: Math. and Ast. 20b.**

132 THE CALCULUS OF FINITE DIFFERENCES. (3) South
A study of the methods of differencing, interpolation, finite integration, summation of series, approximate integration and difference equations. **Prereq: Math. and Ast. 20b.**

141 INTRODUCTION TO THEORY OF NUMBERS. (3) Ward
Divisibility, prime numbers, congruences and residues, Diophantine equations. **Prereq: Consent of instructor.**

144a-f PROBLEM SEMINAR. (2 ea.) Senior Staff
Reports on current research papers. Problems from various fields of mathematics. **Prereq: Consent of instructor.**

201a-f INDEPENDENT WORK IN MATHEMATICS. (3 ea.) I, II, S Senior Staff
Reading courses in the 200 group for graduate students.

202a, b ALGEBRAIC CURVES. (3, 3) Pence
Topics include general properties of algebraic curves, the theory of residuation, singular points, covariant curves, unicursal curves, systems of curves. **Prereq: Math. and Ast. 127a, b.**

204a, b CALCULUS OF VARIATIONS. (3, 3) Downing
The ordinary problem for the plane and space cases; the necessary conditions of Euler, Weirstrass, Legendre, and Jacobi. The parametric problem; the isoperimetric problem. Sufficiency conditions. **Prereq: Math. and Ast. 105b.**

205 DIFFERENTIAL GEOMETRY. (3) I Downing
Metric differential geometry of curves and surfaces in 3 dimensional Euclidean space, developable surfaces, curvature, geodesics, mapping of surfaces, absolute geometry of a surface. **Prereq: Consent of instructor.**

206 THEORY OF GROUPS. (3) Ward
Permutation groups, isomorphisms, the group postulates, abstract groups, automorphisms, homomorphisms, quotient groups. Abelian groups, Galois groups. **Prereq: Math. and Ast. 126a, b, or consent of instructor.**

208a, b FUNCTIONS OF A REAL VARIABLE. (3, 3) Goodman and Cowling
Brief discussion of real numbers; continuous functions, semi-continuous functions, functions of bounded variation; Stieltjes Integral, measure and integration. **Prereq: Math. and Ast. 106b, or consent of instructor.**

209a-f SELECTED TOPICS IN THE THEORY OF COMPLEX VARIABLES. (3 ea.) Cowling and Goodman
Analytic continuation, functions with natural boundaries, gap theorems, overconvergence, entire functions, Dirichlet series. **Prereq: Math. and Ast. 109b, or consent of instructor.**

210 ADVANCED MATHEMATICAL STATISTICS. (3) South
Theory of sampling, the Chi-square distribution, testing statistical hypotheses. **Prereq: Math. and Ast. 120.**

212a, b SUMMABLE INFINITE PROCESSES. (3, 3) Cowling and Goodman
Fundamental limit idea applied to infinite sequences, infinite series, infinite products, etc. Summability of Cesaro, Holder, Abel, Borel and Leroy. **Prereq: Math. and Ast. 106b, or consent of instructor.**

213 FOURIER SERIES. (3) Cowling and Goodman
Expression of a general periodic function as a Fourier series, sufficient conditions for convergence, Fejer's theorem, applications. **Prereq: Math. and Ast. 106b.**

214 POTENTIAL FUNCTIONS. (3) Leser
Topics considered: Attraction of bodies, Newtonian potential function, theorems of Green and Gauss, level surfaces, spherical harmonics. **Prereq: Math. and Ast. 105b.**

220a, b MATHEMATICS SEMINAR. (2, 2)

221 TENSOR ANALYSIS. (3) Goodman and Cowling
Topics considered: The theory of tensors, quadratic differential forms, Riemannian geometry, pseudo-Euclidean geometry. **Prereq: Consent of instructor.**

222 ORTHOGONAL SYSTEMS OF FUNCTIONS. (3) Goodman and Cowling
This course supplements 221. Eigen value problems for linear differential equations, systems of orthogonal functions, spherical harmonics, hypergeometric and related functions, completeness. **Prereq: Consent of instructor.**

223 INTEGRAL EQUATIONS. (3) Goodman and Cowling
Systems of ordinary linear equations, linear operators, orthogonal systems, linear integral equations of the second kind, theorems of Fredholm, Volterra's equation. **Prereq: Consent of instructor.**

226a, b HIGHER ALGEBRA. (3, 3) Ward
Groups, rings, fields, extension fields, Galois theory, linear algebra, hypercomplex numbers, ideals. **Prereq: Math. and Ast. 126b, or consent of instructor.**

227a, b HIGHER GEOMETRY. (3) Pence
Topics include: Projective spaces, groups of collineations, invariants and covariants, Cremona transformations, the plane cubic and quartic, space curves, the cubic surface. **Prereq: Math. and Ast. 127a, b.**

230 **TOPOLOGY.** (3) Goodman and Cowling
Calculus of sets, metric and separable spaces, complete spaces, continuous mapping, simply connected domains, accessibility and Jordan domains. **Prereq: Math. and Ast. 125a, or consent of instructor.**

231 **ADVANCED DIFFERENTIAL EQUATIONS.** (3) Downing
Existence theorems, partial differential equations, linear equations with periodic coefficients, classical equations, equations in infinitely many variables. **Prereq: Math. and Ast. 105b.**

241 **NUMBER THEORY.** (3) Ward
Peano's Axioms, continued fractions, quadratic fields, algebraic integers, p-adic numbers, etc. **Prereq: Math. and Ast. 126b and 141.**

500 **1-2-3 THESIS.** (0) Senior Staff
This course is designed for graduate students working for advanced degrees. The time-credit is on the same basis as for any other course but no point-credit is given.

Astronomy

*51a, b **DESCRIPTIVE ASTRONOMY.** (3, 3) **I, II** Davis
A study of the sun, moon, planets, comets, meteors; the celestial sphere, the telescope, latitude and longitude, time and calendar; tides; eclipses; stars; and theories of evolution. **Prereq: none.**

52a, b **PRACTICAL ASTRONOMY.** (3, 3) Davis
Coordinate systems; aberration, refraction, parallax; measurement and computation of time, latitude and longitude, eclipses and occultations. **Prereq: Math. and Ast. 51a, b.**

54 **ELEMENTARY OBSERVATIONS IN ASTRONOMY.** (2) Davis
A course dealing with the use of maps, charts, globes, field-glasses, transit instrument, telescope, and cross-staff to determine direction, distance, position, and motion of the astronomical bodies. Two evenings, two hours each.

251a **CELESTIAL MECHANICS.** (3) Davis
Topics included: Rectilinear motion, central forces, potential and attraction of bodies, and the problem of two bodies. **Prereq: Math. and Ast. 105a.**

251b **CELESTIAL MECHANICS.** (3) Davis
Orbit computation, the problem of three bodies, and perturbations. **Prereq: Math. and Ast. 251a.**

MILITARY SCIENCE

Reserve Officers Training Corps (ROTC)
Army and Air Force

Gabriel T. Mackenzie, Edward G. Davis, John C. Boleyn, Frank J. Buldra, James E. Carter, Ollie E. Day, Charles E. Drennen, Samuel J. Foster, George S. Gordon, Walter M. Hatcher, Jr., Samuel W. Howell, Jr., Elmer O. Kinker, Howard S. Maney, Lomon D. Meacham, Joseph W. Ott, Joseph R. Pickett, James F. Pullen, Ernest C. Raulin, Melville B. Schenck, Maurice E. Seely, Frederick D. Standish, Raymond G. Teborek, George I. Wagner, Howard E. Winters, and Edwin W. Woellner, Jr.

ARMY

(Infantry and Signal Corps)

Army Basic Course

Military Science I (Branch Immaterial) (First Year)

Introductory course covering broad precepts of military science, together

* Open to Freshmen.

with practical subjects such as marksmanship, first aid, leadership and drill, and maps and aerial photographs.

*1a, b **MILITARY SCIENCE I, ROTC.** (2) Staff
Three hours per week.

Military Science II (Infantry) (Second Year)

Course in Infantry tactics, weapons, and techniques used in the employment of infantry troops on the squad level, emphasizing the command functions of junior leaders.

21a, b **MILITARY SCIENCE II, ROTC (Inf.)** (2) Staff
Three hours per week. **Prereq: 1a and b.**

Military Science II (Signal Corps) (Second Year)

Course in the basic techniques of wire and radio communications, signal practices in Infantry, Armored, and Airborne Divisions, and the operation of communication centers, together with practical work in leadership and drill.

31a, b **MILITARY SCIENCE II, ROTC (Signal Corps).** (2) Staff
Three hours per week. **Prereq: 1a and b.**

Advanced Course, Army ROTC

Upon successful completion of the Advanced Courses (MS III and MS IV), commissions are granted as Second Lieutenants, Officers Reserve Corps. Each member of the Advanced Course will be required to attend a Summer Camp.

Prerequisite for the Advanced Course is the satisfactory completion of MS I and MS II, or one year's active duty in the Armed Forces, and selection by the President of the University and the head of the Department of Military Science.

Military Science III (Infantry) (Third Year)

The further study of Infantry weapons and techniques, on the platoon and company level, together with broader subjects such as combat intelligence, fortifications, infantry communications, and gunnery. Includes practical work in leadership and drill.

7a, b **MILITARY SCIENCE III, ROTC (Inf.)** (4) Staff
Five hours per week. **Prereq: 21a and b.**

Military Science III (Signal Corps) (Third Year)

The further study of Signal Corps procedures and techniques in the operation of Signal communications, to include logistics and field communications fundamentals. Includes practical work in leadership and drill.

9a, b **MILITARY SCIENCE III, ROTC (Signal Corps).** (4) Staff
Five hours per week. **Prereq: 31a and b.**

Military Science IV (Infantry) (Fourth Year)

An advanced study of Infantry techniques on Battalion and higher level, emphasizing staff procedures, combined arms employment, and general military functions such as troop movements, psychological warfare, and administration. Includes practical work in leadership and drill.

* Open to freshmen.

8a, b **MILITARY SCIENCE IV, ROTC (Inf.)** (4) Staff
Five hours per week. **Prereq: 7a and b.**

Military Science IV (Signal Corps) (Fourth Year)

An advanced study of Signal Corps techniques and higher echelon functions including communication material and equipment, together with general military administration. Includes practical work in leadership and drill.

10a, b **MILITARY SCIENCE IV, ROTC (Signal Corps).** (4) Staff
Five hours per week. **Prereq: 9a and b.**

BAND

Military Science I, ROTC Band (First Year)

*3a, b **MILITARY SCIENCE I, ROTC BAND.** (2) Lutz
Four hours per week.

Military Science II, ROTC Band (Second Year)

4a, b **MILITARY SCIENCE II, ROTC BAND.** (2) Lutz
Four hours per week.

AIR FORCE (ROTC)

The Air ROTC curriculum is designed to produce junior officers possessing qualities and attributes essential to their progressive development in the Air Force Reserve and the Air National Guard.

There are two fields of specialization in the program, viz.:

1. Administration and Logistics
2. Aircraft Maintenance Engineering

Aircraft Maintenance Engineering students must be enrolled in the College of Engineering, or in a course leading to a major in Physics.

Air Force Basic Course
(Freshman and Sophomores)

FIRST YEAR: See Military Science 1a, b, ROTC (Army and Air Force).

Air Science II ROTC (Second Year)

All subjects are common to Engineering and Administration students, viz.: Aerodynamics and Propulsion, Weather, Navigation, Applied Air Power, and Leadership, Drill and Exercise of Command.

41a, b **AIR SCIENCE II, ROTC.** (2) Staff
Three hours per week. **Prereq: 1a, b.**

Advanced Course (Upper Division)

(See entrance requirements page ....).

Advanced subjects within the specialized field of Engineering or Administration will be studied with the aim of instilling a thorough understanding of the specialty, and skill in its various functions.

A six-week summer encampment at a regular Air Force Base will be required of all students as a part of this course.

Air Science III, ROTC (Third Year)

14a, b **AIR SCIENCE III, ROTC (Aircraft Maintenance Engineering).** (4) Staff
Five hours per week. **Prereq: 41a, b.**
After an initial study of Technical Publications, Maintenance and Inspection

* Open to freshmen.

Procedures, this course turns attention to various component systems; Fuel Oil, Electricity, Hydraulics, Propellers and Instruments, in addition to the general subjects.

15a, b AIR SCIENCE III, ROTC (Administration and Logistics). (4) Staff
Five hours per week. **Prereq: 41a, b.**
Study of Supply, Transportation, and Administration.

Air Science IV, ROTC (Fourth Year)

The relationship of the field of specialization to the work of the Air Force as a whole will be clarified with a view to developing a junior officer with a broad understanding, and competence for his specialized field.

12a, b AIR SCIENCE IV, ROTC (Administration and Logistics). (4) Staff
Five hours per week. **Prereq: 15a, b.**
This portion of the course concerns itself with Administration and Logistics in reference to Air Force staff work. The nature of the Staff Organization and the Administrative and Supply Staff Functions are studied.

13a, b AIR SCIENCE IV, ROTC (Aircraft Maintenance Engineering). (4) Staff
Five hours per week. **Prereq: 14a, b.**
This course proceeds to the organizational phases of Maintenance, including Air Force Maintenance Supply, Ground Service Equipment, Field Maintenance and the work of the Air Inspector. It examines Special Maintenance Procedures of Engine Operation and Conditioning, Cruise Control and Test Flight.

Upon successful completion of the fourth year Air ROTC course, the student will receive a commission as a Second Lieutenant, in the U.S. Air Force Reserve. The Professor of Air Science and Tactics may, with the consent and approval of the President of the University, appoint outstanding Air ROTC Seniors as "Distinguished Military Students." These distinguished students may apply for commission as Second Lieutenants in the United States Regular Air Force.

MUSIC

Edwin E. Stein, Arnold Blackburn, Lela Cullis, Helen Hamilton, Earl Holloway, Gordon J. Kinney, Aimo Kiviniemi, Mildred S. Lewis, Warren Lutz, Ford Montgomery, Nathaniel Patch, Frank J. Prindl, Marvin Rabin, Virginia Stallings, William Worrel, and Kenneth R. Wright.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in Field of Concentration: Forty semester hours of advanced work in the field of Literature, Philosophy, and the Arts during the junior and senior years, including the major work.

Music Requirements for a Major. Prerequisites: Junior standing; Music 11a, b; 33a, b; 34a, b; Applied Music — 8 to 12 semester hours.

Required: A minimum of 30 semester hours of advanced work in music as prescribed by the Department of Music. All music majors are required to take part in two performing organizations each semester. A comprehensive examination is required in the senior year.

4a PUBLIC SCHOOL MUSIC. (2) I, S Worrel and Lewis
Methods and materials for the Primary Grades, stressing care of the child voice: rote-song singing, and repertoire; rhythmic development; listening experiences of standard musical literature; beginning notation.
For non-music majors.

4b PUBLIC SCHOOL MUSIC. (2) II, S Worrel and Lewis
Methods and materials for the Intermediate Grades. Two and three part sing-

ing; minor mode. A study of typical music texts for fourth, fifth, and sixth grades. **Prereq: 4a.**
For non-music majors.

*11a **THEORY I — THE ELEMENTS OF MUSICAL THEORY.** (2) I, S — Rabin
Notation, terminology, sight singing, and ear-training. Simple problems in analysis and dictation. Three class meetings each week.

*11b **THEORY I — THE ELEMENTS OF MUSICAL THEORY.** (2) II, S — Rabin
Continuation of 11a. **Prereq: 11a.** Three class meetings each week.

13a **FORM AND ANALYSIS.** (2) I, S — Kinney
A study of the design and harmonic structure of simple and complex forms of music through analyses of standard musical compositions. **Prereq: Music 33a, b.**

13b **FORM AND ANALYSIS.** (2) II, S — Kinney
A continuation of Music 13a. **Prereq: Music 13a.**

15a-q **APPLIED MUSIC — Piano.** (2 ea.) I, II, S — Montgomery, Patch, Stallings, and Cullis

16a-l **APPLIED MUSIC — Strings.** (2 ea.) I, II, S — Wright and Kinney

17a-l **APPLIED MUSIC — Voice.** (2 ea.) I, II, S — Holloway, Hamilton, and Kiviniemi

18a-l **APPLIED MUSIC — Organ.** (2 ea.) I, II, S — Blackburn

19a, b **HISTORY OF MUSIC.** (3, 3) I, II, S — Blackburn
A survey of the history of music from ancient times to the present.

*22a-b **BAND.** (2 ea.) I, II — Lutz
For Freshmen.

23a-b **BAND.** (2 ea.) I, II — Lutz
For Sophomores.

28a-b **CONCERT BAND.** (2 ea.) I, II — Prindl
For Juniors.

29a-b **CONCERT BAND.** (2 ea.) I, II — Prindl
For Seniors.

†31a-l **APPLIED MUSIC — Woodwind Instruments.** (2 ea.) I, II, S — Lutz and Stein

†32a-l **APPLIED MUSIC — Brass and Percussion Instruments.** (2 ea.) I, II, S — Prindl and Worrel

33a **THEORY II — ELEMENTARY HARMONY AND COUNTERPOINT.** (2) I, S — Kinney and Wright
Continuation of Theory I. More advanced problems in harmony, part writing and ear-training, and sightsinging. Three meetings each week. **Prereq: 11b.**

33b **THEORY II — ELEMENTARY HARMONY AND COUNTERPOINT.** (2) II, S — Kinney and Wright
More advanced problems in analysis and part-writing. Applied dominants and simple modulations. Melody writing. Sightsinging and ear-training. Elementary problems in keyboard harmony. Three meetings each week. **Prereq: 33a.**

34a **THEORY III — ADVANCED HARMONY AND COUNTERPOINT.** (4) I, S — Kinney and Wright
Continuation of Theory II. Modulatory and non-functional harmony. Advanced problems in part-writing and analysis. More advanced problems in ear-training, sightsinging, and keyboard harmony. **Prereq: 33b.**

34b **THEORY III — ADVANCED HARMONY AND COUNTERPOINT.** (4) II, S — Kinney and Wright
A consideration of 20th Century idioms. Original composition in small forms. Keyboard review of harmonic practices studied. Advanced sightsinging and dictation. **Prereq: 34a.**

†39a-h **GLEE CLUB.** (1 ea.) I, II, S — Hamilton and Holloway
Any student in the University may be admitted to the glee club after consultation with the director.

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* Open to Freshmen.
† Courses a, b, open to Freshmen; c, d, courses for Sophomores; e, f, courses for Juniors; and g, h, courses for Seniors.

†40a-h **ORCHESTRA.** (1 ea.) I, II — Stein
Students who have demonstrated the required ability are given an opportunity to study standard orchestral literature. Public performances are given at regular intervals.

44a **METHODS AND MATERIALS IN THE ELEMENTARY GRADES.** (4) I, S — Lewis
A course in methods and materials in music education for the first six grades including the care of the child voice, rhythmic development, rote-singing and repertoire, listening experiences, part-singing and notation.

44b **METHODS AND MATERIALS ON THE SECONDARY LEVEL.** (4) II, S — Lewis
Methods and materials in music education for junior and senior high schools. This includes the study of the adolescent, general music classes, organization glee clubs, assemblies, integrated units, program production, etc. **Prereq:** 44a.

46a-p **CLASS INSTRUMENTS.** (1 ea.)
Class instruction in beginning string, woodwind, brass and percussion instruments, and participation in a laboratory instrumental group once a week.

46a, b **CLASS INSTRUCTION IN VIOLIN.** (1 ea.) I, II, S — Rabin

46c, d **CLASS INSTRUCTION IN CLARINET.** (1 ea.) I, II, S — Lutz

46e, f **CLASS INSTRUCTION IN TRUMPET.** (1 ea.) I, II, S — Prindl

46g **CLASS INSTRUCTION IN CELLO.** (1) I, S — Kinney

46h **CLASS INSTRUCTION IN OBOE.** (1) II, S — Lutz

461 **CLASS INSTRUCTION IN FLUTE.** (1) I, S — Lutz

46j **CLASS INSTRUCTION IN FRENCH HORN.** (1) I, S — Worrel

46k **CLASS INSTRUCTION IN PERCUSSION.** (1) II, S — Prindl

461 **CLASS INSTRUCTION IN TROMBONE.** (1) I, S — Worrel

46m **CLASS INSTRUCTION IN BASSOON.** (1) I, S — Lutz

46n **CLASS INSTRUCTION IN STRING BASS.** (1) II, S — Kinney

46p **CLASS INSTRUCTION IN VIOLA.** (1) II, S — Robin

47a **INSTRUMENTAL METHODS AND MATERIALS.** (3) I, S — Worrel
A study of methods and materials for teaching instrumental music on the elementary and secondary school levels including a survey of the public school music program generally.

47b **INSTRUMENTAL METHOD AND MATERIALS.** (3) II, S — Worrel
A continuation of 47a. **Prereq:** 47a.

48a-h **UNIVERSITY CHORISTERS.** (1 ea.) I, II — Lewis
Admission to the University Choristers is through the director.

49a-h **UNIVERSITY CHORUS.** (1 ea.) I, II, S — Kiviniemi
Any student in the University may be admitted to the University Chorus after consultation with the director.

50a **SIGHTREADING AND ACCOMPANYING.** (1) I, S — Stallings
A course designed for piano majors to study problems in sightreading and accompanying. One lecture and one lab meeting a week.

50b **SIGHTREADING AND ACCOMPANYING.** (1) II, S — Stallings
A continuation of 50a. One lecture and one lab meeting a week.

102a **VOCAL PEDAGOGY.** (2) I, S — Kiviniemi
For teachers of voice, supervisors of music and choir directors. The study of physical and psychological problems in the teaching of voice production, the study of breath control, diction, resonance, interpretation, and repertoire.

102b **VOCAL PEDAGOGY.** (2) II, S — Kiviniemi
A continuation of 102a. **Prereq:** 102a.

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† Courses a, b, open to Freshmen; c, d, courses for Sophomores; e, f, courses for Juniors; and g, h, courses for Seniors.

103a **PIANO PEDAGOGY.** (1) I, S — Montgomery
A study of teaching methods and materials.

103b **PIANO PEDAGOGY.** (1) II, S — Montgomery
A continuation of 103a. **Prereq: 103a.**

106a **PIANO LITERATURE.** (2) I, S — Patch
A survey of music written for the piano, emphasizing problems in performance of standard piano literature.

106b **PIANO LITERATURE.** (2) II, S — Patch
A continuation of 106a. **Prereq: 106a.**

107a **VOCAL LITERATURE.** (2) I, S — Hamilton
A study of the development of the Art Song, Opera, Oratorio, and Cantata.

107b **VOCAL LITERATURE.** (2) II, S — Hamilton
A continuation of 107a. **Prereq: 107a.**

108a **HISTORY AND LITERATURE OF THE ORGAN.** (2) I, S — Blackburn
A course of study designed to give the organ student a practical knowledge of the development of the organ, its construction, the standard literature, and teaching materials.

108b **HISTORY AND LITERATURE OF THE ORGAN.** (2) II, S — Blackburn
A continuation of 108a. **Prereq: 108a.**

110 **RESEARCH PROBLEMS IN PEDAGOGY OF THEORY.** (2) I, II, S — Kinney
A course in the teaching of music theory. **Prereq: Music 11a, b, 33a, 33b, 34a, 34b.**

111 **RESEARCH PROBLEMS IN MUSIC.** (2) I, II, S — Worrel
A research course in some phase of music other than history or pedagogy of music theory.

112 **RESEARCH PROBLEMS IN MUSIC.** (2) I, II, S — Staff

113a **COUNTERPOINT.** (2) I, S — Wright
A study of Counterpoint based on 16th Century and 18th Century contrapuntal techniques, original compositions and analysis.

113b **COUNTERPOINT.** (2) II, S — Wright
A continuation of 113a. **Prereq: 13a.**

115a **CHORAL CONDUCTING.** (2) I, S — Lewis
A study of the fundamentals of choral conducting and choral literature, emphasizing materials for the secondary school level.

115b **CHORAL CONDUCTING.** (2) II, S — Lewis
A continuation of 115a. **Prereq: 115a.**

116a **INSTRUMENTAL CONDUCTING.** (2) I, S — Rabin
A study of the technique and practice of the fundamentals of instrumental conducting and score reading.

116b **INSTRUMENTAL CONDUCTING.** (2) II, S — Rabin
A continuation of 116a. **Prereq: 116a.**

117a **ORCHESTRATION.** (2) I, S — Kinney
This course includes a study of the individual instruments of the orchestra and band with practice in scoring for these instruments.

117b **ORCHESTRATION.** (2) II, S — Kinney
A continuation of 117a. **Prereq: 117a.**

118 **MARCHING BAND TECHNIQUE.** (2) II, S — Lutz
A study of marching band organization and formation planning.

119a **COMPOSITION.** (2) I, S — Wright
A beginning course in original composition which affords the student opportunity to compose in the small forms.

119b **COMPOSITION.** (2) II, S — Wright
A continuation of 119a. **Prereq: 119a.**

120a SURVEY OF MUSIC LITERATURE. (2) I, S Stein
This course is intended for non-music majors desiring to acquire an understanding of the literature of music through a study of representative compositions of great composers.

120b SURVEY OF MUSIC LITERATURE. (2) II, S Stein
A continuation of Music 120a.

145 GENERAL SUPERVISION OF MUSIC. (2) II, S Lewis
A study of supervision of the school music program through curriculum planning, supervisory techniques, administrative and community relationships, the use of mechanical aids in the improvement of teaching, etc.

200a, b PROBLEMS IN CREATIVE WORK IN HOMOPHONIC FORMS OF COMPOSITION. (2 ea.)** Wright

201a, b PROBLEMS IN CREATIVE WORK IN CONTRAPUNTAL FORMS OF COMPOSITION. (2 ea.)** Wright

203 CHORAL LITERATURE AND TECHNIQUE. (2) I, S Lewis
A study of choral literature and its interpretation.

204 ADVANCED BAND TECHNIQUE. (2)** Prindl
An advanced course in band techniques with concentration on band organization and materials, the technique of band conducting and an intensive study in the field of band arranging.

208a-c SEMINAR IN MUSIC. (1 ea.) I, II, S Stein
One two-hour meeting is held each week for discussion of current developments in music found in recent books and periodicals.

210 BAROQUE MUSIC. (2) I, S Stein
An intensive study of the music written between 1600-1750. **Prereq: Music 19a, b or 120a, b.**

211 THE CLASSIC AND ROMANTIC PERIODS. (2) II, S Stein
A study of music from the period 1750-1900. **Prereq: Music 19a, b or 120a, b.**

212 MUSIC IN AMERICA. (2)** Stein
The history of music in America from Colonial times to the present day. **Prereq: Music 19a, b or 120a, b.**

213 INTERPRETATION OF INSTRUMENT LITERATURE. (2)** Prindl
A course for experienced leaders of school orchestras and bands. A critical study of standard chamber and symphonic scores and their interpretive problems.
See College of Education for the following courses in Music Education:

251 PROBLEMS IN PUBLIC SCHOOL AND COMMUNITY MUSIC

252 FIELD PROBLEMS IN MUSIC

253 INDEPENDENT WORK IN MUSIC EDUCATION

214 ADVANCED INSTRUMENTAL CONDUCTING. (2)** Rabin
This course is intended to further develop the ability to interpret and conduct the larger forms written for the symphony orchestra and concert band.

215a, b APPLIED MUSIC — Piano. (2 ea.) I, II, S Montgomery, Patch, and Stallings
Prereq: Eight credits of undergraduate study in piano.

216a, b APPLIED MUSIC — Strings. (2 ea.) I, II, S Rabin, Kinney, and Wright
Prereq: Eight credits of undergraduate study.

217a, b APPLIED MUSIC — Voice. (2 ea.) I, II, S Holloway, Kiviniemi, and Houden
Prereq: Eight credits of undergraduate study.

218a, b APPLIED MUSIC — Organ. (2 ea.) I, II, S Blackburn
Prereq: Eight semester hours of undergraduate study.

231a, b APPLIED MUSIC — Woodwind Instruments. (2 ea.) I, II, S Lutz and Stein
Prereq: Eight semester hours of undergraduate study.

** Offered according to demand.

232a, b **APPLIED MUSIC — Brass and Percussion Instruments. (2 ea.) I, II, S** Prindl
Prereq: Eight semester hours of accredited undergraduate study.

PHILOSOPHY

John Kuiper, Jesse De Boer, and John Henry Melzer.

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

Requirements in Field of Concentration: Forty credits 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: 6 credits in Philosophy. **Required:** A minimum of 15 credits in Philosophy; Philosophy 35a, b; and a comprehensive examination in the senior year.

21 **INTRODUCTION TO PHILOSOPHY. (3) I, II, S** Staff
An elementary study of the principal problems of philosophy.

31 **ELEMENTARY LOGIC. (3) I, II, S** Melzer
A study of the logical principles underlying valid thought.

35a-e **TUTORIAL WORK IN PHILOSOPHY. (1 ea.) I, II, S** Staff
Weekly conferences with major students; reports on assigned readings; readings in preparation for the comprehensive examination. Required of senior majors in Philosophy.

51 **ETHICS. (3) I, II** DeBoer
A first course in ethics: study of the nature of moral action; meaning of right and good; moral standards; principal moral theories; organization of individual and social values.

101a **HISTORY OF PHILOSOPHY — ANCIENT AND MEDIEVAL. (3) I** DeBoer
A survey of the philosophical thought of ancient Greece and Rome, and of medieval Christendom.

101b **HISTORY OF PHILOSOPHY — MODERN. (3) II** Kuiper
A survey of modern European and American philosophy from the Renaissance to contemporary times.

102 **CONTEMPORARY PHILOSOPHY. (3) I** Melzer
A study of contemporary philosophic tendencies, notably naturalism, empiricism, pragmatism, idealism, neoscholasticism, existentialism, and logical positivism.

106 **REPRESENTATIVE MODERN PHILOSOPHERS. (3)** Kuiper
A study of 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. (3 ea.) I, II, S** Staff
Open only to students who have distinguished themselves in philosophy or in allied subjects.

110 **THE MAKING OF THE MODERN MIND. (3)**
A study of the intellectual background of the modern age. Renaissance humanism, 17th and 18th century rationalism, 19th century romanticism and idealism are some of the major tendencies to be stressed.

118 **PLATO AND ARISTOTLE. (3)** DeBoer
Plato's development of a theory of the world and of practice, studies in selected dialogues. Analysis of passages in Aristotle's major works on natural philosophy, metaphysics, knowledge, ethics, and politics.

120 **GREAT RELIGIONS OF THE WORLD. (3) S** DeBoer
A descriptive survey of several religions as they developed within their culture, for example, Hinduism, Buddhism, Confucianism, Judaism, Christianity.

125 PHILOSOPHY OF RELIGION. (3) Melzer
A philosophical examination of religious ideas, including such topics as the origin of religion; the nature of religion; the various concepts of God, the soul, immortality; and internal and external criticisms of religion.

130 METAPHYSICS. (3) DeBoer
Study of concepts and problems important for understanding the general or ultimate factors in reality; e.g. space-time, change, causality, substance, matter, life, God.

135 EPISTEMOLOGY. (3) Melzer
A study of the origin, nature, kinds, and validity of knowledge, with a consideration of such topics as faith, intuition, belief, opinion, certainty, and probability. Also some discussion of recent developments in semantics.

190 PROBLEMS OF PHILOSOPHY. (3) Kuiper
This course is designed for upper division and graduate students who have had little or no formal training in philosophy but wish to study the presuppositions underlying religion, education, art, morality, and government.

201a-h SEMINAR IN PHILOSOPHY. (2 ea.) 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. (3, 3) 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. (3, 3) Staff
This course is primarily intended for advanced students who desire and are prepared to do research in philosophy.

PHYSICAL EDUCATION

Don Cash Seaton, Paul W. Byrant, Martha G. Carr, Maurice A. Clay, Stella Gilb, Charles W. Hackensmith, Bernard M. Johnson, Milo G. Karsner, Earl Kauffman, Jr., William E. McCubbin, Richard E. Mackey, Lovaine C. Lewis, Joyce Perbix, Nancy M. Poe, Alfred M. Reece, Adolph Rupp, Bernie A. Shively, and Florence O. Stout.

Note: All students, except veterans and those assigned to Phy. Ed. 2 because of disabilities, are required to enroll in Phy. Ed. 1 for their first semester.

Introductory Service Courses for Men

For information regarding requirements, see page 75.

***1 ORIENTATION.** (0) I, II, S Staff
The student is given a physical conditioning program and an orientation to various carryover sports followed by a physical fitness test and an opportunity to take written and performance tests in three sports of his choice.

***2 ADAPTED SPORTS.** (0) I, II, S Staff
Those students found to have physical disabilities are assigned to this course instead of Physical Education 1. The student is taught various remedial and preventive exercises and adapted sports.

***29 WEIGHTLIFTING AND CONDITIONING.** (0) I, II, S Staff
A general conditioning course, especially desirable for those students with underdeveloped physiques. Men failing the P. F. 1 test in Physical Education are assigned to this course.

Introductory Service Courses for Women

***1 ORIENTATION.** (0) I, II, S Staff
In this course, the student is given posture training and an orientation to various carryover sports followed by a posture test and an opportunity to take written and performance tests in three sports of her choice.

* Open to Freshmen.

*2 **ADAPTED SPORTS.** (0) I, II, S — Carr
Those students found by the medical and physical examination to have physical disabilities are assigned to this course instead of Physical Education 1. The student is taught various remedial and preventive exercises and adapted sports.

Service Courses for Men and Women

The following courses are open to all students who have completed the requirements for Physical Education 1. These courses will fulfill the sports proficiency requirements when passed. All are designed for beginners. The history and rules are taught as well as fundamental skills.

*3 **APPARATUS AND TUMBLING FOR MEN.** (0) I, II — Staff

*4 **ARCHERY.** (0) I, II, S — Staff

*5 **BADMINTON.** (0) I, II — Staff

*6 **BASKETBALL (Women only).** (0) I — Staff

*8 **BOWLING.** (0) I, II, S — Staff

*9 **FENCING.** (0) I, II — Staff

*10 **FOLK DANCING.** (0) I, II, S — Staff

*11 **GOLF.** (0) II, S — Staff

*13 **HANDBALL (Men only).** (0) I, II — Staff

*14 **HOCKEY (Women only).** (0) I — Staff

*15 **HORSEBACK RIDING.** (0) I — Staff

*17 **MODERN DANCE.** (0) I, II — Staff

*20 **SOFTBALL.** (0) II — Staff

*21 **SWIMMING FOR BEGINNERS.** (0) I, II, S — Staff

*23 **TAP DANCING.** (0) I — Staff

*24 **TENNIS.** (0) II, S — Staff

*27 **TUMBLING FOR WOMEN.** (0) II — Staff

*28 **VOLLEYBALL.** (0) I, II — Staff

*31 **GROUP GAMES.** (0) I, II, S — Staff
A comprehensive course in learning the skills and in teaching methods of low organized type games. Designed primarily for students in the College of Agriculture and Home Economics but open to all.

Courses Not Fulfilling Requirements

The following courses are open to all men students who have completed Physical Education 1 but will not count toward the fulfillment of the Physical Education requirement (because they are not considered carryover sports) unless the student is granted special permission by the Director of the Service Curriculum.

*6 **BASKETBALL (Men only).** (0) I — Staff

*19 **SOCCER (Men only).** (0) II — Staff

*26 **TOUCH FOOTBALL (Men only).** (0) I — Staff

*30 **WRESTLING (Men only).** (0) I, II — Staff

* Open to Freshmen.

Advanced Courses

The following advanced courses are open with credit to all students who **have completed** their physical education requirements.

***7 ADVANCED BASKETBALL (Men only). (1) II** Staff
A course for skilled players. Open to those students who earned a letter in high school basketball. Cannot be used to fulfill sports performance requirements.

***12 ADVANCED GOLF. (1) II, S** Staff
Open to men and women students. **Prereq: Physical Education 11 or equivalent.**

***16 HORSEMANSHIP. (1) II** Staff
Instruction in jumping and showmanship. **Prereq: Physical Education 15 or equivalent.**

***18 ADVANCED MODERN DANCE. (1) II** Staff
Prereq: Physical Education 17 or instructor's permission.

***22 ADVANCED SWIMMING. (1) I, II, S** Staff

***25 ADVANCED TENNIS. (1) II** Staff
This course provides an opportunity for skilled players to compete. Open to students who have passed Beginning Tennis, P. E. 24, or by consent of the instructor.

***32 ADVANCED BOWLING. (1) I, II** Staff
Instruction and practice in administration of bowling leagues and advanced techniques. **Prereq: Physical Education 8 and/or consent of instructor.**

***33 ADVANCED FOLK DANCING. (1) I, II** Staff
Instruction and practice in advanced steps, figures, and dances with an increased emphasis on style. **Prereq: Physical Education 10 and/or consent of instructor.**

Professional Courses

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in Field of Concentration: Forty credits of advanced work in the field of Biological Sciences, including the major work.

Requirements for a major. Prerequisites: For Men and Women Anatomy and Physiology 4 and 5; Zoology 1; Sociology 3a or b or 40; English C32 6; Journalism C118; Hygiene 9; Physical Education 40, 51. **For Men** — Physical Education 41, 42, 43, 45, 56. **For Women** — Hygiene 7; Physical Education 46, 47, 49, 57, 90.

Required: for Men and Women — Home Economics 101; Hygiene 110; Physical Education 61, 62a, b, 80, 140, 143, 165, 172, 180. **For Women** — Physical Education 53, 190. **For Men** — Physical Education 52, 70.

(For teaching certificate: Education 148, C147, 105, 169a, b, P.E. 60, 144. Only 6 hours of Education count in Field of Concentration in A. & S.)

Courses for Men and Women

40 PROFESSIONAL ORIENTATION. (2) I Carr and Clay
Introduction to the fields of health, physical education, and recreation. Two hours per week. Required of all students the first fall semester enrolled in the University in Physical Education.

50 EQUITATION. (2) I Ryen
The techniques of horsemanship and methods of instruction. Four hours lab. **Prereq: Physical Education 15 or 16 or consent of instructor.**

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* Open to freshmen after the required Physical Education courses have been completed.

51 **CO-RECREATIONAL ACTIVITIES. (3) I, S** Karsner
Theory and practice in the techniques and teaching procedures of archery, badminton, and bowling. Six hours lab per week.

60 **PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (3) I, II, S** Gilb
Required of all physical education majors and others who wish to qualify for a teaching certificate. Materials and techniques in physical education activities suitable for elementary school children.

61 **FIELD TRIP. (0) II** Carr and Clay
Required the spring semester of all Juniors majoring in physical education. Visitation and inspection of physical education programs.

62a, b **TUTORIAL WORK IN PHYSICAL EDUCATION. (1 ea.) I, II** Carr and Seaton
This work is to be given in preparation for the comprehensive examination. For Arts and Sciences majors only. One hour per week.

80 **RECREATION LEADERSHIP. (2) I, II**
Discussion, observation, and practice of leadership in recreation situations. Students in class serve as leaders of the Faculty Children's Play Club and of special activities by other groups when requested. Lecture, two hours; Lab, two hours.

81 **CAMP LEADERSHIP. (2) II** Kauffman and Carr
Designed for the training of camp administrators and counselors. One hour lecture and two lab per week.

90 **FOLK, TAP, AND SOCIAL DANCING. (3) II** Karsner and Lewis
The basic principles of folk dances of various nations, including practice in executing and calling American Square dances. Practice and teaching methods in ballroom dancing, and fundamentals of tap dancing. Six hours per week.

140 **ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION. (3) I, S** Carr and Clay
Policies and procedures of administration on the secondary school and collegiate levels. Three hours per week.

143 **HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION. (3) I** Hackensmith and Carr
Study of the historical development of physical education and an interpretation of the biological, psychological, and sociological principles of physical education. Three hours per week.

144 **PHYSICAL EDUCATION IN THE SECONDARY SCHOOL. (3) II, S** Carr and Clay
Required for teacher certification in physical education. Theory and practice in methods of teaching physical education activities and supervising programs in the secondary school. One hour per week of lecture, and four hours lab.

145 **INTRODUCTION TO TESTS AND MEASUREMENTS. (3) II** Hackensmith
The construction and grading of essay and objective tests; construction and analysis of achievement tests; and testing and measuring in health and physical education. Lecture two hours and lab two hours per week.

165 **SAFETY IN PHYSICAL EDUCATION. (2) I, S** Seaton
Designed to prepare majors to teach safety education or to serve as school safety coordinators. Provides a knowledge of all common areas of safety education but emphasizes safety in athletics, physical education, and recreation.

172 **KINESIOLOGY. (3) I** Mackey
A study of muscular and mechanical factors in bodily movements. Three hours per week lecture. **Prereq: Anatomy and Physiology 4 and 5.**

173 **REMEDIAL PHYSICAL EDUCATION. (3) II** Hackensmith
A study of the prevention and treatment of physical defects. Two hours of lecture and two hours practice per week. **Prereq: Physical Education 172.**

174 **TECHNIQUES OF REHABILITATION. (2) II** Hackensmith
A practical course in rehabilitation techniques employed in hospitals and rehabilitation centers. Emphasis is upon the use of recreational therapy. Four hours per week lab. **Prereq: Physical Education 173 or consent of the instructor.**

180 **ADMINISTRATION AND ORGANIZATION OF RECREATION. (3) II, S** Kauffman
This course is designed to equip students and community workers with work-

able procedures for developing and operating recreation programs in communities of various sizes and with varying political and social structures.

181 CAMPING IN EDUCATION. (2) I, S Kauffman
Purpose, history, organization, and conduct of camps of various types. **Prereq: Physical Education 81 or permission of instructor.**

182 INTRAMURAL SPORTS. (2) II, S McCubbin and Poe
A study of the development of intramural sports; lecture, recitation, and practice in methods of organizing and administering intramural sports. Three hours per week. One hour lecture and two hours lab.

183 INTERPRETATIONS OF LEISURE AND RECREATION. (3) I, S Kauffman
Designed to provide students interested in recreation as a profession as an adjunct to other work, or as informed citizens with a basic understanding of the significance of leisure and the objectives of recreation.

185 COMMERCIAL RECREATION. (3) II, S Kauffman
This course is concerned with the socio-economic aspects of commercial recreation and the development of operational techniques of such enterprises. Designed for students and operators of commercial recreation facilities. **Prereq: Sociology 40, or consent of instructor.**

Graduate Courses for Men and Women

240 GRADUATE SEMINAR IN PHYSICAL EDUCATION. (2) I, II, S Carr and Hackensmith
A review of current literature in the field. Guidance in thesis writing. Two hours per week.

241 CURRENT STUDIES AND TRENDS IN HEALTH AND PHYSICAL EDUCATION. (3) II, S Seaton
A study of modern trends in health and physical education and standards of evaluation in relation to the history of the various systems, including a review of the principles and objectives.

242 PROBLEMS COURSE IN PHYSICAL EDUCATION. (3) I, S Seaton
For school administrators and directors of physical education. Students work on individual problems applicable to their situation and interests, as well as upon general school problems.

243 PROBLEMS IN THE ADMINISTRATION OF ATHLETICS. (2) II, S Clay and Shively
For athletic directors, supervisors, and athletic coaches. A study of representative athletic administration procedures for colleges, public school systems. Business management is also stressed. Two hours per week.

244 TESTS AND MEASUREMENTS IN HEALTH AND PHYSICAL EDUCATION. (3) I, S Hackensmith
The theory and practice of tests and measurement in the field of health and physical education. Two hours lecture and two hours lab.

280 PROBLEMS IN RECREATION. (2) I, S Kauffman
Current problems in recreation are identified and analyzed by the application of appropriate recreation technique. The course is designed for recreationists, school people and community workers.

290 DANCE AND EDUCATION. (3) S Staff
The function of dance in the educational curriculum on the elementary, secondary and college levels including teacher training and administrative problems. **Prereq: Physical Education 91 or equivalent.**

Courses for Men

41 BASKETBALL COACHING FUNDAMENTALS. (2) I, II Clay
Theory and practice in coaching fundamentals involved in basketball. Four hours lab per week.

42 FOOTBALL COACHING FUNDAMENTALS. (2) I McCubbin
Theory and practice in coaching fundamentals of football. Four hours lab per week.

43 TRACK AND FIELD COACHING FUNDAMENTALS. (2) II Seaton
The theory and practice of coaching track and field events. Four hours lab per week.

44 BASEBALL AND SOFTBALL COACHING FUNDAMENTALS. (3) S Johnson
Theory and practice in coaching fundamentals involved in baseball and softball. Six hours lab per week.

45 TEAM SPORTS FOR MEN. (2) I, II Johnson
Coaching fundamentals, instruction, practice, and rules in the following sports: Touch football, volleyball, speed ball, and soccer. Four hours per week lab.

48 INDIVIDUAL SPORTS FOR MEN. (2) II, S Reece
Theory and practice in the techniques and teaching procedures of golf, tennis, and handball. Four hours per week.

52 SWIMMING AND DIVING (FOR MEN). (2) I, S Reece
The techniques of swimming, water safety, diving, and conducting of meets, water pagaents, etc. Four hours per week lab. Open to all university students. **Prereq: Special skill test.**

56 GYMNASTICS FOR MEN. (3) II Johnson
Theory and practice in calisthenics, tumbling, pyramid building, trampoline, parallel bars, horizontal bar and spring board. Six hours per week, all lab.

70 TRAINING AND FIRST AID. (2) I, S Reece
Principles and practice of first aid, massage, taping and therapy available to the coach and teacher for the prevention and care of athletic injuries. Three hours per week lecture and practice.

72 INTERMEDIATE FOOTBALL. (3) McCubbin
For football players and physical education majors who wish to become coaches. The fundamentals of all positions and playing strategy are covered. One hour lecture and four hours lab. **Prereq: Physical Education 42.**

141 COACHING ADVANCED BASKETBALL. (2) I, S Rupp and Clay
Lecture and recitation on the theory and practice of team play in basketball. Special emphasis is placed upon systems of offense and defense. Two hours per week. **Prereq: Physical Education 41 or consent of instructor.**

142 COACHING ADVANCED FOOTBALL. (2) II, S Bryant and McCubbin
Lecture and recitation on the theory of football. Special emphasis is placed on generalship, signal systems, scouting and conditioning of players. Two hours per week. **Prereq: Physical Education 42 or consent of instructor.**

154 ADVANCED AQUATICS (FOR MEN). (1) II, S Reece
The technique and method of life saving, swimming, and diving leading to an instructor's certificate. Two hours per week lab. **Prereq: A senior LS certificate; or Physical Education 52.**

158a SPORTS OFFICIATING FOR MEN. (1) I, S Johnson
The theory and practice of officiating football, volleyball, basketball, swimming, and other sports. Officiating in college intramurals and high school athletics will be required. One hour lecture, two hours lab.

158b SPORTS OFFICIATING FOR MEN. (1) II, S Johnson
The theory and practice of officiating basketball, track, baseball, tennis, and other sports. Officiating in college intramurals and high school athletics will be required. One hour lecture, two hours lab.

Courses for Women

46 FALL TEAM SPORTS FOR WOMEN. (3) II
Materials, practice, and techniques for the teaching and coaching of field hockey, soccer, and basketball. Six hours per week.

47 SPRING TEAM SPORTS FOR WOMEN. (3) II
Materials, practice, and techniques for the teaching and coaching of softball, volleyball, and speedball for women. Six hours per week.

49 INDIVIDUAL SPORTS FOR WOMEN. (2) II, S Poe and Carr
Theory and practice in methods and principles involved in the teaching of the fundamental skills and advanced coaching techniques in golf and tennis. Four hours per week.

53 SWIMMING AND DIVING FOR WOMEN. (2) I, S Poe
The techniques of swimming, water safety, diving, and conducting of meets, water pageants, etc. Four hours per week lab. Open to all university students. **Prereq: Special skill test.**

57 GYMNASTICS FOR WOMEN. (2) I Perbix
Theory and practice in calisthenics, conditioning exercises, stunts, tumbling and pyramid building, with emphasis upon development of good body mechanics. Four hours lab per week.

91 TECHNIQUE AND PROCEDURE OF THE DANCE. (3) I Staff
An analytical study of contemporary dance structure and technique through basic principles of kinesthetics, form and creativity. Dance as an educational function. Open to male students. Two hours lecture and recitation, and two hours lab.

155 ADVANCED AQUATICS FOR WOMEN. (1) II Poe
The technique and method of life saving, swimming, and diving leading to an instructor's certificate. Two hours per week lab. **Prereq: A senior LS certificate; or Physical Education 53.**

159a SPORTS OFFICIATING FOR WOMEN. (1) I, S Poe
Instruction, interpretation of rules, and practice in officiating field hockey, volleyball, basketball, and other sports. Preparation for Women's National Official's rating in athletics. One hour lecture, two hours lab.

159b SPORTS OFFICIATING FOR WOMEN. (1) II, S Poe
Instruction, interpretation of rules, and practice in officiating basketball, softball, tennis, and other sports. Preparation for Women's National Official's rating in athletics. One hour lecture, two hours lab.

190 HISTORY AND SURVEY OF THE DANCE. (3) II, S Staff
The study of the evolution of dance through the cultural periods of history and the correlation of social structure and dance forms. Open to male students. Three hours per week.

191 RHYTHMICAL FORMS AND ANALYSIS. (2) II Staff
A functional study of rhythms in relation to movement. The employment of percussion instruments and musical accompaniment for dance. Open to male students. Three hours per week; one hour lecture and recitation, two hours lab.

192 DANCE COMPOSITION. (4) I Staff
Dance choreography, program planning, directing, staging and costuming. Formal program required of all students. Open to male students. Two hours lecture and recitation; four hours lab per week. **Prereq: Physical Education 91.**

PHYSICS

William S. Webb, Graydon D. Bell, Randall S. Caswell, Lewis W. Cochran, Ancel E. Cook, Thomas M. Hahn, Jr., Richard Hanau, James E. Hopson, Richard J. Howard,, Bernard D. Kern, O. T. Koppius, Karl O. Lange, George Clinton Patterson, Louis A. Rayburn, William O. Shropshire, and Jacob L. Warner.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits of advanced work in the field of physical science, including the major work.

Requirements for a Major. Prerequisite: Physics 3a-b; Mathematics 17, 18, and 19. Required: Mathematics 20a-b; a minimum of 19 credits of advanced work in Physics, including at least two advanced laboratory courses; a comprehensive examination in the senior year.

1a GENERAL ELEMENTARY PHYSICS. (5) I, II, S Staff
An elementary course covering the Mechanics of solids, liquids, and gases; and Heat. Lectures and recitations, four hours; lab, two hours. **Prereq: High School or College Algebra, Plane Geometry.**

1b GENERAL ELEMENTARY PHYSICS. (5) I, II, S Staff
Continuation of Physics 1a, covering Magnetism and Electricity, Sound, and Light. Lectures and recitations, four hours; lab, two hours. **Prereq: Physics 1a or equivalent.**

3a GENERAL COLLEGE PHYSICS. (6) I, II, S — Staff
An advanced general course covering the Mechanics of solids, liquids, and gases; and Heat. Lectures and recitations, four hours; lab, four hours. **Prereq: Mathematics 17, 18, and 19; Chemistry 1a-b; or equivalents; concurrent, Mathematics 20a.**

3b GENERAL COLLEGE PHYSICS. (6) I, II, S — Staff
An advanced general course covering Magnetism and Electricity, Sound, and Light. Recitations, four hours; lab, four hours. **Prereq: Physics 3a or equivalent; concurrent, Mathematics 20b.**

***51a INTRODUCTION TO PHYSICS.** (3) I — Webb
A lecture demonstration course covering the Mechanics of solids, liquids, and gases; and Heat.

***51b INTRODUCTION TO PHYSICS.** (3) II — Webb
A lecture demonstration course covering Magnetism and Electricity, Sound, and Light. **Prereq: Physics 51a or equivalent.**

104 THEORETICAL MECHANICS. (4) I — Cochran
Considers the fundamental laws of mechanics and the conditions under which they hold. Topics are the dynamics and statics of a particle and rigid body, including constrained and oscillatory motion. **Prereq: Physics 3b; Mathematics 20b.**

108 LIGHT. (3) — Hanau
Considers basic phenomena of geometrical and physical optics including thick lenses, apertures, wave motion, interference, diffraction, polarization, double refraction, absorption, scattering, light velocity, and the theory of selected optical instruments. **Prereq: Physics 3b; Mathematics 20b.**

110 SPECTROSCOPY. (3) — Hanau
Considers production, recording, measuring, and interpretation of spectra. Includes atomic structure, gaseous electrical conduction, spectographic sources, spectographs, photographic photometry, interpretation of spectra in fields of atomic structure and spectographic analysis. **Prereq: Physics 3b; Mathematics 20b.**

111 ELECTRICITY AND MAGNETISM. (3) — Hahn
Considers the fundamental theory of electricity and magnetism, including electrostatic conductors and dielectrics, electrolysis, thermoelectricity, magnetic forces and energy of currents, magnetization of iron, and transient and alternating currents. **Prereq: Physics 3b; Mathematics 20b.**

114 VACUUM TUBES AND CIRCUIT THEORY. (3) — Staff
A lecture and problem course covering the theory of vacuum tubes and associated circuits. **Prereq: Physics 3b; Mathematics 20b.**

115 THEORY OF MEASUREMENTS. (3) — Staff
Considers the analysis of experimental data, including finding an empirical equation to fit a set of data, qualitative and quantitative graphs approximations, probability distributions, errors and deviations, least square solutions. **Prereq: Physics 104; Mathematics 20b.**

119 X-RAYS AND CRYSTAL STRUCTURE. (3) — Staff
Considers the production and properties of X-rays, include the mathematical development of the formulae of absorption, scattering, polarization, methods of wavelength measurement, the Compton effect and related quantum phenomena. **Prereq: Physics 3b; Mathematics 20b.**

120 X-RAY TECHNIQUE. (2) — Cochran
An introductory course for medical technologists; includes the design and operation of X-ray equipment, and the factors affecting the quality of vadiographs. Several weeks are devoted to practice in radiography. **Prereq: Physics 1b.**

123a HEAT AND THERMODYNAMICS. (3) — Koppius
Stresses fundamental principles of heat phenomena; laws of thermodynamics; equations of state for gases; changes of state; derivation of thermodynamic relations and their application to physics and allied sciences. **Prereq: Physics 3b; Mathematics 20b.**

123b HEAT AND THERMODYNAMICS. (3) — Koppius
Continuation of Physics 123a: thermodynamic functions; thermodynamic equilibrium; phase rule and phase equilibria; equilibrium in gaseous and liquid

* Open to Freshmen.

systems; ionic equilibrium; electromotive force and free energy; surface phenomena; radiation; Nernst's heat postulate. **Prereq: Physics 123a.**

125a-d INDEPENDENT WORK IN PHYSICS. (3 ea.) Staff

130 EXPERIMENTAL PHYSICS: SPECTROSCOPY. (2) Hanau
Considers the use and properties of various light sources; prism and grating spectographs; photographic materials; photometric methods; qualitative and quantitative analysis of unknown materials by spectographic methods. **Prereq: Physics 110 or permission of instructor.**

131 EXPERIMENTAL PHYSICS: ELECTRICITY AND MAGNETISM. (2) Cochran
Includes calibration and use of electrometers, galvanometers, and potentiometers; studies of dielectrics and magnetization; measurements of capacitance, resistance and inductance; absolute determinations of electrical quantities. **Prereq: Physics 11 or equivalent (may be taken simultaneously).**

134 EXPERIMENTAL PHYSICS: VACUUM TUBES. (2) Staff
Considers the measurements of circuit and vacuum tube constants, and the experimental study of amplifiers, a.f. and r.f. oscillators, pulse generators, sawtooth generators, etc. **Prereq: Physics 114, or equivalent (may be taken simultaneously).**

135 EXPERIMENTAL PHYSICS: ATOMICS AND NUCLEONICS. (2) Caswell
An advanced laboratory course dealing with methods of producing and detecting nuclear particles. The experiments include methods appropriate to alpha particles, electrons and positrons, photons, neutrons, fission fragments and mesons. **Prereq: Physics 155 or equivalent.**

137 EXPERIMENTAL PHYSICS: HEAT. (2) Koppius
Considers gas thermometers, resistance thermometers, radiation pyrometers, thermocouples; determination of expansion coefficients, vapor pressures, densities, viscosity, surface tension, transition points, specific and latent heats, ratio of specific heats, conductives, radiation constants. **Prereq: Physics 123a.**

138 EXPERIMENTAL PHYSICS: LIGHT. (2) Hanau
Considers the properties of lenses, mirrors, prisms, gratings, and combinations of these elements. Important optical phenomena are studied by means of microscope, telescope, spectrometer, interferometer, polarimeter. **Prereq: Physics 108, or permission of instructor.**

155a FUNDAMENTAL ATOMIC AND NUCLEAR PHYSICS. (3) Hahn
Stresses the fundamental principles of atomic and nuclear theory and practice. Topics: atomic nature of matter, radiant energy, atomic and molecular structure, radioactivity, nuclear structure, transmutation of nuclei, nuclear fission. **Prereq: Physics 3b; Mathematics 20b.**

155b FUNDAMENTAL ATOMIC AND NUCLEAR PHYSICS. (3) Staff
A continuation of Physics 155a emphasizing a detailed study of nuclear structure. Topics: basic facts for nuclear theory (size, spin, and statistics), constituent particles, disintegration, nuclear dynamics, and nuclear forces. **Prereq: Physics 155a or equivalent.**

205 KINETIC THEORY OF MATTER. (3) Senior Staff
Classical kinetic theory of gases, including theorems of Clausius, Joule, Maxwell, and Boltzmann; coefficients of viscosity and slip; Brownian movements; specific heat relations; equations of changes of state. **Prereq: Two "100" Physics courses; Mathematics 105a.**

208 MICROWAVES. (3) Senior Staff
Considers electromagnetic wave theory emphasizing modern problems of microwave transmission, including Plane, rectangular, and cylindrical wave guides, and special problems of transmission at hyperfrequency. **Prereq: Mathematics 105a; Physics 111; Electrical Engineering 133 or equivalent.**

210 ELECTRODYNAMICS. (3) Senior Staff
Considers the subject from the point of view of relativity and the electron theory. Topics: potential solutions of the field equations, retarded and simultaneous fields of systems of point charges. **Prereq: Physics 111; Mathematics 105a.**

212 CONDUCTION OF ELECTRICITY THROUGH GASES. (3) Senior Staff
Considers basic phenomena of electrical discharge in low pressure gases, including ionic formation, mobility, diffusion, and recombination; representative discharges such as the arc, glow, spark, corona. **Prereq: Physics 111; 110 or 155a; Mathematics 105a.**

213 ELECTROMAGNETIC THEORY. (3) Senior Staff
Discusses the application of classical electromagnetic theory to the optical phenomena of reflection, refraction, polarization, absorption, and dispersion. Isotropic, non-istotropic, conducting, and non-conducting media are treated. **Prereq: Physics 111 and 108; Mathematics 105a.**

214 TRANSIENT ELECTRIC AND VACUUM TUBE PHENOMENA. (3) Senior Staff
Considers transient currents in circuits containing variable inductance, capacitance, and resistance, coupled circuits, and vacuum tube circuits. Methods of differential equations, and Heaviside's operational circuit analysis, are used. **Prereq: Physics 111 or 114; Mathematics 105a.**

215a QUANTUM MECHANICS. (3) Senior Staff
Considers the origin of quantum theories and the older theories of Bohr and Sommerfeld; mathematical techniques of quantum mechanics; general aspects of wave mechanics and matrix mechanics; the uncertainty principle. **Prereq: Physics 217a or equivalent.**

215b QUANTUM MECHANICS. (3) Senior Staff
A continuation of 215a with extensions into special methods of solving problems in the theory, problems in more than one dimension, and the Pauli and Dirac theories of the electron. **Prereq: Physics 215a or equivalent.**

217a THEORETICAL PHYSICS. (4) Senior Staff
A course of lectures presenting the basic aspects of theoretical physics in a unified way. Representative topics: advanced dynamics; hydrodynamics; elasticity. **Prereq: Two "100" courses in Physics; Mathematics 105a.**

217b THEORETICAL PHYSICS. (4) Senior Staff
A continuation of 217a dealing with statistical mechanics, thermodynamics, electrodynamics, relativity, quantum theory. **Prereq: Physics 217a or equivalent.**

218 THERMODYNAMICS. (3) Senior Staff
Review of the two classical laws of thermodynamics and their dynamical and statistical mechanical support; Nernst's heat theorem; applications of classical thermodynamics to important problems, relativity thermodynamics. **Prereq: Physics 123a; Mathematics 105a.**

220a-h SEMINAR. (1 ea.) Senior Staff
A weekly meeting of the staff and advanced students for the discussion of recent developments in physics and of work in progress in the department. Credit is given to those who satisfactorily present papers.

224 ADVANCED X-RAYS AND CRYSTAL STRUCTURE. (3) Senior Staff
A lecture course dealing with the study of the theories of production, scattering, and absorption of X-rays; the interpretation of X-ray spectra; the analysis of crystals; and experimental techniques in X-ray measurements. **Prereq: Physics 119.**

225 THESIS. (0) Senior Staff
This course is intended for graduate students who are prepared to undertake special problems. Except in the case of a purely mathematical problem the entire time is to be devoted to work in the laboratory.

226a-b RESEARCH. (3 ea.) Senior Staff

227a-b RESEARCH. (5 ea.) Senior Staff

250 RELATIVITY. (3) Senior Staff
A lecture course dealing with the special and general theories of relativity. The application of the theories to mechanics, electricity and magnetism, and other fields is considered. **Prereq: Physics 104 and 111; Mathematics 105a.**

POLITICAL SCIENCE

Amry Vandenbosch, Gladys M. Kammerer, John E. Reeves, J. B. Shannon, Claude B. Stephenson, Jr., Ernest G. Trimble, and Kenneth E. Vanlandingham.

Requirements in Field of Concentration: Forty credits 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 51a and b. **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 fifteen credits of advanced work in Political Science; a comprehensive examination in the senior year.

51a, b AMERICAN GOVERNMENT. (3, 3) I, II, S — Staff
A survey of federal, state, and local governments in the United States, with comparisons with government on the same levels in Canada and Great Britain.

52 MUNICIPAL GOVERNMENT. (3) I — Reeves
An introductory course in the study of the structure and functions of modern city governments.

80 STATE GOVERNMENT. (3) I, II, S — Reeves
A study of the forms and functions of government in operation in the states of the United States.

111 CURRENT PUBLIC AFFAIRS. (2) I, II — Staff
An analysis and discussion of the most significant contemporary problems affecting public policy.

180a-d INDEPENDENT WORK. (3 ea.) I, II, S — 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. (3) II — Staff
Open to major students.

I. Political Parties and Public Opinion

170 POLITICAL PARTIES. (3) I — Shannon
An analysis of pressure groups; organization, methods, and functions of political parties in the United States.

173 PUBLIC OPINION. (3) II — Shannon
A study of the nature of public opinion, influence of the press, propaganda techniques and media of communication in politics.

179 POLITICAL LEADERSHIP. (3) II, S — Shannon
A course in practical politics, an analysis of the interaction of leaders and led in government. A course intended particularly for persons expecting to enter the profession of politics.

RELATED COURSE IN OTHER DEPARTMENTS

Psychology 104, Social Psychology.

II. Public Administration

177a INTRODUCTION TO PUBLIC ADMINISTRATION. (3) I, S — Kammerer
A study of theories of administration and organization, problems of line management and control, the principal staff and auxiliary functions and agencies, and the problem of administrative responsibility under democrat government.

177b PUBLIC PERSONNEL ADMINISTRATION. (3) II — Kammerer
A study of the history of the merit system in public administration, recruitment, position classification, pay policies, employee relations and morale, tenure, promotion, transfer, and training in the public service; the role of the personnel officer.

177c ADMINISTRATIVE REGULATION. (3) II, S
An examination of the regulatory movement, legal bases of regulation, the organization and administration of regulatory agencies, practice and procedure in rule making and administrative adjudication; and judicial control.

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 Administration.
Social Work 112. Fields of Social Work.
Social Work 151. Public Assistance.

III. Theory

171a EARLY POLITICAL THEORY. (3) I — Shannon
The political theories of Plato and Aristotle, Roman and early Christian Political Thought.

171b MODERN POLITICAL THEORY. (3) II — Shannon
Study of Machiavelli, Hobbes, Locke, Rousseau, Burke, and the theories of the American and French Revolutions, the English Utilitarians.

175 CONTEMPORARY AMERICAN POLITICAL THOUGHT. (3) II, S — Shannon
Conceptions of the respective roles of national and local governments subsequent to the war between the states; American ideas of laissez faire 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. (3) I, S — Trimble
A study of the governments of Great Britain and the Dominions, France, and Scandinavia.

155b COMPARATIVE GOVERNMENT — CONTEMPORARY DICTATORSHIPS. (3) II, S — Trimble
A study of the totalitarian states of Europe and Asia.

168 THE GOVERNMENTS AND POLITICS OF EASTERN ASIA. (3) I, S — Vandenbosch
An introductory study of the political institutions of China, Japan, India and the countries of Southeast Asia.

V. Public Law

159a AMERICAN CONSTITUTIONAL DEVELOPMENT. (3) I, S — Trimble
Chronological survey of the making of the constitution and its interpretation through principal statutes and judicial decisions; some emphasis upon the economic and social interests which influenced this growth.

159b AMERICAN CONSTITUTIONAL DEVELOPMENT. (3) II — 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.

176 LEGISLATION. (3) II — Kammerer
A functional study of legislative bodies and the process of legislation, covering the organization of legislative assemblies, operation of the committee system, procedures, bill drafting, aids, and 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. (3) II, S
The relations between the United States and the Latin American countries, with emphasis on the Monroe Doctrine and Pan-Americanism.

150 INTERNATIONAL LAW. (3) II — 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; treatment of aliens.

165 WORLD POLITICS. (3) I, II, S — Vandenbosch
A study of the most significant problems of world politics, including the fundamental factors governing international relations, the techniques and instruments of power politics, and the conflicting interests in organizing world peace.

166 THE UNITED NATIONS. (3) II, S — Vandenbosch
Background of the United Nations. Problems and issues at the San Francisco Conference; analysis of charter and comparison with League of Nations Covenant; nature, structure, and functions.

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.** (3) II, S — Shannon
A study of the theories and principles of planning with a detailed investigation of the regional life of selected areas.

204 **INTERNATIONAL RELATIONS AND ORGANIZATION.** (3) II — 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.** (3) I — Kammerer or Reeves
A research course in selected problems of public administration. The problems will be chosen in accordance with the needs and desires of students registered for the course.

211 **THE CONSTITUTION AND CIVIL RIGHTS.** (3) I, S — Trimble
The American conception of civil rights as expounded by the Constitutional Fathers and as interpreted by the courts. The social, economic, and political aspects and implications of these rights.

213 **FEDERAL CENTRALIZATION.** (3) II — 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.

217 **CONTEMPORARY AMERICAN DIPLOMATIC PROBLEMS.** (3) I, S — Vandenbosch
An examination of the more important and basic current problems of American foreign policy.

271 **SEMINAR IN CONTEMPORARY POLITICAL THEORY.** (3) I, S — Shannon
An intensive study of contemporary political ideologies.

VII. State and Local Government

140 **RURAL LOCAL GOVERNMENT.** (3) I, S — Vanlandingham
A study of the organization and functioning of units of local government, with primary emphasis on government in Kentucky counties.

172 **KENTUCKY GOVERNMENT AND CONSTITUTION.** (3) II — 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.

RELATED COURSES IN OTHER DEPARTMENTS
Economics 124. State and Local Taxation.
Sociology 40. The Community.
Sociology 170. The City.

PSYCHOLOGY

James S. Calvin, Robert E. Bills, Lysle W. Croft, Charles F. Diehl, Graham B. Dimmick, Betsy W. Estes, Irving A. Gail, Robert Glaser, Leslie L. Martin, Parl L. Mellenbruch, Ernest Meyers, Edward Newbury, Robert D. North, Frank A. Pattie, A. Dudley Roberts, Morris Roseman, Erwin W. Straus, Walter E. Watson, and M. M. White.

For information regarding the Industrial Psychological, Child Guidance, and Speech Correction services, see "Special Services of the University," p. 289.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements for a Major. Prerequisite: Psychology 1a and 1b 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 15 of the 40 credits in the field must be courses in Psychology not open to freshmen. In addition, students majoring in the Department must pass a comprehensive examination in the senior year.

*1a **INTRODUCTION TO PSYCHOLOGY.** (3) I, S — Staff
An introduction to the study of the fundamental problems of human behavior. Among the topics discussed are: heredity, development of the individual, individual differences, emotion, the senses, perception, and the nervous system.

*1b **INTRODUCTION TO PSYCHOLOGY.** (3) II — Staff
A continuation of 1a. Among the topics discussed are attention, motivation, learning, social behavior, language, thinking, and personality.

2 **APPLIED PSYCHOLOGY.** (3) I, II — Mellenbruch
Practical applications of psychology to business, industry, law, medicine, and every-day living. The student is led to see how he can employ psychology efficiently and how psychology in turn affects him. **Prereq: 1a, 1b.**

7 **PSYCHOLOGY OF THE CHILD.** (3) I, II, S — Bills and Estes
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. **Prereq: 1a.**

8 **INDIVIDUAL DIFFERENCES.** (3) I, II, S — Newbury
An introduction to the study of individual differences in relation to measurement in psychology. Effects on behavior of race, sex, heredity, physical constitution, and training will be considered. **Prereq: 1a, 1b.**

104 **SOCIAL PSYCHOLOGY.** (3) I, II — White
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. Topics given special consideration: crowds, mob behavior, propaganda, and nationalism. **Prereq: 1a, 1b.**

105 **EMPLOYMENT PSYCHOLOGY.** (3) I, II, S — Mellenbruch
Emphasis is placed on the characteristics of an effective interview, the application blank, the use of objective tests in selection and the relation of adjustment, interests, special abilities, and experience to job fitness. **Prereq: Psy. 8.**

106 **INDUSTRIAL PSYCHOLOGY.** (3) I, II — Mellenbruch
Applications of psychology to industrial personnel problems: training, merit ratings, industrial fatigue, surveys of attitudes, morale, turnover and absenteeism, safety promotion, providing incentives, welfare provisions, etc. **Prereq: 1a, 1b.**

108 **EXPERIMENTAL PSYCHOLOGY.** (4) I — Meyers
An experimental study of the nature of sensation and perception — of the process by which we know the world through our senses: vision; hearing; taste and smell; the skin senses. **Prereq: 1a, 1b.**

113 **PSYCHOLOGY OF LEARNING.** (4) II — Meyers and Calvin
An experimental study of the learning process with an analysis of various types of learning — verbal learning, form learning, conditioned-response learning, acquisition of skills, memory, problem solving, thinking. **Prereq: 1a, 1b.**

114 **ABNORMAL PSYCHOLOGY.** (3) I, II, S — Pattie
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. **Prereq: 1a, 1b.**

115 **GENETIC PSYCHOLOGY.** (3) II — Newbury
Influence of hereditary factors in the development of human behavior. A critical survey of the evidence regarding psychological traits such as musical and other special abilities, intelligence, interests, insanity. **Prereq: 1a, 1b.**

116 **ANIMAL BEHAVIOR.** (4) I — Newbury
Experimental techniques used in investigations of animal behavior. Topics in-

* Open to Freshmen.

clude: heredity and environment, activity, instinct, motivation, learning, sensory discrimination, and personality in subhuman species. **Prereq: 1a, 1b.**

117 BIOLOGY OF MOTIVATION. (2) II Newbury
Fundamental activating and goal-seeking processes of living organisms, biologically considered, including experimental and theoretical studies on such topics as instincts, drives, motives, and taste preferences. **Prereq: 1a, 1b.**

120a-d INDEPENDENT WORK IN PSYCHOLOGY. (2 ea.) I, II, S Staff
Designed for advanced students who undertake minor research problems to be conducted in regular consultation with the instructor. **Prereq: Major in the Department with a standing of two in psychology courses.**

121 STUDENT PERSONNEL. (3) I, II Martin
The methods of dealing with student personnel problems in college and high school, including the problems of selection, classification, grading, personal adjustment, motivation, guidance, and vocational placement. **Prereq: 1a, 1b.**

124 MENTAL HYGIENE. (3) I, II, S Bills
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. **Prereq: 1a, 1b.**

125 EXPERIMENTAL CHILD STUDY. (3) I, II
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. **Prereq: Psy. 7.**

130 SPEECH CORRECTION: A SURVEY. (3) I, II, S Diehl
The nature, causes, and treatment of the major disorders of speech: defective articulation and voice, aphasia, and stuttering. A limited amount of clinical practice may be obtained by some of the more advanced students.

131 STUTTERING AND ITS CORRECTION. (3) I, II, S Diehl
A practicum course in therapy for all types of speech disorders. **Prereq: Psy. 130 or may be taken concurrently.**

140 MENTAL DEFICIENCY. (2)
A psychological approach to the problem of mental deficiency. Discussion of various types; consideration of hereditary and environmental factors in causation; education and social control. **Prereq: Psy. 8.**

150 PSYCHOLOGICAL TESTING. (3) I, II Glaser and Estes
A general orientation to the field of psychological testing. Introduction to the principles and methods of psychological testing, and a survey of the various kinds of psychological tests. **Prereq: 1a, 1b, 8.**

201a-h SEMINAR IN PSYCHOLOGY. (1 ea.) I, II 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. (2 ea.) I, II, S Staff
Shorter research problems are registered under this number. A minimum of six hours a week is required in consultation with the instructor.

205a-b SEMINAR IN SOCIAL PSYCHOLOGY. (3 ea.) II White
Each semester some topic in the field of social psychology, such as attitudes and beliefs, structure and function of social groups, social determinants of behavior, leadership, and morale will be studied intensively. Same as Sociology 205a, b.

210a-h RESEARCH IN PSYCHOLOGY. (3 ea.) I, II, S Staff
Research or thesis work may be registered under this number. A minimum of nine hours a week is required on research conducted in consultation with the instructor.

211 MENTAL WORK AND FATIGUE. (3) I Calvin
A laboratory course. Two hours devoted to experiments and two hours discussion each week. **Prereq: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

212 THE EMOTIONS. (3) II Griffith
An experimental study of feeling and emotion. The following aspects of emotional behavior are considered: the conscious experience of emotion; behavior in emotional situations; physiological changes accompanying emotion. **Prereq: Psy. 109 or equivalent.**

214 THEORIES OF LEARNING. (3) II Calvin
An examination of theories which attempt to explain the processes of learning and memory. The principal types of theories examined are the behavior theories and the field theories. **Prereq: Psy. 113 or equivalent.**

215 PSYCHOMETRICS. (3) I, II Glaser and North
Analysis and interpretation of human measurements. The course deals with the computation and interpretation of simple, partial, and multiple correlations, regression equations, and reliability of measures. **Prereq: Math. 4 or equivalent.**

217 PSYCHOLOGY OF LANGUAGE. (2) II Diehl
A survey of semantic uses of language as related to human behavior. Special attention will be given to language problems of the brain injured: aphasic, cerebral palsied, and mentally disordered.

219 CLINICAL PSYCHOLOGY. (4) I, II, S Roseman
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.

222 SYSTEMS OF PSYCHOLOGY AND THEIR HISTORY. (3) I Pattie
A survey of the history of psychology and an intensive study of current systems of psychology.

225 PRACTICE IN TESTING: INTELLIGENCE TESTS. (3) I, II Glaser
This course provides advanced laboratory practice in the measurement of intelligence by individual techniques. Six hours a week. **Prereq: Psy. 8 or equivalent.**

226 PSYCHOLOGICAL MEASURING INSTRUMENTS. (3) II Mellenbruch
A study is made of a wide variety of psychological tests including group intelligence tests, personality and interest inventories, area aptitude tests, and special aptitude tests. **Prereq: Psy. 8.**

230 PERSONALITY THEORY. (3) I Pattie
An intensive survey of the major psychiatric, psychological, and sociological theories of personality structure and development. The relation of these theories to psychological research on personality will be examined.

234a PRINCIPLES OF TEST CONSTRUCTION. (3) I Mellenbruch
A survey of the principles involved in different types of standardized tests, followed by the construction and item analysis of an original test by the student. **Prereq: Psy. 215.**

234b TEST STANDARIZATION. (3) II Mellenbruch
A continuation of 234a. The student will administer a revised form of his preliminary test to an adequate sampling of the appropriate population and will determine its reliability and validity. **Prereq: Psy. 234a.**

235 DIAGNOSIS AND COUNSELING IN A STUDENT PERSONNEL PROGRAM. (3) II Croft
An advanced course in techniques for collecting information for student counseling, diagnostic techniques, and the techniques of counseling and interviewing. **Prereq: A graduate major in Psychology or Education, and Psy. 121.**

237 CLINICAL TESTING. (2) I, II Watson
Practical experience in the application of clinical diagnostic techniques to a variety of pathological subjects. **Prereq: Psy. 225.**

238 THE RORSCHACH TEST. (4) I, II Dimmick
An introduction to the Rorschach test as a clinical instrument. Practice in administering, scoring and interpreting the test. **Prereq: Psy. 219.**

239 THE THEMATIC APPERCEPTION TEST. (3) II, S Roseman
An introduction to the Thematic Apperception Test as an instrument for obtaining information concerning thought content, attitudes, and feelings. Practice in administering, scoring, interpretation. **Prereq: Psy. 238.**

240a THERAPEUTIC PROCEDURES. (3) I, II Bills
Theory and technique of nondirective psychotherapy. Consideration will be given to the personality theory formulated for the technique and the supporting evidence. Supervised counseling experience. **Prereq: Psy. 219.**

240b THERAPEUTIC PROCEDURES. (3) Dimmick
History, evolution and rationale of various psychotherapeutic procedures includ-

ing directive psychotherapy, play therapy, use of painting and drawing. Demonstrations and supervised experience in these techniques. **Prereq: Psy. 219.**

241 MOTIVATION. (2) II Dimmick
A survey of our present nowledge — clinical, experimental, and observational — of affective and conative factors in psychopathology. Psychoanalytic theory of motivation of behavior is emphasized.

245 ADVANCED ABNORMAL PSYCHOLOGY. (3) I Dimmick
Special consideration is given the neuroses and the psychoses. Emphasis is placed upon the problems of differential diagnosis through the use of psychological techniques. **Prereq: Psy. 114, 219.**

250 THE RORSCHACH TEST: (Advanced Course). (4) II Dimmick
In this course emphasis will be placed on the interpretation of a wide range of normal and pathological Rorschach records. **Prereq: Psy. 238.**

270 PSYCHOLOGICAL EXPERIMENTATION. (3) I, II Glaser and Calvin
A study of the application of experimental methods in the major areas of psychology, including sensation and perception, learning, motivation, emotion, and personality. The design of research studies will be emphasized. **Prereq: Psy. 108, 113.**

300a MEDICAL THERAPEUTIC PROCEDURES. (1) I Straus
Rationale, procedures, and results of four important psychiatric therapeutic methods: (1) electrical and pharmacological shock, (2) narcohypnosis or drug-analytic methods, (3) malaria and other types of fever therapy, and (4) prefrontal lobotomy.

300b MEDICAL THERAPEUTIC PROCEDURES. (1) II Straus
This course presents the history, rationale, indications, procedures, and results of psycho-therapeutic methods.

310a-h PRACTICUM IN CLINICAL PSYCHOLOGY.
(3 ea.) I, II s Roberts, Gail, and assistant
Supervised case experience in clinical psychology. Students rotate among various institutions, including neuropsychiatric hospitals, institutes for mental defectives, and child guidance clinics. **Prereq: Psy. 226, 238.**

311a-h PRACTICUM IN STUDENT PERSONNEL. (3 ea.) I, II, S Croft
Nine hours of supervised work each week in the University Personnel Office.

312a-h PRACTICUM IN CHILD PSYCHOLOGY. (3 ea.) I, II, S
Nine hours of supervised work each week.

313a-h PRACTICUM IN INDUSTRIAL PSYCHOLOGY. (3 ea.) I, II, S Mellenbruch
Nine hours of supervised work each week.

431a-p SPECIAL FIELD PRACTICUM. (1 ea.) I, II, S Dimmick
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. For special fee see page 18.

500-1 THESIS. (0) I, II, S Staff

500-2 THESIS. (0) I, II, S Staff

500-3 THESIS. (0) I, II, S Staff

RADIO ARTS

Elmer G. Sulzer and Camille Sue Henderson.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in Field of Concentration: Forty semester hours in courses not open to freshmen, including the major work, in the field of Literature, Philosophy, and the Arts, during the junior and senior years.

Requirements for a Major: Prerequisites: Radio Arts 1a, 1b. **Required:** Radio Arts 2a, 101, 105a, 105b, 106a, 106b, and 110. Comprehensive examination.

*1a **RADIO TODAY.** (3) I, S — Sulzer
The networks, the broadcasting station, electrical transcriptions, radio reception, specialized types of programs.

*1b **RADIO TODAY.** (3) II — Sulzer
Radio in public service; broadcasts to schools; building the radio schedule; serving the sponsor; listener problems; the newer radio arts (FM, Facsimile, Television). Lecture and recitation, three hours.

2a **RADIO ANNOUNCING.** (2) I, II, S — Henderson
The study and practice of radio announcing, with emphasis on studio and microphone techniques, pronunciation, inflection. Workshop on WBKY. Lecture and recitation, one hour; lab, two hours. No prerequisite. Not open to freshmen.

101 **RADIO REGULATIONS.** (2) I — Sulzer
A study of the Rules and Regulations of the Federal Communications Commission; music licensing regulations; libel and slander; copyrights as applied to broadcasting. Lecture and recitation, two hours. No prerequisite.

102 **ADVANCED RADIO ANNOUNCING.** (2) I, II — Henderson
The study of news commentating, public events, man-on-the-street, the interview, round table participation and moderation, and concert announcing. Workshop on WBKY. Lecture and recitation, one hour; lab, two hours. **Prereq:** 2a.

105a **RADIO SCRIPT WRITING.** (2) I, S — Henderson
Practice in script writing in the various short forms; commercials, interviews, talks, with special emphasis on the writing tools of radio. Lecture and recitation, one hour; lab, two hours. No prerequisites.

105b **RADIO SCRIPT WRITING.** (2) II — Henderson
Continuation of 105a. Practice in writing the larger forms: original dramas, adaptations, variety programs, serials, children's programs, public service programs. Lecture and recitation, one hour; lab, two hours. No prerequisites.

106a **RADIO PRODUCTION.** (2) I, S — Sulzer
The fundamentals of radio production, including program planning, casting, rehearsals. Practice in production. Lecture and recitation, one hour; lab, two hours. No prerequisite.

106b **RADIO PRODUCTION.** (2) II — Sulzer
A continuation of 106a. Advanced practice in radio production involving research on assigned projects for radio presentation. Conferences and lab, four hours. **Prereq: Radio Arts 105a and 106a or consent of instructor.**

110 **PRO-SEMINAR IN RADIO.** (1) II — Sulzer
Discussion and reports. Required of all seniors in preparation for the comprehensive examination.

ROMANCE LANGUAGES AND LITERATURES

Hobart Ryland, Clarence H. Albro, Sue Barnett, Betty Eilertsen, Jane Haselden, J. Eduardo Hernandez, Margaret Horsfield, Onnalee Kaufman, Blaine W. Schick,† Alberta W. Server, and Thomas C. Walker.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in Field of Concentration: Forty credits 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 15 credits of advanced work in Romance Languages; R. L. 80a, b. Comprehensive examination in the senior year.

* Open to Freshmen.
† See appended list of changes of status, p. 337.

Note.— The student who presents one unit of high school foreign language will be permitted to enroll in first year work for full credit.

The student who presents two units of high school foreign language will be permitted to enroll in first year work, but will receive credit only if he makes at least a B standing in this course.

*1a **ELEMENTARY FRENCH.** (3) I, II, S — Staff
The study of the basic principles of the language through grammar, with emphasis on oral practice through the use of oral exercise. A short reader is introduced.

*1b **ELEMENTARY FRENCH.** (3) I, II, S — Staff
A continuation of 1a. Several short readers are translated. **Prereq: 1a or one year of high school French.**

*11 **ELEMENTARY AURAL-ORAL PRACTICE IN FRENCH.** (1) — Eilertsen
Two hours a week. A course to improve pronunciation and comprehension of spoken French. Aural-oral drills, dictation, and recordings. This course offered only to students enrolled in R. L. 1b, 2a, or 2b. **Prereq: 1a.**

2a **INTERMEDIATE FRENCH.** (3) I, II, S — Staff
Supplementary reading. A good pronunciation, a thorough knowledge of grammar and verbs, reading and conversation are the aims of the course. **Prereq: 1a, b or two years of high school French.**

2b **INTERMEDIATE FRENCH.** (3) I, II, S — Staff
Continuation of 2a. **Prereq: 2a or three years of H. S. French.**

3a, b **FRENCH CONVERSATION AND COMPOSITION.** (2, 2) I, II, S — Ryland
This course is designed to give students a fair amount of fluency in the use of the spoken language. Vocabulary will be built by the use of images rather than by translation, i.e. the direct method. **Prereq: 2a, b.**

6a, b, c **FRENCH NOVEL AND DRAMA.** (3 ea.) I, II, S — Eilertsen
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. **Prereq: 2a, b.**

8a, b **FRENCH PHONETICS.** (3, 3) I, II, S — Schick
A scientific study of French sounds based on the International System of Phonetic Symbols. **Prereq: R. L. 2a, b.**

80a, b **TUTORIAL SEMINAR.** (1, 1) I, II — 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.** (3, 3) I, II, S — Schick
This course is especially planned for teachers of phonetics both in high school and in college. **Prereq: 8a, b and 6a, b.**

109a, b **FRENCH LITERATURE OF THE XIX CENTURY.** (3, 3) I, II, S — 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. **Prereq: 6a, b.**

110a, b **FRENCH LITERATURE OF THE XVII CENTURY.** (3, 3) I, II, S — Schick
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. **Prereq: 6a, b.**

113a, b **ADVANCED FRENCH GRAMMAR.** (3, 3) I, II, S — Ryland
A study of the finer points of French Grammar. **Prereq: 6a, b.**

114a-h **INDEPENDENT WORK IN ROMANCE LANGUAGES.** (3 ea.) I, II, S — Staff
Prereq: 6a, b.

115a, b **FRENCH LITERATURE OF THE XVIII CENTURY.** (3, 3) I, II, S — Walker
A study of the representative writers of the XVIII century with special attention given to Voltaire and Rousseau. **Prereq: 6a, b.**

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* Open to Freshmen.

116a, b **FRENCH LITERATURE OF THE XX CENTURY.** (3, 3) I, II, S Horsfield
A study of the modern writers starting with the Symbolist Group and continuing up to the present. **Prereq: 6a, b.**

122a, b **ADVANCED FRENCH CONVERSATION.** (2, 2) I, II, S Ryland
A study of intonation and elocution in French. Three minute speeches in French will be prepared for each recitation. Some reading in French poetry will also be practiced. **Prereq: R. L. 3a, b and R. L. 8a, b.**

201a, b **FRENCH LITERATURE OF THE RENAISSANCE.** (3, 3) I, II, S Ryland
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. **Prereq: twenty-one semester hours of college French.**

202a, b **OLD FRENCH.** (3, 3) I, II, S Shick
First semester, a study of the syntax and composition of old French. Second semester, reading of texts in old French. **Prereq: two years of German, four years of French. Recommended: two years of Latin.**

204a **ROMANCE PHILOLOGY.** (3) I, II, S Schick
A study of the elements of Vulgar Latin. The phonology, etymology, morphology and historical grammar of the various Romance Languages. **Prereq: 202a, b.**

204b **ROMANCE PHILOLOGY.** (3) I, II, S Shick
General trends and comparative Romance Philology. **Prereq: 204a.**

205a, b **SEMINAR IN FRENCH LITERATURE.** (3, 3) I, II, S Staff
Prereq: twenty-one semester hours of college French.

Spanish

*5a **ELEMENTARY SPANISH.** (3) I, II, S Staff
The study of the basic principles of the language through grammar, with emphasis on oral practice through the use of oral exercises. A short reader is introduced.

*5b **ELEMENTARY SPANISH.** (3) I, II, S Staff
A continuation of 5a. Several short readers are translated. **Prereq: 5a or one year of high school Spanish.**

*13 **ELEMENTARY AURAL-ORAL PRACTICE IN SPANISH.** (1) Server
Two hours a week. A course to improve pronunciation and comprehension of spoken Spanish. Aural-oral drills, dictation and recordings. This course offered only to students enrolled in R. L. 5b, 7a or 7b. **Prereq: 5a.**

7a **INTERMEDIATE SPANISH.** (3) I, II, S Staff
Review of grammatical principles, composition work, and reading of selected Spanish works. **Prereq: 5a, b or two years of high school Spanish.**

7b **INTERMEDIATE SPANISH.** (3) I, II, S Staff
Continuation of 7a. **Prereq: 7a or three years of high school Spanish.**

9a, b, c **SPANISH NOVEL AND DRAMA.** (3, 3, 3) I, II, S Server
Reading of standard texts; brief survey of Spanish Literature, composition, and outside reading. **Prereq: 7a, b.**

10a, b **SPANISH CONVERSATION AND COMPOSITION.** (3, 3) I, II, S 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. Class conducted entirely in Spanish. **Prereq: 7a, b.**

35 **MEXICAN CIVILIZATION.** (3) Server
A lecture course on the cultural development of Mexico designed to furnish a working basis for required trips to important centers of Mexican civilization.

102a, b **ADVANCED SPANISH GRAMMAR AND COMPOSITION.** (3, 3) I, II, S Server
A study of the finer points of Spanish Grammar. **Prereq: 9a, b.**

104a, b **SPANISH LITERATURE OF THE XVII CENTURY.** (3, 3) I, II, S Hernandez
Selected literature of the Golden Age; Cervantes, the picaresque novel. **Prereq: 9a, b.**

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* Open to Freshmen.

106, b SPANISH LITERATURE OF THE XX CENTURY. (3, 3) I, II, S
Beginning with the later works of the Generation of 1898 and continuing up to the present; representative works of recent writers are studied. **Prereq: 9a, b.**

108a, b SPANISH AMERICAN LITERATURE. (3, 3) I, II, S — Server
A study of representative writers and principal literary productions of Spanish America. Outside reading of 2000 to 2500 pages of selected works. **Prereq: 9a, b.**

112a SPANISH LITERATURE OF THE XIX CENTURY. (3) I, II, S — Server
A study of Spanish Romanticism and the works of the leading Constumbristas. **Prereq: 9a, b.**

112b SPANISH LITERATURE OF THE XIX CENTURY. (3) I, II, S — Server
A study of the novel and drama of the second half of the XIX Century. **Prereq: 9a, b.**

203a OLD SPANISH. (3) I, II, S — Server
A study of the vocabulary and grammar of Old Spanish contrasting and comparing it to modern Spanish. **Prereq: twenty-one semester hours of college Spanish.**

203b OLD SPANISH. (3) I, II, S — Server
Reading in texts of Old Spanish. **Prereq: 203a.**

206a, b SEMINAR IN SPANISH LITERATURE. (3, 3) I, II, S — Staff
Prereq: twenty-one semester hours of college Spanish.

Italian

***4a, b ELEMENTARY ITALIAN.** (3, 3) I, II, S — Schick
A study of the grammar and composition of Italian. **Prereq. for 4b is 4a or one year of high school Italian.**

15a, b INTERMEDIATE ITALIAN. (3, 3) I, II, S — Schick
Review of grammatical principles and readings in selected Italian works. **Prereq. for 15a: 4a, b. Prereq. for 15b: 15a.**

Russian

30a-b ELEMENTARY RUSSIAN. (3, 3) — Hernandez
The study of the basic principles of the language through grammar and reading with emphasis on oral practice.

Romance Languages

150 THE TEACHING OF ROMANCE LANGUAGES. (3) S — Server
A course for teachers and prospective teachers of French or Spanish with the objective of providing a more vital approach to the teaching of these languages.

SOCIAL WORK

Harold E. Wetzel, Irving A. Gail, and Beulah Theobald.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits 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. Prerequisite: Social Work 24. A basic minimum of twenty-four credits in social work including 100, 113, 116, 122, 130a, and 140a 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.

24 ORIENTATION TO SOCIAL WELFARE PRACTICE. (3) I, II
An introduction to the organization and function of selected social work

* Open to Freshmen.

agencies in the community. Lectures, discussions, and observational visits. This course is the prerequisite for all majors in the department.

100 PUBLIC WELFARE ADMINISTRATION. (3) II Wetzel
Philosophy, background, and methods of tax-supported social work. Interrelationship of federal, state and local services; standards and supervision as influenced by federal security legislation. **Prereq: two courses in social work.**

105 CHILD WELFARE SERVICES. (3) I, S 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) I Gail
An analysis of personality development and behavior patterns with special reference to psychiatric interpretation and their implications for social case work. For majors in the department. **Prereq: two courses in social work.**

111a-d INDEPENDENT WORK. (1 ea.) I, II, S Staff
Conferences, assigned readings, reports on minor research problems. Open to majors in the department by special permission.

113 INTRODUCTION TO SOCIAL WORK I. (2) II
An introductory course in the generic principles of social case work. Discussion based on selected readings and case records. For majors in the department. **Prereq: two courses in social work.**

116 SOCIAL WORK RESEARCH AND STATISTICS. (3) I 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. **Prereq: two courses in social work.**

122 FIELD OF SOCIAL WORK. (3) I, II, S Staff
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) and the professional status of social work will be considered.

127a, b TUTORIAL WORK IN SOCIAL WORK. (1 ea.) I, II, S Staff
For senior majors in the department.

130a COMMUNITY ORGANIZATION FOR SOCIAL WELFARE. (3) I, S
Methods and techniques of social welfare planning. Analysis of needs and resources, coordination of agencies, financing and developing chest and council programs and interpretation of social work.

130b COMMUNITY ORGANIZATION FOR SOCIAL WELFARE. (3) II
A continuation of 130a with emphasis on the organization and function of social welfare agencies at the national and international level. **Prereq: 130a or permission of the instructor.**

131 FIELD PRACTICE IN COMMUNITY ORGANIZATION. (2) I, II
One hundred clock hours of supervised work in planning and execution of simple projects in community organization. For senior majors by special permission. **Prereq: SW 130a.**

140a PRINCIPLES OF SOCIAL GROUP WORK. (3) I, S
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.

140b ADMINISTRATION AND SUPERVISION OF GROUP WORK AGENCY PROGRAMS. (3) II
The group work process as applied to agency administration, supervision of staff and volunteers, statistical and process recording, evaluation of program, personnel and committee relationships. **Prereq: 140a or consent of the instructor.**

144a, b FIELD PARTICIPATION IN GROUP WORK PROGRAMS. (2 ea.) I, II, S
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. **Prereq: SW 140a, and consent of the instructor.**

151 PUBLIC ASSISTANCE PROGRAMS. (3) II Wetzel
The current function of public assistance upon the federal, state, and local levels with emphasis on the public assistance provisions of the Social Security Act, general relief, and work relief policies. **Prereq or concurrent: SW 122.**

217 GENERIC SOCIAL CASE WORK. (2) I
An introductory course for graduate students with emphasis upon the application of case work principles in problems of increasing complexity. **Prereq: SW 113, or special permission.**

220a SUPERVISED FIELD WORK. (2) I, II
150 clock hours of supervised field work in a public or a private agency.

221 ADVANCED SOCIAL CASE WORK I. (2) II
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) II Wetzel
A study of social insurance in Europe and the United States. Emphasis will be given to the problems in administration, financing, and coverage.

SOCIOLOGY

Irwin T. Sanders, C. Arnold Anderson, John H. Given, James W. Gladden, and Sarah B. Holmes.

UPPER DIVISION REQUIREMENTS — Junior and Senior Years

Requirements in the Field of Concentration: Forty credits 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 equivalent. **Required:** Minimum of 18 credits of advanced work in Sociology, including at least 3 credits in Theory and Methodology, 6 credits in one of the other sub-divisions below, and Sociology 19a and b, and 20a and b. Comprehensive examination in senior year.

Courses in Sociology

I. Introductory and General Sociology

***1 PRINCIPLES OF SOCIOLOGY. (3) I, II, S**
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.

***3a SOCIETIES AROUND THE WORLD. (3) I, II, S** Staff
Meets Social Studies requirements. Comparative study of the Eskimo, Navajo, and Baganda as preliterate, primitive societies in difficult environments. (Same as Anthropology and Geography 3a.)

***3b SOCIETIES AROUND THE WORLD. (3) I, II, S** Staff
Meets Social Studies requirements. Comparative study of the Chinese Peasant, Cotton South, and British Midlands as more highly developed societies living in more moderate environments. (Same as Geography 3b.)

18 COMPARATIVE SOCIOLOGY. (3) I Sanders
A study of the dynamics of culture as shown in a primitive, a peasant, and a modern culture system.

19a, b JUNIOR TUTORIAL. (1 ea.) I, II, S Staff
Conferences, assigned readings, reports, etc. For junior majors.

20a, b SENIOR TUTORIAL. (1 ea.) I, II, S Staff
Conferences, assigned readings, reports, etc. For senior majors.

II. Theory and Methodology

105 SOCIAL THEORY: PLATO TO COMTE. (3) I Sanders
The social theories of representative social thinkers, together with a brief study

* Open to freshmen.

of their lives and the times in which they lived. Extensive reading of their works. **Prereq: one sociology course.**

114a-d **INDEPENDENT WORK.** (1 ea.) I, II, S — Staff
Study of some special topic by duly authorized students. For sociology majors only.

122 **CONTEMPORARY SOCIOLOGICAL THEORY.** (3) II — Anderson
A study of the leading developments in sociological theory and methodology from Comte to the present time. **Prereq: two sociology courses.**

124 **TECHNIQUES OF SOCIAL INVESTIGATION.** (3) I
A study of the practical applications of sociology in organizing, conducting, and interpreting social surveys and other forms of sociological research. **Prereq: one sociology course.**

130 **SOCIAL SYSTEMS.** (3) S
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.

201a, b **SOCIOLOGY SEMINAR.** (2 ea.) I, II, S — Staff
Consideration mainly of methods of research and of current sociological literature.

225 **SYSTEMATIC SOCIOLOGY.** (3) I — Sanders
An intensive study of certain selected sociological theorists such as Weber, Durkheim, Simmel, Pareto, and others.

III. Social Organization and Process

6 **AMERICAN IMMIGRANTS AND RACES.** (3) II
A study of ethnic groups in the United States, and of national policies for dealing with related problems, including special attention to Negro-white relations.

*7 **SOCIAL INSTITUTIONS.** (3) II — Anderson
A comparative analysis of the familial, economic, religious, recreational and other basic institutions of human society, with emphasis upon the institutionalization process.

27 **RELIGION AND CULTURE.** (3) I — Gladden
An analysis of the structure, function, and process of religion as found in various cultures especially emphasizing religious patterns found in America. Open to juniors and seniors or to sophomores who have had introductory sociology.

28 **THE CULTURAL PROCESS AND THE HEBREW-CHRISTIAN RELIGION.** (3) II — Gladden
Development of the Hebrew and Christian religions showing social origins of the two faiths and effect of cultural change on their growth. Open to juniors and seniors or to sophomores who have had introductory sociology.

40 **THE COMMUNITY.** (3) I, S — Given
Social organization and process in modern communities; social techniques of community improvement.

109a **THE FAMILY.** (3) I, II, S — Gladden
A study of the institutions of marriage and the family and an analysis of the various factors and forces at work in our time which are affecting the individual marital relationship. **Prereq: two sociology courses.**

109b **THE FAMILY.** (3) II, S — Gladden
A study of the various social situations in which children grow to early adolescence with emphasis on the primary group relationships in home, neighborhood, play group, and school. **Prereq: Sociology 109a or permission of instructor.**

126 **INDUSTRIAL SOCIOLOGY.** (3) I — Gladden
A sociological analysis of the division of labor, the characteristics of occupational groupings; principal socio-economic movements, and group relationships in modern industry. **Prereq: one sociology and one economics course.**

127 **SOCIAL CLASSES.** (3) II — Anderson
A systematic treatment of the factors underlying social differentiation and

* Open to freshmen.

stratification, with particular attention to class and caste; social mobility in American society. **Prereq: one sociology course.**

128 HUMAN RESOURCES OF THE SOUTH. (3) II, S Anderson
Analysis of the population and social organization of the south and of the factors influencing the development and utilization of the human resources of the region. **Prereq: senior standing of social science majors; others by arrangement.**

164 THE BALKANS: THE STUDY OF A PEASANT SOCIETY. (3) II, S Sanders
A description of the basic social structure of the Balkan region and an analysis of the social changes occurring in the peasant way of life. Countries covered are Albania, Bulgaria, Greece, Rumania, and Yugoslavia.

170 THE CITY. (3) II Sanders
This course is a study of the sociology of city life. The major emphasis is upon the ecological and social characteristics of urban life in contrast to rural community life. **Prereq: An introductory sociology course or with approval of instructor.**

209 SEMINAR IN THE FAMILY. (2) II Gladden
A seminar for advanced students interested in family research, family counseling, or dealing with family relationships in some other professional capacity.

224 MINORITY GROUPS. (3) I
A sociological scheme of analysis is applied to the special problems of adjustment arising from ethnic group relations and culture contacts.

230 EDUCATIONAL SOCIOLOGY. (3) II, S Hartford
A course in the sociological foundations of education. (Same as Education 230.)

IV. Social Disorganization and Reorganization

***2 MODERN SOCIAL PROBLEMS. (3) I, II, S** Holmes
An introductory course involving an examination of selected social problems of the present day. Topics discussed are family, poverty, crime, race, housing, population, industrial development, etc. Not open to seniors in Arts and Sciences College.

101 SOCIAL DEPENDENCY. (3) I
A study of poverty and social dependence and of measures for their alleviation and reduction, with special attention to present private and public activities in this direction, including social insurance.

102 SOCIAL PATHOLOGY. (3) II Sanders
A systematic examination of the various types of social disorganization, with particular emphasis upon the sociological explanation of underlying factors. **Prereq: one sociology course.**

103 CRIMINOLOGY. (3) I, II, S
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.

121 POPULATION PROBLEMS. (3) I
A study of movements and trends in population, with respect to race, age, birthrates, etc. **Prereq: Sociology 124 or its equivalent.**

V. Personality and the Group

25 COLLECTIVE BEHAVIOR. (3) I, 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. (3) I, II, S White
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. Topics given special consideration: crowds, mob behavior, propaganda, and nationalism. **Prereq: Psychology 1a and b. (Same as Psychology 104.)**

205a, b SEMINAR IN SOCIAL PSYCHOLOGY. (3 ea.) II White
Each semester some topic in the field of social psychology, such as attitudes and beliefs, structure and function of social groups, social determinants of be-

* Open to freshmen.

havior, leadership, and morale will be studied intensively. (Same as Psychology 205a, b.)

VI. Rural Sociology

(The following courses in Rural Sociology are offered in the College of Agriculture. For course descriptions, see College of Agriculture material.)

10 INTRODUCTION TO RURAL SOCIOLOGY. (3) I, II — Beers

115 ORGANIZATION OF RURAL GROUPS. (3) II, S — Brown

125 RURAL MOVEMENTS AND SOCIAL POLICY. (3) I

160 RURAL COMMUNITY ANALYSIS. (3) I, II — Bauder

180 ADVANCED RURAL SOCIOLOGY. (3) I, S

190a-c SPECIAL PROBLEMS IN RURAL LIFE. (2) I, II — Staff

200a-c RESEARCH IN RURAL SOCIOLOGY. (2) I, II, S — Staff

210 SEMINAR IN RURAL ORGANIZATION. (3) I — Beers

220 SEMINAR IN RURAL ATTITUDES. (3) II — Bauder

230 RURAL URBAN RELATIONS. (3) I

250a, b TOPICAL SEMINAR. (3) II — Staff

ZOOLOGY

James M. Edney, William R. Allen, Roger W. Barbour, Alfred C. Brauer, and Elizabeth L. Sawyer.

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

Requirements in the Field of Concentration: Forty credits 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 6 credits. **Required:** Zoology 7a or 157a; Zoology 7b or 157b, or 21; Zoology 106; Zoology 108a, b; Zoology 114a, b; a minimum of 15 credits of advanced work, passing a comprehensive examination before graduation.

Courses recommended for Special Curricula: Medical Sciences 1, 7b, 101a, b, 105, 106, 108b, (117, 119, 123); Teacher Training, 1, 7a, b, 11, 21, 102, 103a, b, 108a, b, 109; Pre-Conservation Training, 1, 7a, 21, 102, 103a, b, 105, 109, 112, 117, 119, 123), 130. No prerequisites for Zoology 1, 11, or 108a, b. Zoology 1 required for admission to all other courses. See Catalog and Instructor.

***1 PRINCIPLES OF ANIMAL BIOLOGY.** (4) I, II, S — Staff

General studies on cell structure, mitosis, gametogenesis, ontogeny, histology, physiology, homology, ecology, taxonomy, heredity, and phylogeny. Laboratory studies on typical Invertebrate and Vertebrate types. Two lectures and two lab periods per week for one semester.

7a COMPARATIVE ANATOMY. (4) I — Brauer

Invertebrates. Comparative morphology of types of the important phyla, classes, and orders. Life histories and development of selected forms. **Prereq: Zoology 1.**

* Open to Freshmen.

7b COMPARATIVE ANATOMY. (4) I Edney
Systematic consideration of chordates with emphasis on vertebrates. Comparative studies of chordate morphology, phylogeny, ontogeny, organology, physiology, and homology. Laboratory studies on typical prochordates, cyclostomes, gnathostomes and the cat. **Prereq: Zoology 1.**

11 NATURE STUDY. (4) II, S Allen and Barbour
Get acquainted studies of the natural environment as the background of human culture. Elementary materials for use of schools, Nature Clubs, Scouts, etc. Stars, planets; earth forms; trees, birds, insects, fishes. Lectures, lab, field work.

21 NATURAL HISTORY OF THE VERTEBRATES. (4) I, II, S Barbour
An introduction to the natural history and taxonomy of the fishes, amphibians, reptiles, birds, and mammals. Two lectures, two field or lab exercises per week. **Prereq: Zoology 1.**

101a HISTOLOGY. (4) I, II, S Brauer and Sawyer
Histology of the tissues. A course in the technique of preparation of animal tissues for microscopic study. Practice in imbedding, staining, sectioning, mounting, and identification of tissues. **Prereq: Zoology 1.**

101b HISTOLOGY. (3) II, S Brauer
Histology of the organs. A continuation of Course 101a in which the studies are based on the organs and special attention given to pathology. **Prereq: Zoology 101a.**

102 ORNITHOLOGY. (4) II, S Allen and Barbour
A study of the life-histories, habits, identification, structure, adaptations, and physiology of birds. Special emphasis upon migrations, songs, nests and economic importance of our native birds. Lectures; field excursions; lab studies. **Prereq: Zoology 1.**

103a GENERAL ENTOMOLOGY. (3) I Allen
A beginning course in the study of this greatest group of the Animal Kingdom. Anatomy, morphology, adaptations, life-histories of representatives of the most important orders of insects and other arthropod classes. **Prereq: Zoology 1a.**

103b GENERAL ENTOMOLOGY. (3) II Allen
Continuation of 103a. More detailed study of the orders and many representative families. Methods of making and preserving insect collections. Identification; life-history, ecology of many insect species. Making an individual collection. **Prereq: Zoology 103a.**

105 PARASITOLOGY. (4) I, S Edney
Protozoan, helminth and arthropod parasites of man and domestic animals, emphasis on etiology, epidemiology, methods of diagnosis, control measures, and life histories. Techniques for host examination and preparation of material for study. **Prereq: Zoology 1.**

106 EMBRYOLOGY. (4) II, S Brauer and Sawyer
A general course in ontogeny. Studies in maturation, fertilization, cleavage, organogenesis and anomalies of development with laboratory work based on the chick and pig. **Prereq: Zoology 1.**

108a PRINCIPLES OF ZOOLOGY (Evolution). (2) I, S Allen
An advanced lecture course on some of the fundamental principles of animal biology. Organic evolution and related dynamic aspects of the living organism. Three times a week.

108b PRINCIPLES OF ZOOLOGY (Heredity). (2) II, S Sawyer
Lectures and recitations on principles of heredity, variation and eugenics. Two hours per week.

109 ANIMAL ECOLOGY AND FIELD BIOLOGY. (3) I Allen
An analysis of the environment and the respective adjustments of animal life to the environmental complex. Habitats, food, respiratory needs and mechanisms, life-histories, animal associations, adaptations. **Prereq: Zoology 1.**

110a-f INDEPENDENT WORK. (3 ea.) I, II, S Staff
Special problems for individual students who are capable of pursuing independent investigations. For Zoology Majors.

111 SPECIAL MICROTECHNIQUES IN ZOOLOGY. (3) Brauer
Special methods in histological technique for students of Zoology, Pathology or Anatomy. **Prereq: Zool. 101a, b.**

112 **ICHTHYOLOGY. (4) I** Allen
Taxonomy of fishes with life-histories and biology of types. Fish structure and physiology, habits, ecology. Fish-culture and economic Ichthyology: care of fishes, aquaria, etc. Elements of fresh-water fishery administration. **Prereq: Zoology 1.**

114a-f **ZOOLOGICAL SEMINAR. (1 ea.) I, II** Staff
Reports on: technical papers in scientific journals, book review, recent developments in Zoology, scientific meetings. Tutorial instruction preparatory to comprehensive examination. Required of all majors in Zoology.

117 **MEDICAL PROTOZOOLOGY. (4) II, S** Edney
The etiology, epidemiology, pathology, diagnosis, prophylaxis and control of parasitic protozoa, with special emphasis on life cycles and detailed studies of the protozoan parasites of man. Given alternate years. **Prereq: Zoology 105.**

119 **HELMINTHOLOGY. (4) II, S** Edney
The etiology, epidemiology, pathology, diagnosis, prophylaxis and control of trematode, cestode and nematode parasites of vertebrates, with special emphasis on those of vererinary and medical importance. Given alternate years. **Prereq: Zoology 105.**

120 **ANIMAL CYTOLOGY. (4) I** Sawyer
A study of recent concepts of the organization of protoplasm and correlated activities in animal cells. Two lectures, four hours lab. **Prereq: Zoology 1, 101a.**

123 **MEDICAL ENTOMOLOGY. (4) I, S** Edney
Study of Arthropod vectors of disease. Structure, collection, identification, control measures and life history studies. Given alternate years. **Prereq: Zoology 105.**

157a **INVERTEBRATE ANATOMY. (4) I** Brauer
An advanced course on the comparative anatomy of invertebrate animals with special attention paid to phylogeny, organology, and taxonomy. **Prereq: Zoology 1.**

157b **ADVANCED VERTEBRATE ZOOLOGY. (4) I** Edney
Systematic consideration of chordates with emphasis on vertebrates. Comparative studies of chordate morphology, phylogeny, ontogeny, organology, physiology and homology. Laboratory studies on typical prochordates, cyclostomes, gnathostomes and the cat. **Prereq: Zoology 1.**

166 **PHYSIOLOGY OF DEVELOPMENT. (3) I** Brauer
A review of theories of differentiation and a consideration of the genetic environment, and correlative physiological factors in differentiation. Lectures, assigned readings and literature reports. **Prereq: 1: 7a, 7b or 106.**

COURSES PRIMARILY FOR GRADUATE STUDENTS

Qualified students may elect work in any special field listed below. Independent work under direction, with conferences on objectives, principles, materials, methods, analysis of data and conclusions. Progress reports required at intervals.

202a-d **PROBLEMS IN ORNITHOLOGY. (3) I, II, S** Barbour

205a-d **PROBLEMS IN PARASITOLOGY. (3) I, II, S** Edney

206a-d **PROBLEMS IN EMBRYOLOGY AND HISTOLOGY. (3) I, II, S** Brauer

209a-d **PROBLEMS IN LIMNOLOGY AND ECOLOGY. (3) I, II, S** Allen and Barbour

212a-d **PROBLEMS IN ICHTHYOLOGY. (3) I, II, S** Allen

220a-d **PROBLEMS IN CYTOLOGY. (3) I, II, S** Sawyer

COLLEGE OF AGRICULTURE AND HOME ECONOMICS

AGRICULTURAL ENTOMOLOGY

Walter Allen Price and Lee Hill Townsend.

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

2 APICULTURE. (3) II — Price and Townsend
The anatomy of the bee; the colony; location and equipment of the apiary; honey production; diseases and enemies of bees. Laboratory work includes manipulation of equipment and bees. Lectures, two hours; lab., two hours.

3 ECONOMIC ENTOMOLOGY: HOUSEHOLD INSECTS. (2) I — Townsend
Life histories, habits, and control of the common insects which are injurious and troublesome in the home. Consideration is given to certain other insects which have public health importance. Lectures, two hours.

102 ECONOMIC ENTOMOLOGY. (3) S — Townsend
For those interested in agricultural teaching and extension work. Life history, control, and identification of economic insects of Kentucky are considered. Lectures, two hours; lab., two hours. **Prereq.: Agr. Ent. 1.**

103 ECONOMIC ENTOMOLOGY: FRUIT AND GARDEN INSECTS. (3) I — Townsend
Life histories, habits, distribution, and control of insects injurious to fruits and vegetables, with attention to those found in Kentucky. Enemies of these species are considered. Lectures, two hours; lab., two hours. **Prereq.: Agr. Ent. 1.**

104 ECONOMIC ENTOMOLOGY: FARM CROP INSECTS AND ANIMAL PARASITES. (3) II — Townsend
Life histories, habits, distribution, and control of insects injurious to farm crops; also insect parasites of farm animals. Enemies of these species are considered. Lectures, two hours; lab., two hours. **Prereq.: Agr. Ent. 1.**

105a-b SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. (3 ea.) I, II — Townsend
Insect physiology, anatomy, ecology, and taxonomy, entomological literature and technique; studies of special groups of insects. **Prereq.: Agr. Ent. 1, and any of the following: 102, 103, 104.**

201a-b ENTOMOLOGICAL PROBLEMS. (3 ea.) I, II — Price
Investigations of chosen insect problems, including original work. Discussion and assignment of current insect subjects. **Prereq.: Agr. Ent. 1, 102, 103, 104, 105.**

Agricultural Extension

Thomson Ripley Bryant

101 METHODS IN AGRICULTURAL EXTENSION. (1) II — Bryant
Methods in extension work in agriculture and home economics; legislative background, organizing the working forces; administration, financing; cooperating agencies, relationships, effective programs of work. Lecture, one hour.

AGRONOMY

Martin Edward Weeks, Jesse Byron Brooks, Stephen Diachun, Ernest Newton Fergus, Perry Elmer Karraker, James Byron Kelley, Edmund J. Kinney, Paul Merwin Phillippe, George Roberts, William Albert Seay, William Gregor Survant, William Dorney Valleau, and Earl Robert Young.

1 ELEMENTARY FARM CROPS. (3) I, II, S — Phillippe
A survey course considering geographical distribution, science of production, and uses of important field crops. Lecture and recitation, two hours; lab., two hours.

2 **MARKET GRAIN GRADING. (2) II, S** Phillippe
Studies of federal classes and grades of market grains. Lab., four hours. **Prereq.: Agron. 1.**

102 **FIELD CROP ECOLOGY. (3) I, S** Phillippe
A study of the environmental factors affecting the yield and quality of field crops. Lecture and recitation, three hours. **Prereq.: Agron. 1; Bot. 1.**

103 **WEEDS. (2) II, S** Phillippe
The important characteristics, identification, and control of weeds, with emphasis on identification and control of Kentucky weeds. Lecture and discussion, two hours. **Prereq: Bot. 1.**

104 **ADVANCED CROPS: FORAGE CROPS. (3) I, S** Fergus
A comprehensive study of forage crops with special emphasis upon their production in Kentucky. Lecture and recitation, three hours. **Prereq.: Agron. 1; Bot. 1.**

105 **ADVANCED CROPS: TOBACCO AND CEREALS. (3) II, S** Kinney
Tobacco and the important cereal crops are studied in considerable detail as regards distribution, soil, and climatic adaptations and technique of production. Lecture and recitation, three hours. **Prereq.: Agron. 1; Bot. 1.**

106 **FIELD CROP IMPROVEMENT. (3) II** Kinney
A study of the principles involved and the techniques used in breeding crop plants. Lecture and recitation, three hours. **Prereq.: Bot. 1; Agron. 1; A. I. 61.**

109a-c **SPECIAL PROBLEMS IN CROPS. (3 ea.) I, II, S** Staff
Intensive studies of specific crop problems. **Prereq.: Agron. 1 and approval of instructor.**

200a-d **AGRONOMY SEMINAR. (1 ea.) I, II** Staff

204a, b **SPECIAL PROBLEMS IN PRODUCTION OF FORAGE CROPS. (3, 3 II, S** Fergus and Phillippe
Intensive studies of research relative to particular problems in forage crop production. **Prereq.: Approval of instructor.**

205a, b **SPECIAL PROBLEMS IN PRODUCTION OF TOBACCO OR CEREALS. (3, 3) II, S** Kinney
Prereq.: Approval of instructor.

Courses in Plant Pathology

23 **PLANT PATHOLOGY. (4) II** Diachun
A general survey of the causes, effects of, and methods of control of plant diseases. Recitation, two hours; lab., four hours. **Prereq.: Bot. 1.**

123a-c **SPECIAL PROBLEMS IN PLANT PATHOLOGY. (3) I, II, S** Diachun and Valleau
Prereq: Agron. 23.

Courses in Soils

10 **SOILS. (3) I, II** Survant
A general study of the origin, classification, properties, and management of soils. It is desirable that students take Agronomy 11 concurrently. Lecture and recitation, three hours. **Prereq.: or concurrent: Chemistry. 1b or 4b.**

11 **SOILS LABORATORY. (2) I, II** Survant
Laboratory and field exercises dealing with important soil properties and processes, designed to accompany Agronomy 10. Lab. four hours. **Prereq. or concurrent: Agron. 10.**

110 **SOIL BIOLOGY. (3) I** Seay
A study of soil organisms and biological soil processes in relation to soil productivity. Lecture, two hours; lab., two hours. **Prereq.: Agron. 10; Bact. 52.**

111 **SOIL CONSERVATION. (3) I, II** Survant
The scope and nature of the soil conservation problem, and the application of soil conservation methods to the planning and management of farms. Lecture and recitation, two hours; lab., two hours. **Prereq.: Agron. 10.**

112a-d **SPECIAL PROBLEMS IN SOILS. (3, 3) I, II, S** Karraker, Survant, and Seay
Intensive studies of specific soil problems. Prereq.: Agron. 10 and approval of instructors.

113 EXPERIMENTAL METHODS AND INTERPRETATION OF RESULTS. (3) II — Roberts

A study of the essentials of reliable experimentation, including sources of error; a study of experimental data with emphasis on interpretation. **Prereq.: Agron. 10.**

114 FERTILIZERS AND SOIL MANAGEMENT. (3) II — Karraker

Sources, manufacture, evaluation, and use of fertilizers and lime materials; soil moisture, tillage, and soil organic matter and nitrogen. Lecture and recitation, three hours. **Prereq.: Agron. 10.**

119 SOIL ORIGIN, CLASSIFICATION, AND MAPPING. (3) II — Karraker

A study of the origin, nature, classification, and mapping of soils. Lecture, recitation, and field work, three hours. **Prereq.: Agron. 10.**

200a-d AGRONOMY SEMINAR. (1 ea.) I, II — Staff

212a-d RESEARCH IN SOILS. (3 ea.) I, II, S — Weeks and Karraker

Prereq.: Approval of instructor.

Farm Engineering

1 MECHANICS OF THE FARMSTEAD. (3) I, II, S — Brooks

Fundamentals of engineering as applied to agriculture, including materials, transmission of power, farm implements, water supply, sanitation, and electricity. Lecture, two hours; lab., two hours.

2 FARM MOTORS. (3) II — Kelley and Young

A study of the fundamental principles governing the selection, construction, operation, and repair of motors, tractors, and tractor equipment adapted for farm use. Lecture, two hours; lab., two hours.

3 FARM STRUCTURAL ENGINEERING. (3) I, II, S — Young and Brooks

Construction, care, and repair of farm buildings and equipment. Drawing, use of lumber, farm woodworking, woodworking tools, and concrete work. Lecture, one hour; lab., four hours.

4 FARM SHOP. (3) I, II, S — Young

Machinery repair, soldering, cold metal work, forging, oxyacetylene and electric arc welding, pipe fitting, rope work and painting. Lecture, one hour; lab., four hours.

101a-c SPECIAL PROBLEMS. (2 ea.) I, II, S — Staff

This course is designed to permit advanced students to make an intensive study of some phases of Agricultural Engineering in which they are particularly interested. Approval of instructor required.

102 DAIRY ENGINEERING. (2) II — Kelley

Engineering principles involved in the construction, operation and management of machinery and equipment used in processing dairy products. Lecture, two hours. **Prereq.: Fm. Eng. 1.**

104 RURAL ELECTRIFICATION. (2) I, II — Kelley

Designed to give students information on how to obtain electric service and on the problems involved in selecting and using farm and home electrical equipment. Lecture, two hours.

105 ENGINEERING PRACTICES IN WATER MANAGEMENT. (3) I, II — Kelley and Brooks

Surveying, mapping, and determining areas of farm land; designing farm drainage systems; farm reservoirs; controlling water erosion with terraces and other mechanical structures. Lecture, one hour; lab., four hours.

ANIMAL INDUSTRY

Wesley Patterson Garrigus, John Orville Barkman, Charles Elmer Barnhart, Garland Mixton Bastin, Thomas Grover Culton, Emmitt Dozier, Jr., Ralph Francis Elliott, Theodore Russell Freeman, Scott Leroy French, Edwin Stanton Good, Wyatt Marion Insko, Jr., Henry Bartlett Morrison, Durward Olds, Kob Ryen, Dwight Moody Seath, Dewey George Steele, Walter Earl Thomas, Ernest Thomas Wightman, Edward James Wilford, and Patch Gregory Woolfolk.

Courses in Animal Husbandry

1 FARM LIVESTOCK PRODUCTION. (3) I, S — Barnhart and French
Types, market classes, and grades of beef cattle, sheep, swine, horses, and mules; origin, development, and characteristics of breeds; importance and place of livestock in Kentucky agriculture. Lecture two hours; lab., two hours.

2 LIVESTOCK JUDGING. (3) II, S — French
Evaluation of purebred and commercial beef cattle, sheep, swine, draft horses, and mules. Practice in writing reasons and giving reasons orally. Lab., six hours. **Prereq.: A. I. 1. Not open to freshmen.**

3 LIVESTOCK MANAGEMENT. (1) II — French
Livestock management problems with approved equipment, materials, and methods. Lab., two hours. **Prereq.: A. I. 1.**

4 ADVANCED LIVESTOCK MANAGEMENT. (1) I — French
Intensive training in approved livestock management practices with emphasis on the preparation of animals for show and sale. Lab, two hours. **Prereq: A. I. 3.**

5 LIGHT HORSE HUSBANDRY. (3) II — Garrigus and Ryen
A brief study of the breeds of light horses; selection, feeding, and management; fundamental instruction in equitation. Lecture, two hours; lab., two hours. Not open to freshmen.

6 FARM BUTCHERING AND MEAT CURING. (4) I, II — Wilford
Slaughtering and cutting of beef, veal, hog, and lamb carcasses; correlation of breeding and feeding with carcass values, meat curing. Lecture, two hours; lab., four hours. **Prereq.: A. I. 1. Not open to freshmen.**

7 IDENTIFICATION AND EVALUATION OF MEATS. (1) I — Wilford
Meat cutting, identification, selection, grading and judging with emphasis on the nutritional and economic values of the different grades and cuts of meats. Lab., two hours. Not open to freshmen.

8 RETAIL MEATS. (1) II — Wilford
A study of meat cutting and processing methods; cut-out values, consumer preferences, and processing meats for freezing. Lab., two hours. **Prereq.: A. I. 6.**

100 ANIMAL BREEDING. (3) II — Steele
History of animal improvement; survey of hereditary traits in livestock; inbreeding and outcrossing; progeny tests and herd analysis. Lecture, three hours. **Prereq.: A. I. 1, 61.**

102 ADVANCED LIVESTOCK JUDGING. (3) I — French
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lab, six hours. **Prereq: A. I. 1, 2, and approval of instructor.**

103 WORK STOCK PRODUCTION. (3) I
History and importance of the horse and mule industry; selection, breeding, feeding, and management of horses and mules. Lecture, two hours; lab., two hours. **Prereq.: A. I. 1, 81.**

104 SHEEP PRODUCTION. (3) II — Woolfolk
History and importance of the sheep industry; selection, breeding, feeding, and management of sheep; production and handling of wool. Lecture, two hours; lab., two hours. **Prereq.: A. I. 1, 81.**

105 BEEF PRODUCTION. (3) II — Garrigus
History and importance of the beef cattle industry; selection, breeding, feeding and management of beef cattle. Lecture, two hours; lab., two hours. **Prereq.: A. I. 1, 81.**

106 PORK PRODUCTION. (3) I — Barnhart
History and importance of the swine industry; selection, breeding, feeding, and management of swine. Lecture, two hours; lab., two hours. **Prereq.: A. I. 1, 81.**

108 MEAT JUDGING. (1) I — Wilford
Intensive instruction in the evaluation of carcasses and cuts of beef, veal, pork, and lamb. Lab., two hours. **Prereq.: A. I. 6.**

109a-c SPECIAL PROBLEMS IN ANIMAL HUSBANDRY. (3 ea.) I, II, S — Staff
Approval of instructor required.

200a-c ANIMAL INDUSTRY SEMINAR. (1 ea.) I, II Staff

201a-c RESEARCH IN MEATS. (3 ea.) I, II, S Wilford
Problems involving original investigation.

203a-c RESEARCH IN HORSE HUSBANDRY. (3 ea.) I, II, S
Problems involving original investigation.

204a-c RESEARCH IN SHEEP HUSBANDRY. (3 ea.) I, II, S Woolfolk
Problems involving original investigation.

205a-c RESEARCH IN BEEF CATTLE HUSBANDRY. (3 ea.) I, II, S Garrigus
Problems involving original investigation.

206a-c RESEARCH IN SWINE HUSBANDRY. (3 ea.) I, II, S Barnhart
Problems involving original investigation.

500-1,2,3 THESIS. (no credit) Staff

Courses in Dairying

21 FARM DAIRYING. (3) I, II Morrison, Elliott, Bastin, and Dozier
Place of dairying in agriculture; factors affecting secretion, composition, physical and chemical properties of milk and cream; food value of dairy products; dairy calculations; clean milk production; farm dairy processes. Lecture, two hours, lab., 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; scoring these products in accordance with standard methods. Lecture, one hour; lab., two hours.

23 JUDGING DAIRY CATTLE. (3) II Seath
Selection of sires, cows, and heifers with due consideration for breed and dairy type, application of principles involved in the problem of herd improvement. Lab., six hours. **Prereq.: A. I. 21.**

27 SURVEY OF THE DAIRY INDUSTRY. (3) S Staff
Designed to acquaint students with research problems and methods at other institutions and with commercial operations in other areas. Full time for approximately two and one-half weeks. **Prereq.: A. I. 21 or permission of instructor.**

120 DAIRY CATTLE BREEDING. (3) II Seath
Application of genetics to problems of breed and herd improvement; progeny testing of sires; type classification, selective registration; prominent families and strains within the leading dairy breeds. Lecture, two hours; lab., two hours. **Prereq.: A. I. 61.**

121 DAIRY CATTLE FEEDING AND MANAGEMENT. (3) I Seath and Elliott
Application of principles of nutrition to dairy cattle feeding; current methods contributing to maximum efficiency in the production of quality dairy products on the farm. Lecturce, two hours; lab., two hours. **Prereq.: A. I. 81.**

122 ADVANCED DAIRY CATTLE JUDGING. (3) I Seath
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lectures and lab. **Prereq.: A. I. 21, 23.**

123 DAIRY BACTERIOLOGY. (2) I Morrison
Application of bacteriological principles to production and processing of dairy products, entrance of micro-organisms into dairy products, effects of their growth and methods for control. Lecture, two hours. **Prereq.: Bact. 52 or 102.**

124 DAIRY BACTERIOLOGY LABORATORY. (2) I Morrison
Laboratory to accompany A. I. 123, Dairy Bacteriology. Lab., four hours. **Prereq. or concurrent: A. I. 123.**

125 BUTTER AND ICE CREAM. (5) I Barkman
The principles involved in the commercial manufacture, handling, and storage of butter and ice cream. Lecture, three hours; lab., six hours. **Prereq: A. I. 21.**

127 SURVEY OF THE DAIRY INDUSTRY. (3) S Staff
Same as A. I. 27 except that graduate students will be given additional assignments.

128 **TECHNICAL CONTROL OF DAIRY PRODUCTS. (3) II** Morrison and Freeman
Various chamical and bacteriological tests used in the control of production or processing of dairy products. Lab., and recitation, six hours. **Prereq.: A. I. 21, 123, 124.**

129a-f **SPECIAL PROBLEMS IN DAIRYING. (3 ea.) I, II, S** Dairy Staff
Approval of instructor required.

130 **MARKET MILK. (3) II** Morrison
A study of problems concerning the production and processing of market milk and its related products. Lecture, two hours; lab., three hours. **Prereq.: A. I. 21.**

131 **CHEESE-MAKING. (3) II** Freeman
A study of problems and practices in the manufacture and ripening of cheddar and other common types of cheese. Lecture, two hours; lab., three hours. **Prereq.: A. I. 21.**

132 **REPRODUCTION IN DAIRY CATTLE. (2) II** Olds
A study of male and female reproductive processes in dairy cattle and the application of artificial breeding to the improvement of dairy herds. Lecture, one hour; lab., two hours. **Prereq.: A. I. 21, 61: Zool. 1.**

139a-d **DAIRY SEMINAR. (1) II** Dairy Staff
Open to Seniors and Graduate Students.

221a-c **RESEARCH IN DAIRYING. (3 ea.) I, II, S** Dairy Staff
Problems involving original investigation in either dairy production or dairy manufacturing.

500-1,2,3 **THESIS. (no credit)** Staff
Note.—See also A.I. 200, Animal Industry Seminar.

Courses in Poultry Husbandry

41 **FARM POULTRY PRODUCTION. (3) II** Wightman
Principles of poultry husbandry, breeds and poultry improvement; selection and culling; incubation and brooding; feeding, housing, and disease control. Marketing poultry products. Lecture, two hours; lab., and demonstration, two hours.

43 **HATCHERY MANAGEMENT. (3) II** Wightman
Principles involved in operating incubators and brooders; hatchery operation and management; factors influencing the avian embryo; operation of commercial incubators. Lecture, two hours; lab., two hours. **Prereq.: A.I. 41 and approval of instructor.**

44 **POULTRY JUDGING. (3) II** Wightman
Selection of breeding stock as a basis for flock improvement, including breed type and production values. Lecture, one hour; lab., four hours. **Prereq.: A.I. 41.**

46 **SURVEY OF THE POULTRY INDUSTRY. (3) S** Staff
Designed to acquaint students with research problems and methods at other institutions and with commercial operations in other areas. Full-time for approximately two and one-half weeks. **Prereq.: A.I. 41 or permission of instructor.**

140 **POULTRY BREEDING. (3) I** Wightman
Genetic principles involved in poultry breeding; disease resistance; inheritance of egg production and related characters; development of breeding programs. Lecture, three hours. **Prereq: A.I. 41, 61.**

141 **ADVANCED POULTRY PRODUCTION. (3) I** Wightman
Studies of control measures in poultry diseases, nutrition, marketing; flock management and replamecent. Lecture, two hours; lab., and dem., two hours. **Prereq.: A.I. 41.**

142 **MARKETING AND PROCESSING POULTRY PRODUCTS. (2) I** Wightman and Roberts
Organization and functioning of markets; grading, packaging, and handling poultry and eggs. Lecture, one hour; lab., two hours. **Prereq.: A.I. 41, M.& R.F. 100.** Same course as M.& R.F. 142.

145 **ADVANCED POULTRY JUDGING. (3) I** Wightman
Primarily for judging team candidates. Open only to those who have made good

standings in the prerequisite courses. Lecture, one hour; lab., four hours. **Prereq.: A.I. 41, 44.**

Note.—See also A.I. 200, Animal Industry Seminar.

146 SURVEY OF THE POULTRY INDUSTRY. (3) S — Staff
Same as A.I. 46 except that graduate students will be given additional assignments.

149a-c SPECIAL PROBLEMS IN POULTRY. (3 ea.) I, II, S — Wightman
Approval of instructor required.

241a-c RESEARCH IN POULTRY. (3 ea.) I, II, S — Wightman and Insko
Problems involving original investigation.

500-1,2,3 THESIS. (no credit) — Staff

Courses in Genetics

61 GENETICS. (3) I, II, S — Steele
The elementary principles of heredity and their relationship to plant and animal breeding. Attention is directed briefly to human heredity. Lecture, three hours. **Prereq.: One course in biology.**

62 GENETICS LABORATORY. (1) I, II — Steele
Technic of Drosophila breeding; analysis of Mendelian ratios in corn; observation of chromosomes in mitosis and reduction. Lab., two hours. Concurrently with A.I. 61, at student's option.

161 GENETICS. (3) I, II, S — Steele
Lectures of A.I. 61 and assigned readings. Primarily for graduate students. Lecture, three hours. **Prereq.: One course in biology.**

162 GENETICS LABORATORY. (1) I, II — Steele
Similar to A.I. 62 but additional work required. Primarily for graduate students. Lab., two hours. Concurrent with A.I. 161, at student's option.

163 ADVANCED GENETICS. (3) II — Steele
Concerned chiefly with the physical basis of heredity, mutations, chromosomal aberrations, linkage, genetics and development, and reports on current literature. Lecture, three hours. **Prereq.: A.I. 61.**

169a-c SPECIAL PROBLEMS IN GENETICS. (3 ea.) I, II, S — Steele
Approval of instructor required.

261a-c RESEARCH IN GENETICS. (3 ea.) I, II, S — Steele
Problems involving original investigation.

500-1,2,3 THESIS. (no credit) — Steele

Note.—See also A.I. 200, Animal Industry Seminar.

Courses in Animal Nutrition

81 PRINCIPLES OF ANIMAL NUTRITION. (3) I, II — Woolfolk and Good
Digestion, absorption, assimilation and utilization of nutrients by domestic animals; principal feeds, rations, and nutritive ratios. Lecture, three hours. **Prereq.: Chem. 4a or 1a.**

281 ANIMAL NUTRITION. (3) I — Thomas
The chemistry and physiology of animal nutrition and the nutritive requirements for growth, fattening, reproduction, lactation, and other body functions. Lecture, three hours. **Prereq.: Chem. 37 or equivalent.**

282 LABORATORY METHODS IN ANIMAL NUTRITION. (3) I — Thomas
The use of laboratory techniques and equipment in the solution of fundamental problems of nutrition. Lecture and recitation, one hour; lab., four hours. **Prereq. or concurrent: A.I. 281.**

283 ADVANCED ANIMAL NUTRITION. (3) II — Thomas
History and development of nutritional theories and techniques; a critical review of current literature. Lecture and recitation, three hours. **Prereq.: A.I. 281.**

284a-c RESEARCH IN ANIMAL NUTRITION. (3 ea.) I, II, S — Thomas
Problems involving original investigation.

289a-c **SPECIAL PROBLEMS IN ANIMAL NUTRITION.** (3 ea.) I, II, S Thomas
Approval of instructor required.

500-1,2,3 **THESIS.** (no credit) Thomas

Note.—See also A.I. 200, Animal Industry Seminar.

ANIMAL PATHOLOGY

Floyd Edgar Hull and Ross Gardner Brown.

51 **ANIMAL HYGIENE.** (3) I, II Brown
Animal Hygiene includes feed, water, housing, ventilation, yards, pastures, sanitation, and environment. All are part of the many problems to be considered in a program of animal health. Lecture, three hours.

101 **ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS.** (3) I Brown
A study of anatomy and physiology as related to courses in livestock judging, nutrition, butchering, breeding, and infectious diseases. Lecture, three hours.

102 **INFECTIOUS DISEASES OF DOMESTIC ANIMALS.** (3) II Hull and Brown
Distribution, general nature, manner of dissemination, methods of control, prevention, and eradication of infectious and parasitic diseases of animals. Lecture, three hours. **Prereq.: An. Path. 51.**

104a-b **SPECIAL PROBLEMS IN ANIMAL PATHOLOGY.** (3 ea.) I, II Hull and Brown
Prereq: An. Path. 51, 101, 102, and approval of instructor.

201a-b **INVESTIGATIONS IN ANIMAL DISEASES.** (3 ea.) I, II Hull and Brown
This course is open only to persons who have degrees in veterinary medicine.

FARM ECONOMICS

William Durrett Nicholls, Lawrence Allen Bradford, Glenn Leroy Johnson, and John C. Redman.

1 **AGRICULTURAL ECONOMICS.** (3) I, II, S Bradford
An application of the principles of economics to agriculture and to farm businesses. **Prereq.: Econ. 51.**

110 **FARM MANAGEMENT.** (3) I, II, S Bradford
A study of organizing and managing farms. Factors affecting farm earnings. Individual farm organization and farm management problem assignments assist students in learning to apply the principles of business to farms. **Prereq.: Fm. Econ. 1.**

111 **ADVANCED FARM MANAGEMENT.** (3) I Johnson
Advanced managerial concepts will be developed and applied in handling the problems of adjusting farms to changing economic, weather, and technical events, and studying the elements of farm management research. **Prereq.: Fm. Econ. 110.**

112a-c **SPECIAL PROBLEMS IN FARM ECONOMICS.** (3 ea.) I, II, S Nicholls
Students are assigned a special problem in the field of farm economics. **Prereq.: Fm. Econ. 110, approval of instructor.**

113 **TYPES AND SYSTEMS OF FARMING.** (3) II Nicholls
Critical study of the business organization and management of successful Kentucky farm businesses. Various systems of farming are given emphasis. Field trips required. **Prereq.: Fm. Econ. 110, approval of instructor.**

115 **FARM ACCOUNTING.** (3) II Bradford
A study of farm records and farm accounts including farm cost accounting. **Prereq.: Fm. Econ. 110.**

120 **LAND ECONOMICS.** (3) I Redman
Emphasizes the economic, institutional, and technological forces affecting the present and potential needs and productivity of natural resources in agriculture. **Prereq.: Fm. Econ. 1 or approval of instructor.**

121 **LAND-USE PLANNING.** (3) II Redman
Critical study of public land policies, planning, private and social ends of land

use, and resource-use adjustments in agriculture in relation to other sectors of the economy. **Prereq.: Fm. Econ. 120 or approval of instructor.**

122 LAND VALUE AND APPRAISAL. (3) I Nicholls
The capitalization process, and other devices for valuing farm land; appraisal procedures of the Federal Land Banks and of other credit institutions. **Prereq.: Fm. Econ. 120 or approval of instructor.**

130 PRODUCTION ECONOMICS. (3) I, S Bradford
Economic analysis of agricultural production. A theoretical treatment of land rents, land returns, capital returns, costs, and similar functions of agricultural production. **Prereq.: Fm. Econ. 110.**

200a-d AGRICULTURAL ECONOMICS SEMINAR. (1 ea.) I, II Staff
Discussion and papers on methods, problems, current literature, and research in the field of agricultural economics. Required of graduate students in the department.

201a-d RESEARCH IN FARM ECONOMICS. (3 ea.) I, II, S 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. **Prereq.: Approval of instructor.**

202a-b ECONOMICS OF PRODUCTION AS APPLIED TO AGRICULTURE. (3 ea.) I, II Johnson
Application of production economics to questions of combining the agents of production, scale, combining enterprises, the role of management, interregional competition and national agricultural policies and programs. **Prereq.: Approval of instructor.**

203 COST, PRICE, AND PRODUCTION RELATIONSHIPS IN AGRICULTURE. (3) II, S Johnson
Will acquaint the student with data (and their use) on production expenses, cost of production, prices paid, prices received, agricultural production, farm income and relevant non-farm subjects. **Prereq.: Approval of instructor.**

204 RESEARCH METHODS IN FARM ECONOMICS. (3) II Johnson
An analytical examination of research methods and techniques used in farm economics research. **Prereq.: Fm. Econ. 110, approval of instructor.**

HOME ECONOMICS

Statie Erikson, Bobby Jean Allred, Emily Baker, Marie Barkley, Leora Bentley, Anne Clemmons, Frances Crumrine, Pauline Freels, Ruth Guenther, Elizabeth Helton, Mary Mumford, Roberta Taylor, Helen Wilmore, and Mary Wooldridge.

Courses in Foods and Nutrition

2 NUTRITION AND PUBLIC HEALTH. (3) S Erikson
Nutrition as it affects social and family problems in the field of public health. Consideration is given to family food budgets on different economic levels. Lecture and discussion, three hours.

3 DIETETICS FOR NURSES. (4) S Taylor
Principles of normal nutrition and the value of diet in maintaining and restoring health. Modifications of normal diet to meet requirements for good nutrition in disease. Lecture, two hours; lab., four hours.

5 FOODS. (4) I, II, S Barkley, Taylor, and Freels
An introduction to the study of food. The classification and composition of foods and study of methods of preparation and principles involved. Lecture, two hours; lab., four hours.

6 FOODS. (3) II, S Barkley and Taylor
Meal planning and service. The selection, purchase and preparation of food. Practice is given in different types of food service. Lecture and lab., six hours. **Prereq.: H. Econ. 5.**

11 FOODS AND NUTRITION. (3) I, II Erikson
Properties and nutritive values of food. Functions of food for maintenance of body processes. Metabolism of food in the body. Lecture, two hours; lab., three hours. **Prereq.: A. & P. 5, Chem. 4b.**

101 PRINCIPLES OF NUTRITION. (3) II, S Clemmons
A non-technical course on the essentials of adequate diet for optimum health and on food plans to fit physiological and environmental factors. Lecture and discussion, three hours. Not open to home economics majors.

102 DIETETICS. (3) I, II, S Clemmons
Daily food requirements at different age levels and different economic levels. Practice is given in setting up normal dietaries for individuals, families and other groups. Lecture, two hours; lab., three hours. **Prereq.: H. Econ. 6, 11.**

103a-b COMMUNITY NUTRITION. (3 ea.) I, II, S Clemmons
Study of nutrition education with emphasis on causes and effects of malnutrition, methods of judging nutrition and development of health programs in public schools. Lecture, two hours; lab., two hours. **Prereq. or concurrent: H. Econ. 102.**

105a-c EXPERIMENTAL COOKERY. (3 ea.) I, II, S Freels
Study of factors that affect results obtained in cooking and food preparation processes. Experimental work under controlled conditions. Lecture, one hour; lab., four hours. **Prereq.: Chem. 37, H. Econ. 5 or approval of instructor.**

106a-d FIELD WORK IN NUTRITION. (1 ea.) I, II, S Clemmons
Nutrition problems at different age levels, correlated with surveys and experimental studies to show the relation between diet selction and its physical and mntal effects. Lecture and laboratory. **Prereq.: H. Econ. 103a, b, or approval of instructor.**

107 WORKSHOP IN NUTRITION. (4) Alternate S 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.

108a-c SEMINAR IN NUTRITION. (1 ea.) I, II Erikson
Investigations of recent research in nutrition. One hour. **Prereq.: Senior or graduate standing.**

111 ADVANCED NUTRITION. (4) I Erikson
Application of biochemistry to understanding of the utilization of nutrients for body processes. Laboratory work includes analysis of digestive juices, blood, and urine; balance experiments. Lecture, two hours; lab., four hours. **Prereq.: H. Econ. 11.**

112 NUTRITION IN DISEASE. (4) II Erikson
Metabolic processes of the body in normal and diseased conditions, correlating the metabolic changes due to disease with diet therapy. Lecture, two hours; lab., four hours. **Prereq.: H. Econ. 111, 102, or taken concurrently.**

114 FOOD PRESERVATION. (3) II, S Helton
Principles of home food preservation. Canning, dehydration, and freezing of fruits, vegetables and meats; pickling of fruits and vegetables; making of jams, jellies, and preserves; brining. **Prereq: Bact. 52 and H. Econ. 5.**

115 FOOD FOR SPECIAL OCCASIONS. (2) S Barkley
Advanced work in culinary arts and skills. Preparation of attractive and appetizing dishes to help the homemaker in planning buffet suppers, receptions, picnics, wedding parties, formal meals. Lab., four hours. **Prereq.: H. Econ. 5, 6.**

119a-c SPECIAL PROBLEMS IN FOODS AND NUTRITION. (2 ea.) I, II Clemmons and Erikson
Intensive work on a specific phase of the field. Senior or graduate standing.

206a-d ADVANCED FIELD WORK IN NUTRITION. (1 ea.) I, II, S Clemmons
The course is a continuation of H.E. 106 a-d with investigations of recent research in the field. Lecture and lab. **Prereq.: H. Econ. 103, 106a, or approval of instructor.**

208a-c SEMINAR IN NUTRITION. (2 ea.) I Erikson

219a-c SPECIAL PROBLEMS IN FOODS AND NUTRITION. (2 ea.) I, II Clemmons and Erikson
Independent advanced work on a specific problem.

Courses in Clothing, Textiles, Costume Design, and Interior Decoration

20 CLOTHING. (3) I, S Guenther
Principles of clothing selection and management. Techniques of garment con-

struction. Lab, six hours. Open only to non-home economics students.

25 TEXTILES. (2) I, II, S Guenther
Fundamentals of weaves, fibers, fabrics, and finishes. Simple tests for recognizing fabrics, emphasis on practical aspects. Lecture, one hour; lab, two hours.

26 CLOTHING SELECTION AND COSTUME DESIGN. (3) I, II, S Crumrine
Selection of costume and management of the wardrobe. Clothing costs and values. Designing costumes to meet individual needs. Lecture, one hour; lab, four hours. **Prereq: Art 30, or approval of instructor.**

27 CLOTHING CONSTRUCTION. (4) I, II, S Guenther
Basic principles of clothing construction, using commercial patterns with some modification included. Lecture, one hour; lab, six hours. **Prereq: H. Econ. 25, 26.**

125 ADVANCED TEXTILES. (2) I, S Guenther
One class project in addition to individual semester reports. Lecture, one hour; lab, two hours. **Prereq: H. Econ. 25, 161.**

126 COSTUME DESIGN. (3) I, S Crumrine
The arts of costume today and throughout the past. Costumes are designed to meet today's needs. Lecture, one hour; lab, four hours. **Prereq: H. Econ. 27, Art 30.**

127 ADVANCED CLOTHING. (3) I, II, S Crumrine and Guenther
The making of foundation and creative pattern designs, also creative design through draping, with emphasis on accurate fittings. Lecture, one hour; lab, four hours. **Prereq: H. Econ. 27.**

128a-c SPECIAL PROBLEMS IN CLOTHING AND COSTUME DESIGN. (2 ea.) I, II, S Guenther and Crumrine
Intensive work on specific phases of the field. Senior or graduate standing.

129 INTERIOR DECORATION. (3) II, S Crumrine
A study of color, line, texture as used to create effective interiors suited to modern living. Lecture, two hours; lab, two hours. **Prereq: H. Econ. 25, 61, Art 20 or approval of instructor.**

130 INTERIOR DECORATION PROJECTS. (2) II, S Allred
Selected projects in furnishing the home, including furniture refinishing, upholstering and slip cover making. Costs in terms of time and money are considered. Lab, four hours. **Prereq: H. Econ. 129.**

134 ECONOMICS OF CLOTHING. (2) II, S r Guenthe
The clothing industry, its influence and economy. Field trips to study mass production, class project and individual semester reports. Lecture, one hour; lab, two hours. **Prereq: H. Econ. 127, 161.**

135 DECORATIVE TEXTILES. (2) II, S Guenther
Survey of techniques used in applying color and design to fabrics. Individual problems, demonstrating techniques, developed. Lecture, one hour; lab, two hours. **Prereq: H. Econ. 25, Art 30.**

136a-c SPECIAL PROBLEMS IN TEXTILES. (2 ea.) I, II, S Guenther
Intensive work on specific phases of the field. Senior or graduate standing.

137 TAILORING. (2) I, S Clothing Staff
Analysis of tailoring technique in the shop and in the home. Tailored garments are planned and constructed. Lab, four hours. **Prereq: H. Econ. 127.**

138a-c SPECIAL PROBLEMS IN INTERIOR DECORATION. (2 ea.) I, II, S Crumrine
Intensive work on specific phases of the field. Senior or graduate standing.

139 ADVANCED INTERIOR DECORATION. (2) II, S Crumrine
The art of interior decoration throughout the past and today. Interiors are planned to meet today's needs. Lecture, one hour; lab, two hours. **Prereq: H. Econ. 129.**

228a-c SPECIAL PROBLEMS IN CLOTHING AND COSTUME DESIGN. (2 ea.) I, II, S Guenther and Crumrine
Independent advanced work on a specific problem.

236a-c SPECIAL PROBLEMS IN TEXTILES. (2 ea.) I, II, S Guenther
Independent advanced work on a specific problem.

237a-c SEMINAR IN TEXTILES, CLOTHING, COSTUME DESIGN, AND INTERIOR DECORATION. (2 ea.) I, II Guenther and Crumrine
Investigation of special textile, clothing and costume design or interior decoration. Lecture, two hours.

238a-c SPECIAL PROBLEMS IN INTERIOR DECORATION. (2 ea.) I, II, S Crumrine
Independent advanced work on a specific problem.

Courses in Institution Management

41 INSTITUTION MARKETING. (3) I, S Helton
Economics of food and supplies for institutions. Factors that influence selection and purchase. Field trips to wholesale houses, distribution centers and food production plants. Lecture, two hours; lab, two hours. **Prereq: Econ. 51.**

42 INSTITUTION FOODS. (4) I Helton
Large quantity food preparation and service. Using modern equipment in preparation of large quantities of food. Food cost accounting, job analysis, and time studies. Lecture, two hours; lab, four hours. **Prereq: H. Econ. 5.**

140 THE SCHOOL LUNCH. (3) I, II, S Helton
Designed for teachers who manage the lunch room. Consideration will be given to equipment, menus, purchase, storage, preparation and service of food. Lecture, two hours; lab, two hours. **Prereq: H. Econ. 5, Econ. 51.**

141 INSTITUTION ORGANIZATION AND MANAGEMENT. (3) II Helton
Principles of institution organization, types of institution service, personnel and financial management. Legal aspects of institution management. Personal and professional qualifications of an institution manager. **Prereq: H. Econ. 41, 42.**

142a-c INSTITUTION ADMINISTRATION. (2 ea.) I, II, S Helton
Application of scientific principles of institution management. Practice is given in management in different food units on the campus. **Prereq: H. Econ. 141.**

143 INSTITUTION EQUIPMENT. (3) II Helton
Selection, arrangement, cost and care of equipment; problems of lighting, heating, ventilation and refrigeration. Two field trips are taken to neighboring cities to see equipment in use in institutions. **Prereq: H. Econ. 42.**

149a-c SPECIAL PROBLEMS IN INSTITUTION MANAGEMENT. (2 ea.) I, II Helton
Intensive work on specific problems. Senior or graduate standing.

249a-c SPECIAL PROBLEMS IN INSTITUTION MANAGEMENT. (2 ea.) I, II Helton
Independent, advanced work.

Courses in Child Development

51 HEALTH OF THE FAMILY. (3) I, II Erikson
Factors that influence family health; agencies and forces to be utilized for health improvement; applications of modern science to family health and prevention of disease; techniques of home nursing. Lecture, three hours.

52 INTRODUCTION TO CHILD DEVELOPMENT. (4) I, II Bentley
Study of children from birth through preschool and primary years. Emphasis on increased understanding of adult personality through study and observation of young children. Lecture, three hours; lab, two hours.

150 TECHNIQUES OF GUIDANCE FOR THE PRESCHOOL CHILD. (4) II Mumford
An opportunity for extensive laboratory assistance in the nursery school for students who wish to develop skills in working with children. Lecture, two hours; lab, four hours. **Prereq. H. Econ. 152.**

152 CHILD CARE AND DEVELOPMENT. (3) I Bentley
Increased understanding of children through study of normal development, care, and guidance of the preschool child. Observation and participation in nursery school. Lecture, two hours; lab, two hours. **Prereq: H. Econ. 52.**

154 FAMILY LIVING. (4) I, II, S Mumford
A study of the influences which bear upon the home and family with emphasis on preparation for successful marriage and parenthood. Lecture, four hours and occasional field trips.

155 THE CHILD AND HIS CLOTHING. (3) S Mumford and Clothing Staff
A detailed study of the selection, cost and care of the preschool child's clothing in relation to his needs. Lectures and occasional field trips. **Prereq: H. Econ. 52.**

156 PLAY AND PLAY MATERIALS. (2) S Bentley
Play activities of young children, relation of play equipment to development, and characteristics of good play materials. Construction of toys suitable for the preschool child. Lecture, one hour; lab, two hours.

157 INFANT DEVELOPMENT. (2) S Bentley
Study of development, care and guidance of the child during prenatal, natal, and infant periods. Lecture, two hours. **Prereq: Anatomy and Physiology 5.**

158 FOOD FOR CHILDREN. (3) II, S Mumford and Nutrition Staff
Experience in selection, preparation and serving of food to preschool children with detailed observation of their eating habits during the noon meal. **Prereq: H. Econ. 6, 11, 52.**

159a-c SPECIAL PROBLEMS IN CHILD DEVELOPMENT AND FAMILY LIVING. (2 ea.) I, II Mumford and Bentley
Intensive work on specific problems. Senior or graduate standing.

259a-c SPECIAL PROBLEMS IN CHILD DEVELOPMENT AND FAMILY LIVING. (2 ea.) I, II Mumford
Independent advanced work.

Courses in Home Management

61 HOUSING. (4) I, S Wilmore
The course deals with social and economic problems of housing American families and problems of house buying and house planning from the standpoint of the consumer. Lecture, four hours. **Prereq: Econ. 51.**

161 CONSUMER PROBLEMS. (3) II, S Wilmore
Consumer buying, its social and economic aspects. Analysis of problems of manufacturer, merchant, and consumer in order to understand the needs and responsibilities of each group. Lecture, three hours. **Prereq: Econ. 51; H. Econ. 61.**

162a HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (2) I, II, S Wilmore
Philosophy and principles of home management. Study of the mechanics of time, energy, and money management; personal development, and social and family relationships. Lecture, 2 hours. **Prereq: Econ. 51; H. Econ. 61.**

162b HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (3) I, II, S Wilmore and Freels
A residence period in the Home Management House is required of seniors in home economics. Experience in the application of principles presented in other courses. **Prereq: H. Econ. 162a; prereq. or concurrent: H. Econ. 102.**

169a-c SPECIAL PROBLEMS IN HOME MANAGEMENT. (2 ea.) I, II Wilmore
Intensive work on specific phases of home management. Senior or graduate standing.

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. **Prereq: H. Econ. 162b.**

269a-c SPECIAL PROBLEMS IN HOME MANAGEMENT. (2 ea.) I, II Wilmore
Independent advanced work.

General Courses

73 FARM HOME PROBLEMS. (4) II Agric. Staff
A course in agriculture for home demonstration agents, teachers in rural schools, and others engaged in rural work. Lecture, three hours; lab, two hours.

74 HOME ECONOMICS FOR MEN. (2) I H.E. Staff
Study in selected areas of home economics dealing with values in personal and family living.

HORTICULTURE

Albert Jackson Olney, O. Malcolm Davenport, Norris Raymond Elliott, Emery Myers Emmert, and Clair Smith Waltman.

1 GENERAL HORTICULTURE. (3) I, II — Olney
A study of the principles and practices basic to the production of fruit, flowers, and vegetable crops. Lectures, three hours.

20 ELEMENTARY LANDSCAPE. (2) II — Elliott
The elementary principles of landscape as applied to the planting of urban home grounds and farmsteads. Lectures, two hours.

22 ELEMENTARY FLORICULTURE. (2) II — Elliott
The elementary principles of growing flowers and decorative plans, as house plants, and outdoor culture. Lectures, two hours.

102 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, one hour; lab, two hours. **Prereq: Hort. 1, Chem. 4a, Agr. Ent. 1.**

103 POMOLOGY: POME FRUITS. (3) I — Waltman
A course dealing with the theory and practice of commercial pome fruit production, with major emphasis on apple growing. Lectures, two hours; lab, two hours. **Prereq: 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, two hours; lab, two hours. **Prereq: Hort. 1.**

105 POMOLOGY: SMALL FRUITS. (2) I — Waltman
A detailed study of the care and management of commercial plantings of strawberries, raspberries, and other bush fruits. Lectures, one hour; lab, two hours, first half; lectures, two hours, last half. **Prereq: Hort. 1.**

106a-c SPECIAL PROBLEMS IN POMOLOGY. (3) I, II, S — Waltman
This course is designed to meet the need for advanced work. **Prereq: Hort. 1, 103, 104, 105, and approval of instructor.**

110 THE PRINCIPLES OF VEGETABLE GARDENING. (3) I — Emmert
A study of the fundamental principles underlying commercial production of vegetables. Lectures, two hours, lab, two hours. **Prereq: Hort. 1, Agron. 10.**

111 GROWING VEGETABLE PLANTS UNDER GLASS. (3) I — Emmert
Production of vegetable plants grown for transplanting; types of hotbeds, cold frames, and simple greenhouse structures. Lectures, two hours; lab, two hours. **Prereq: Hort. 110.**

112a-c SPECIAL PROBLEMS IN VEGETABLE CROPS. (3) I, II, S — Emmert
This course is designed to meet the need for advanced work. **Prereq: Hort. 1, 110, and approval of instructor.**

120 LANDSCAPE GARDENING. (3) II, S — Elliott
Principles of landscape architecture; coordination of buildings with surroundings; identification and uses of decorative materials and their requirements. Lectures, two hours; lab, two hours. **Prereq: Hort. 1, Bot. 1, 2.**

121 ADVANCED LANDSCAPE. (3) II — Elliott
A continuation of Horticulture 120, with special emphasis on design and use of materials. Lectures, two hours; lab, two hours. **Prereq: Hort. 120.**

122 FLORICULTURE. (2) II — Elliott
A detailed study of specific groups of flowers such as bulbs, iris, and roses. Lectures, two hours. **Prereq: Hort. 22.**

123 PLANT PROPAGATION. (3) II — Elliott
A detailed study of the methods of propagating certain horticultural plants. Includes cuttings, grafting, and budding. Lectures, two hours; lab, two hours. **Prereq: Hort. 1, 120; Bot. 1, 2.**

124a-d SPECIAL PROBLEMS IN ORNAMENTAL HORTICULTURE. (3) I, II, S — Elliott
This course is designed to meet the need for advanced work. Approval by the instructor required. **Prereq: Hort. 1, 120, 121; Bot. 1, 2; or approval of instructor.**

125 PLANTS AND PLANTING MATERIALS. (2) II — Elliott
A study of woody and herbaceous plants and their idenification, suitability for landscape uses and the effects produced. Lecture, one hour; lab, two hours. **Prereq: Hort. 120 or approval of instructor.**

200a-c SEMINAR. (1) I, II, S — Olney and Staff

201a-c RESEARCH IN HORTICULTURE. (3) I, II, S — Olney and Staff
Prereq: Approval of instructors.

Forestry

1 ELEMENTS OF FORESTRY. (3) I — Davenport
Brief coverage of the fields of forestry; development, and importance; tree growth; principal forest regions; important timber species; forest management practices, utilization and products; state and federal forestry program. Lectures, three hours.

2 FARM FORESTRY. (3) I, II — Davenport
Principles of forestry applied to farm woodlands. Important trees of Kentucky. Reproduction, management, and protection of farm woodlands. Measuring and utilization of wood products. Lectures, two hours; lab, two hours.

10 ELEMENTS OF FOREST MENSURATION. (3) I — Davenport
The theory and application of measurements of logs, trees, and stands of timber. Lectures, two hours; lab, two hours. **Prereq: Forestry 1 or 2; Math 3; or approval of instructor.**

20 SEEDING AND PLANTING. (3) II — Davenport
Artificial regeneration for forest stands; fundamentals of forest nursery practice; planting techniques and methods. Lectures, two hours; lab, two hours. **Prereq: Forestry 1 or 2.**

110 WOOD IDENTIFICATION AND TECHNOLOGY. (3) II — Davenport
General anatomy of wood, identification of commercial species based on gross and microscopic features. Properties and uses. Lectures, two hours; lab, two hours. **Prereq: Forestry 1 or 2; Bot. 1; and approval of instructor.**

111 LUMBER AND OTHER FOREST PRODUCTS. (3) II — Davenport
Manufacture, grading, and seasoning of lumber. Forest products other than logs or lumber, their methods of utilization and markets. Lectures, three hours. **Prereq: Forestry 1 or 2 and approval of instructor.**

120a-c SPECIAL PROBLEMS IN FORESTRY. (3) I, II, S — Davenport
This course is designed to meet the need for advanced work. **Prereq: Forestry 110 and 111, and aproval of instructor.**

MARKETS AND RURAL FINANCE

Aubrey J. Brown, Dana George Card, Carl McKinley Clark, Harold B. Clark, Hugh Bruce Price, John Bissell Roberts, and Leon Angus Vennes.

30 SOURCES AND USES OF AGRICULTURAL DATA. (2) S — Card
Principal sources of production and market data: methods of collecting, interpreting, and presenting such information for use. Lecture, one hour; lab, two hours.

100 AGRICULTURAL MARKETING. (3) I, II, S — Brown, Clark, and Vennes
Principles and methods of marketing farm products with attention to systems and agencies at both country and central markets. **Prereq: Econ. 51.**

101 COOPERATIVE MARKETING. (3) I — Vennes
Principles, methods, and problems involved in the cooperative marketing of farm products and in the purchase of farm production supplies through cooperatives. **Prereq: M. & R. F. 100.**

102a MARKETING TOBACCO AND OTHER FARM CROPS. (2) II, S — Clark
Special emphasis on the marketing of and the market system for tobacco; some attention given to grain marketing. **Prereq: M. & R. F. 100.**

102b MARKETING TOBACCO AND OTHER FARM CROPS. (1) S — Clark
Procedures and problems in establishing market standards with special emphasis on tobacco, including practice in grading. **Prereq. or concurrent: M. & R. F. 102a, or approval of instructor.**

103 MARKETING LIVESTOCK AND LIVESTOCK PRODUCTS. (2) II — Brown
Analysis of livestock and dairy markets, market organization, market agencies, market institutions, market services, and public regulations. **Prereq: M. & R. F. 100.**

110 AGRICULTURAL PRICES. (3) I Card and Vennes
Price behavior of agricultural products over time; supply-price relationships; relation of agriculture to general price level. **Prereq: Fm. Econ. 1.**

120 AGRICULTURAL FINANCE. (2) II Clark
Credit needs of agriculture; problems connected with farm and market agency financing; organization and operation of agricultural credit agencies. **Prereq: Fm. Econ. 1.**

130 AGRICULTURAL STATISTICS. (3) I Card
Principles and methods involved in the analysis, interpretation, and use of agricultural statistics including variation, correlation, standard errors, and simple analysis of variance.

140 AGRICULTURAL POLICY. (3) II Price
Development of principles underlying agricultural policy; objectives of agricultural policy; appraisal of current and proposed agricultural programs. **Prereq: M. & R. F. 100.**

142 MARKETING AND PROCESSING POULTRY PRODUCTS. (2) I Roberts and Wightman
Organization and operation of markets; grading, packaging, and handling poultry and eggs. Lecture, one hour; lab, two hours. **Prereq: A.I. 41, M. & R. F. 100.** Same course as Animal Industry 142.

200a-c AGRICULTURAL ECONOMICS SEMINAR. (1 ea.) I, II 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 ea.) I, II, S Brown and Staff
Open to graduate students who have the necessary training and ability to do research on some selected problem in this field. **Prereq: Approval of head of department.**

204 RESEARCH IN MARKETING. (3) II Price
A critical examination of methods, objectives, and results of various types of research in marketing organization, marketing functions and market management. **Prerq: M. & R. F. 100.**

210 THEORY OF AGRICULTURAL PRICES. (3) I Brown
Advanced study of agricultural price behavior by the application of economic theory and statistical analysis to this field. **Prereq: M. & R. F. 110 or approval of instructor.**

230a STATISTICS FOR AGRICULTURAL RESEARCH: SOCIAL SCIENCES. (3) II Card
Theory and practice of sampling methods in agricultural research: multiple, partial, and joint correlation: tests of reliability; and agricultural index numbers. **Prereq: M. & R. F. 130 or equivalent.**

230b STATISTICS FOR AGRICULTURAL RESEARCH: PLANT AND ANIMAL SCIENCES. (2) II Card
Analysis of variance and covariance; statistical considerations in the design of experiments; tests of significance and confidence limits. **Prereq: M. & R. F. 130 or equivalent.**

RURAL SOCIOLOGY

Howard Wayland Beers, Ward W. Bauder, and James Stephen Brown.

10 INTRODUCTION TO RURAL SOCIOLOGY. (3) I, II Beers
Agriculture and culture; family, church, school, government, and trade in rural life; the person in relation to rural neighborhoods, communities, groups and agencies; cooperation and conflict; recreation, health, and social welfare.

115 ORGANIZATION OF RURAL GROUPS. (3) Bauder
A study of the dynamics of organized groups; leadership, membership participation and program planning in agricultural organization and other organized rural groups. **Prereq: An introductory course or consent of instructor.**

125 RURAL MOVEMENTS AND SOCIAL POLICY. (3) I Brown
Social factors in selected rural movements, their organization and development, influence upon governmental policy, and the social needs met. **Prereq: An introductory course or consent of instructor.**

160 RURAL COMMUNITY ANALYSIS. (3) I, II Bauder
The nature of the town-country community, with special emphasis on the function of institutional and agency programs and their leaders in relation to the community. Same course as H. Econ. 175.

180 ADVANCED RURAL SOCIOLOGY. (3) II Brown
Systematic study of the structure and function of family, informal and locality groups, social strata, religious, educational, political, and occupational groups in rural society.

190a-c SPECIAL PROBLEMS IN RURAL LIFE. (2 ea.) I, II 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.

200a-c RESEARCH IN RURAL SOCIOLOGY. (2 ea.) I, II, S Staff
Individual graduate research with correlated study of rural social research types and methods.

210 SEMINAR IN RURAL ORGANIZATION. (3) I Beers
Basic theories of social organization, comparative study of selected systems of rural social organization; examples of purposeful organization.

220 SEMINAR IN RURAL ATTITUDES. (3) II Bauder
The nature and genesis of rural attitudes and their relation to rural social control; analysis of contemporary rural attitudes and opinion.

230 RURAL URBAN RELATIONS. (3) II Brown
Interdependence of city and country; solidary and antagonistic relationships of city and country; the process of urbanization; problems of rural adjustment to urban influences.

250a, b TOPICAL SEMINAR. (3 ea.) I, II Staff
Analysis of topics of scientific interest in rural sociology, selected from such fields as the following; criticism of research; sociological factors in land use; migration; rural social ecology of the South; highland societies.

COLLEGE OF ENGINEERING

CIVIL AND ARCHITECTURAL ENGINEERING

Robert Ezekiel Shaver, David Knox Blythe, Alvin Lee Chambers, Frank Jacobs Cheek, Jr., William Arthur Gray, Lowell Edward Gregg, Clinton Kelly Hoffmann, Ernst Vern Johnson, James Llewellyn Leggett, Jr., Earl Moldovan, Samuel Albert Mory, Jr., and Laurence Chester Pendley.

Architectural Engineering

1 ARCHITECTURAL RENDERING. (2) I, II — Gray

Pictorial delineation of architectural subject in the medium of pencil, ink, and water color. Drawing, six hours. **Prereq: Junior classification.**

4a ARCHITECTURAL DESIGN. (3) I, II — Gray

Principles of aesthetic design and functional planning of buildings, grade "C" Beaux Arts Institute of Design. Drawing room, nine hours. **Prereq: Junior classification and AE 1.**

4b ARCHITECTURAL DESIGN. (3) I, II — Gray

Continuation of AE 4a. Grade 'C" Beaux Arts Institute of Design. Drawing room, nine hours. **Prereq. Junior classification and AE 4a.**

5 BUILDING EQUIPMENT. (2) II — Gray

Theory and practice of modern building equipment. Lecture and recitation, two hours. **Prereq: Junior classification.**

6a ADVANCED ARCHITECTURAL DESIGN. (4) I, II — Gray and Johnson

A study of more advanced problems in architectural composition. Grade "B' Beaux Arts Institute of Design. Drawing room, twelve hours. **Prereq: Senior classification and AE 4b.**

6b ADVANCED ARCHITECTURAL DESIGN. (4) I, II — Gray and Johnson

A continuation of AE 6a. Grade "B" Beaux Arts Institute of Design. Drawing room, twelve hours. **Prereq: Senior classification and AE 6a.**

7 BUILDING CONSTRUCTION. (3) I — Gray

A study of the materials and methods of modern building construction; working drawings and detailing. Lecture and recitation, two hours per week; drafting room, three hours per week. **Prereq: Junior classification and Eng. Dr. 1b.**

8 THEORY OF ARCHITECTURE. (2) I, II — Johnson

Theory of architectural design with special emphasis on factors effecting the development of plan. Lecture and recitation, two hours. **Prereq: Junior classification.**

Civil Engineering

12 PLANE SURVEYING. (3) I, II — Blythe

Principles, field practice and calculations. General use and care of surveying instruments. Class work, two hours; field work, three hours. **Prereq: Math. 18.**

15 GENERAL SURVEYING. (3) S — Shaver and Blythe

Given at Camp Robinson, Noble, Kentucky. Plane and geodetic surveying field and office practice. **Prereq: Approval of Head of Department.**

16a ROUTE SURVEYING. (3) I, II — 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, three hours. **Prereq: CE 12.**

16b ROUTE SURVEYING. (3) S — Shaver and Blythe

Given at Camp Robinson, Noble, Kentucky. Complete location survey of highway or railroad. **Prereq: Approval of Head of Department.**

17 HYDROGRAPHIC SURVEYING. (1) S — Shaver and Blythe

Given at Camp Robinson, Noble, Kentucky. Stream gauging. Location surveys for bridges and dams. **Prereq: Approval of Head of Department.**

18 MAPPING AND TOPOGRAPHIC DRAWING. (2) I, II — Hoffmann
Construction of maps from field notes, reproductions and changing scale of maps, topographic symbols, contours, projected location, profile, line, and grade. Drafting room, six hours. **Prereq: CE 12.**

23 SEMINAR. (1) I, II — Chambers
A study of current engineering literature as related to civil engineering; assigned reading and reports. Round table conference, two hours. **Prereq: Senior classification.**

24 SANITARY ENGINEERING FOR SANITARY INSPECTORS. (4) S — Cheek
Theory and practical application for county and state sanitarians only. Lecture and recitations, 45 hours. Field trips and reports, thirty-six hours. Weekly seminar at Fayette County Health Office.

31 HIGHWAY LOCATION, CONSTRUCTION, AND MAINTENANCE (2) I, II — Pendley
Principles of location, topographic conditions, economic considerations, benefits, and costs. Materials and types of roads, and general maintenance. Lecture and recitation, two hours. **Prereq: CE 16a.**

32 STREETS AND PAVEMENTS. (2) I, II — Chambers
Drainage, subgrade, foundations, surfacing materials; resistance to friction, safety appliances, construction, maintenance, and traffic census. Lecture and recitation, two hours. **Prereq: SE 31.**

37 HIGHWAY MATERIALS. (2) I, II — Chambers and Pendley
Methods of testing highway materials and the relation of such tests to standard specifications. Lab, four hours. **Prereq. or concurrent: CE 32.**

49 RAILWAY CONSTRUCTION AND MAINTENANCE. (2) I, II — Shaver
Theory of construction, road bed, track, sub-drainage, structures, yards, terminals, revisions, cost of operation, and maintenance of way. Lecture and recitation, two hours. **Prereq: CE 16a.**

81 TESTING MATERIALS. (1) I, II, S — Chambers and Pendley
Experimental investigations and tests of woods, metals, cement, concrete, and other construction materials to verify the laws governing their behavior under given conditions. Lab, two hours. **Prereq. or concurrent: AM 100.**

107 SOIL MECHANICS. (3) I, II — Gregg
A study of soil and its utilization in foundations for structures and subgrade for highways. Stabilization and improvement of bearing values. Lectures and recitations, two hours a week; lab, three hours. **Prereq: Senior classification.**

110a REINFORCED CONCRETE. (4) I, II — Moldovan and Mory
Theory and design of beams, slabs, girders, and columns as related to building frames, retaining walls and bridges. Lecture and recitation, three hours; drawing room, three hours. **Prereq: CE 171a.**

110b REINFORCED CONCRETE. (3) I, II — Mory
Continuation of CE 110a, with special emphasis on complete structures. Lecture and recitation, two hours; drawing room, three hours. **Prereq: CE 110a.**

114 ADVANCED SURVEYING. (3) I, II — Blythe
Methods of geodetic surveying and adjustment of observations, map projections. Plane table surveys. Introduction to aerial photography. Class work, two hours; field work, three hours. **Prereq: Summer Camp.**

120 HYDRAULICS. (2) I, II, S — Cheek
Mechanics of fluids under static and dynamic conditions. Fundamentals as found in any standard elementary textbook. Lecture and recitation, two hours. **Prereq: AM 4 and AM 100.**

123 HYDRAULICS LABORATORY. (1) I, II, S — Cheek
Experimental investigation and application of some of the more important principles covered in CE 120. Lab, three hours. **Prereq. or concurrent: CE 120.**

151 WATER SUPPLY AND WATERWORKS. (2) I, II — Cheek
Rainfall and run-off, surface and underground sources of supply. The purification plant and its operation. Distribution and pressure problems. Pipe networks. Lecture and recitation, two hours. **Prereq: CE 120. Concurrent with CE 152.**

152 SEWERS AND SEWAGE DISPOSAL. (2) I, II — Cheek
Sanitary and storm sewers, flow problems. Disposal plants and their operation. Lecture and recitation, two hours. **Prereq: CE 120. Concurrent with CE 151.**

157 SANITARY ENGINEERING FOR HEALTH OFFICERS. (2) S Cheek
For County Health Officers only. Stress is laid upon preventative rather than curative measures. The theory portion of CE 24 is included so the doctor will better understand the problems of the sanitarian.

158 SANITARY ENGINEERING DESIGN. (3) I, II Cheek
For students now majoring in Sanitary Engineering. Complete design and lay-out of a water plant, distribution system, storm and sanitary sewer, and sewage disposal plant. Drawing room, nine hours. **Prereq: CE 151 and 152.**

159 DESIGN AND OPERATION OF WATERWORKS AND SEWERS. (2) I, II Cheek
General designs of water treatment and sewage disposal plants; distribution and collection systems; practice in the more common laboratory tests used in the plants. Lab and drawing room, six hours. **Prereq: CE 151 and 152.**

171a THEORY OF STRUCTURES. (3) I, II Moldovan and Mory
Analysis of stresses in simple and indeterminate structure, including beams, girders, trusses, towers, and building frames. Lecture and recitation, three hours. **Prereq. or concurrent: AM 100.**

171b THEORY OF STRUCTURES. (3) I, II Mory
Continuation of CE 171a with emphasis on indeterminate structures. Lecture and recitation, three hours. **Prereq: CE 171a.**

173a STEEL STRUCTURES. (3) I, II Mory
Design and details for various types of riveted and welded connections, riveted and welded building frames, plate girders and trusses. Lecture, one hour; drawing room, six hours. **Prereq: CE 171a.**

173b STEEL STRUCTURES. (2) I, II Moldovan and Mory
Continuation of CE 173a with emphasis on floor systems, trusses, and plate girders for bridges. Drawing room, six hours. **Prereq: CE 173a.**

174 GRAPHIC SOLUTIONS. (2) I, II Moldovan and Mory
Analysis of stresses by graphical methods, in simple structures including beams, girders, and trusses. Design and details of timber structure. Drawing room, six hours. **Prereq. or concurrent: CE 171a.**

182 SANITATION. (2) I, II Cheek
Municipal and rural sanitation presented from an engineering viewpoint. Also includes problems in heating, lighting, plumbing, and ventilation. **Prereq: 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, or its equivalent.

202a-d CONSTRUCTION. (3 ea.) I, II Mory
Advanced work in plain and reinforced concrete. Theory, design, and details for rigid buildings, bridge frames and arches. Calculation of stresses by the method of column analogy. Class work, one hour; lab, four hours.

221a, b ADVANCED SOIL MECHANICS. (3 ea.) I, II Gregg
Advanced study of the engineering properties of soils and the application of these theories to the design of engineering structures. Lecture, one hour; lab, four hours. **Prreq: CE 107.**

232a-d HIGHWAY ENGINEERING. (3 ea.) I, II Chambers and Gregg
Advanced study of the principals of design, construction maintenance and laboratory investigations on highway materials. Lecture, one hour; lab, four hours.

242a-d RAILROAD ENGINEERING. (3 ea.) I, II Shaver
Advanced course in location, construction, maintenance, economical selection of lines, grade reduction, cost of operation, valuation, and structures and their maintenance. Class work, one hour; lab, four hours.

252a-d SANITARY ENGINEERING. (3 ea.) I, II Cheek
Continuation of CE 159 covering more detailed design of various sanitary constructions. (Additional courses in chemistry, bacteriology, and zoology should be taken in connection with this course.) Class work, one hour; lab, four hours.

262a-d GEODETIC SURVEYING. (3 ea.) I, II — 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, one hour; lab, four hours.

272a-d STRUCTURAL ENGINEERING. (3 ea.) I, II — Mory
Advanced work in structural steel. Theory, design, and details of arches, continuous highway and railroad plate girders, trussed bridges and building frames. Class work, one hour; lab, four hours.

282a-f SPECIAL PROBLEMS IN CIVIL ENGINEERING. (3 ea.) — Staff
Individual work on some selected problem in one of the various fields of Civil Engineering. Lab, six hours. **Prereq: Approval of Head of Department.**

283a-d SEMINAR. (1 ea.) — Staff
Review of current literature in the field of Civil Engineering, general discussion and presentation of papers on departmental research. Required of all graduate students. Two hours.

ELECTRICAL ENGINEERING

Ernest A. Bureau, Leslie Keene Adams, Nathan B. Allison, Brinkley Barnett, Joseph Aubrey Boyd, Hansford White Farris, William Lawrence Garrott, Charles Thomas Maney, Robert Edroy Meek, Arthur A. Nierenberg, Earl T. Noble, Harry Alex Romanowitz, and Gustavus Edward Smith.

11 ELECTRICAL LABORATORY. (1) I, II — Adams
A study of the methods and materials used in connecting electrical apparatus and in the wiring of buildings with emphasis on adequacy, serviceability, safety, code requirements, and costs. Two hours lab.

21 PRINCIPLES OF ELECTRICAL ENGINEERING. (4) I, II — Staff
A study of the application of the fundamental laws of electric, magnetic, and dielectric circuits. Three class hours; two hours lab. **Prereq, or concurrent: Math. 20b and Physics 3b.**

101 FUNDAMENTALS OF ELECTRICAL MACHINERY. (3) I — Staff
(For Civil, Metallurgical, and Mining Engineers.) A study of the more common types of D.C. and A.C. electrical equipment and machinery. Two class hours; two hours lab. **Prereq: Physics 3b.**

102 ELECTRICAL MACHINERY. (2) II — Bureau
(For Metallurgical and Mining Engineers.) A study of electric power and its control as applied to mining machinery and metallurgical processes. Two class hours. **Prereq: EE 101.**

103 ELECTRICAL LABORATORY FOR MINING ENGINEERS. (1) II — Staff
A laboratory study of circuits and equipment used in the servicing and operation of industrial equipment. With special emphasis on mining applications. Three hours lab. Concurrent: EE 102.

105a ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY. (4) I — Staff
(For Mechanical Engineers.) Study of electrical circuits and machinery and their control as found in modernly equipped installations. Three class hours; three hours lab. **Prereq: Physics 3b and Math. 20b.**

105b ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY. (4) II — Staff
(For Mechanical Engineers.) Continuation of EE 105a. Three class hours; three hours lab.

107 ELECTRICAL CONTROLS. (3) I — Noble and Maney
Control of electric equipment. Types of contractors, relays, etc. Typical circuits with which they are tied together into units for automatic functioning. Two class hours; three hours lab. **Prereq: EE 116, 105b or 101.**

108 INDUSTRIAL ELECTRONICS. (3) II — Romanowitz and Smith
Electronic devices for industrial use, and their applications in the control of rectifiers, motors and welders. High frequency heating, timing circuits, and oscillators; phototubes, etc. Two class hours; three hours lab. **Prereq: EE 116, 161.**

110 ELECTRICAL LABORATORY. (2) I, II — Staff
An experimental study of electrical machinery. Lecture, one hour; lab, one three-hour period. **Prereq. or concurrent: EE 116.**

111 ADVANCED ELECTRICAL LABORATORY. (1) I Staff
Continuation of EE 110. Lab, two hours.

114 ALTERNATING CURRENT CIRCUITS. (4) I, II Staff
A mathematical study of single phase and polyphase circuits under the influence of steady state sinusoidal and nonsinusoidal voltages. Three class hours; three hours lab. **Prereq: EE 21 and Math. 20b.**

115 DIRECT CURRENT MACHINERY. (3) I Staff
A study of D.C. Machinery construction and design, and its operation and characteristics. Two class hours; three hours lab. **Prereq: EE 21 and Math. 20b.**

116 ALTERNATING CURRENT MACHINERY. (4) II Staff
A study of A.C. machinery construction and its operation and characteristics. Three class hours; three hours lab. **Prereq: EE 114, 115.**

117 ADVANCED ALTERNATING CURRENT MACHINERY. (3) II Staff
Advanced analytical study of A.C. machinery characteristics. **Prereq: EE 116.**

118 ELECTRICAL POWER PLANT EQUIPMENT. (3) Staff
A study of the electrical elements of a modern power plant and their operation and characteristics. **Prereq: EE 116.**

120 ELECTRICAL CIRCUIT ANALYSIS. (3) II Allison, Nierenberg, and Smith
Mathematical and physical principles of engineering analysis. Analogies, duals. Steady state and transient solutions. Fourier and Laplace analyses. Dimensional analysis. Bessel and Hyperbolic functions, etc. Two class hours; two hours lab. **Prereq: EE 114, Math. C 105a.**

123 ELECTRICAL EQUIPMENT PROBLEMS. (2) I, II Bureau and Nierenberg
(For Electrical Engineers.) Individual problems related to engineering practice are assigned. The solutions involve economic as well as engineering considerations. Lecture, one hour; five hours lab. **Prereq: EE 116, 120.**

124 ELECTRICAL DESIGN. (2) I, II Barnett
Fundamental relations in the design of electrical machinery. Includes the calculations for the design of several pieces of electrical equipment. Lecture, one hour; five hours lab. **Prreq: EE 115, 116.**

135 ELECTRICAL NETWORKS. (4) I Allison and Romanowitz
Fundamentals of network theory in communication and power circuits. Network theorems, transmission lines and wave filters. Three class hours; three hours lab. **Prereq: EE 114, 120.**

136 ILLUMINATION ENGINEERING. (3) I Noble and Maney
Spectral nature of light sources; entities in illumination systems; measurements and standards; design of interior and outdoor lighting systems. Two class hours; three hours lab. **Prereq: Physics 3b.**

137 ELECTRIC POWER TRANSMISSION AND DISTRIBUTION. (3) I, II Staff
A study of the problems involved in the transmission of electric power with special emphasis on the elements of the transmision line. **Prereq: EE 120, 135.**

139 TELEPHONY. (3) II Staff
The theory and practice of modern telephone operation. **Prereq: EE 135.**

151a, b SEMINAR. (1 ea.) I, II Staff
Weekly meeting with staff for reports and discussion on research and modern trends and practices in Electrical Engineering. Two class hours. **Prereq: Senior standing.**

152a-c INDEPENDENT PROBLEMS. (1 ea.) I, II Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only for students the character of whose previous work justifies it.

152d-f INDEPENDENT PROBLEMS. (2 ea.) I, II Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only for students the character of whose previous work justifies it.

161 ELECTRONICS. (4) I, II Staff
High vacuum and gas tube characteristics. Electronic circuits, rectifiers and smoothing filters. Audio amplifiers, oscillators. Electronic instruments. Three class hours; three hours lab. **Prereq: EE 114.**

162 RADIO ENGINEERING I. (4) I Staff
Resonance at radio frequencies; coupled circuits and impedance transformation; radio frequency amplifiers. AM and FM transmitters and receivers. Three class hours; three hours lab. **Prereq: EE 161.**

164 RADIO ENGINEERING II. (4) I, II Farris and Romanowitz
High frequency phenomena: Coupled circuits, impedance transformation, lines, antenna feeding and matching, wide band amplifiers, pulse circuits. Three class hours; three hours lab. **Prereq: EE 162, 135.**

165 RADIO ENGINEERING — FUNDAMENTALS OF ELECTRIC WAVES. (2) II Romanowitz
Fundamental theory of current, potential, power, and electric and magnetic fields. Vector analysis, Maxwell's equations. Plane waves, power flow and the Poynting vector. Two class hours. **Prereq: EE 120.**

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.

206 ELECTRIC POWER TRANSMISSION. (3) Bureau and Barnett
The theory underlying the calculation and operation of long distance transmission circuits. Special attention to relay control.

210 SYMMETRICAL COMPONENTS. (3) Bureau
A study of the symmetrical component method of analyzing unbalanced conditions on transmission lines and its use in solving relay applications.

211a LINEAR CIRCUIT ANALYSIS I. (3) Smith
Laplace and Fourier transform methods of analysis of linear lumped constant systems under transient and steady state conditions: Feedback amplifiers; Filter networks; Stability and physical realizability. **Prereq: EE 120, 135.**

211b LINEAR CIRCUIT ANALYSIS II. (3) Smith
Continuation of EE 211a with an introduction to non-linear systems.

212 SERVOMECHANISMS. (3) Smith
Synthesis of closed loop systems. Transient and steady state analysis of system transfer functions. Laplace transform and loci plot methods. **Prereq: EE 107, 108, 211a.**

221 ELECTRON BEHAVIOR IN HIGH VACUUM AND GAS TUBES. (3) Romanowitz
Potential distribution, thermionic emission and electron flow; Energy of electrons in Metals; Maxwellian Distribution equation and curves; Random motions of electrons and ions. **Prereq: EE 108, 120.**

222 GASEOUS CONDUCTING ELECTRONIC DEVICES. (3) Romanowitz
Atomic energy level diagrams; Photo-electric emission and devices; Electric arcs and glow discharges, plasmas and boundaries, sheaths and probes; Industrial devices. **Prereq: EE 221.**

223 COMMUNICATION ENGINEERING — ADVANCED TRANSMISSION LINE THEORY. (3) Romanowitz and Farris
Open wire and coaxial lines, reflections, standing waves; circle diagram; stub matching; impedence transformation; wave guides. Continuation of EE 135. **Prereq: EE 135, Math. 120.**

226 RADIO ENGINEERING — ULTRA HIGH FREQUENCY. (3) Allison and Romanowitz
Generation, detection, and measurement of microwave energy; vacuum tubes at ultra high frequencies, the klystron and the magnetron. Lecture, two hours; three hours lab. **Prereq: EE 164, 165.**

227 ELECTROMAGNETIC FIELDS. (3) Allison and Romanowitz
Advanced studies in electric and magnetic fields, using vector methods and Maxwell's equations; wave equations, radiation and propagation of energy. **Prereq: EE 165.**

230a-f SPECIAL PROBLEMS IN ELECTRICAL ENGINEERING. (3 ea.) Staff
Open to graduate students who have the ability to carry on research. Individual work in one of the various fields of Electrical Engineering. Lab, six hours a week.

231a-d SEMINAR. (1 ea.) Staff
Review of current literature in the field of Electrical Engineering, general discussion and presentation of papers on departmental research. Required of all graduate students. Two class hours.

ENGINEERING — GENERAL

Robert Dawson Hawkins, Staley Fields Adams, William Jackson Barber, Carroll Sparks Carter, Willis Merle Carter, Alvin Lee Chambers, Edward Everett Elsey, Hansford White Farris, Oliver William Gard, George Richard Gerhard, Clinton Kelly Hoffmann, John Sherman Horine, Clifton O'Neal Mock, Louis Edward Nollau, Laurence Chester Pendley, Harry Alex Romanowitz, Ernest Melvern Spokes, Dwight Tenney, and Elbert Eugene Williams.

Applied Mechanics

2 MECHANISMS. (3) I, II, S Hawkins and Barber
(For Mechanical Engineers.) Movement of machine parts such as crank and link motions, cams gears, straight line and quick return motions. Lecture and recitation, two hours, lab, three hours. **Prereq: Physics 3a and Eng. Dr. 18.**

3 STATICS. (3) I, II, S Hawkins, Barber, and Adams
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, three hours. Prereq: Physics 3a and Math. 20a.

4 DYNAMICS. (2) I, II, S Hawkins, Barber, and Adams
Motion of a particle, dynamics of moving bodies, impulse and momentum, work and energy. Lecture and recitation, two hours. **Prereq: AM 3. Prereq. or concurrent: Math. 20b.**

6 MECHANISMS. (2) I, II, S Hawkins and Barber
(For Electrical Engineerins.) Movement of machine parts such as crank and link motions, cams, gears, straight line and quick return motions. Lecture and recitation, two hours. **Prereq: Physics 3a and Eng. Dr. 1b.**

7 DYNAMICS. (3) I, II, S Hawkins, Barber, and Adams
(For Mechanical Engineers.) Motion of a particles, dynamics of moving bodies, impulse and momentum, work and energy, balancing, gyroscopy, advanced dynamics of rigid bodies. Lecture and recitation, three hours. **Prereq. or concurrent: Math. 20b. Prereq: AM 3.**

100 STRENGTH OF MATERIALS. (4) I, II, S Hawkins, Barber, and Adams
A study of stress and strain due to direct forces, shear, bending, torsion, eccentric loads and combined stresses. Lecture and recitation, four hours. **Prereq: AM 3 and Math. 20b.**

106 ADVANCED STRENGTH OF MATERIALS. (3) I, II, S Hawkins and Adams
Unsymmetrical bending of beams, thin plates, stress analysis of thick walled cylinders, and rotating discs. Theory of elastic energy, curved beams, stress concentration, and fatigue. Lecture and recitation, three hours. **Prereq: AM 100.**

107 MECHANICAL VIBRATIONS. (4) I, II Hawkins and Barber
Vibrations of systems of one and several degrees of freedom, critical speeds, and torsional and lateral vibrations of shafts. Lecture and recitation, four hours.

Prereq: AM 4 or 7 and AM 100. Prereq. or concurrent: Math. 105a.
NOTE: Credit will not be given in both AM 2 and AM 6.
NOTE: Credit will not be given in both AM 4 and AM 7.

Engineering Administration

102 ENGINEERING ADMINISTRATION. (3) I, II Tenney and Elsey
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, three hours. **Prereq: Senior classification.**

Engineering Drawing

1a ELEMENTARY ENGINEERING DRAWING. (2) I, II, S — Nollau, Hoffmann, and Mock
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. Three two-hour periods a week.

1b DESCRIPTIVE GEOMETRY. (2) I, II, S — Nollau, Hoffmann, Horine, and Mock
A study of the essential principles of descriptive geometry and the solution of practical problems pertaining to the various branches of engineering. Three two-hour periods a week. **Prereq: Eng. Dr. 1a.**

2 MECHANICAL DRAWING. (1) I, II, S — Nollau, Hoffman, and Mock
(For students in Industrial Chemistry.) Freehand lettering, exercises in the use of instruments, orthographic, and axonometric projection, graphs and tracing. One two-hour period and one 1-hour period a week.

12 GRAPHICAL COMPUTATIONS. (2) — Carter
Graphic solution of problems in mechanism, construction, and use of alignment charts. Lecture, one hour; drafting room, three hours. **Prereq. or concurrent: Physics 3a, AM 2. Prereq: Eng. Dr. 18.**

18 ADVANCED ENGINEERING DRAWING. (2) I, II, S — Nollau and Mock
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. Six hours. **Prereq: Eng. Dr. 1b.**

115 PHOTOGRAPHY. (3) I — Nollau
(For Engineers.) Lectures on the optics and chemistry of photography together with practical demonstrations. Lecture, one hour; laboratory, four hours a week. **Prereq:Chem. 1a, Physics 3a, Junior standing.**

Fire Protection and Safety Engineering

101a FIRE PROTECTION ENGINEERING. (2) I — Gard
A study of building materials and construction relative to fire prevention and the analysis of common fire hazards. Lecture and recitation, two hours a week. **Prereq: Junior classification.**

101b FIRE PROTECTION ENGINEERING. (2) II — Gard
A study of special fire hazards, principles of fire insurance ratings, and laws and ordinances governing fire prevention and protection. Lecture and recitation, two hours a week. **Prereq: Junior classification.**

101c FIRE PROTECTION ENGINEERING. (2) I — Gard
A study of fire protection methods including water supply, fire fighting equipment, town grading, alarm systems and special extinguishing devices. Lecture and recitation, two hours a week. **Prereq: Junior classification.**

102 SAFETY ENGINEERING. (2) II — Gard
A study of safety methods including industrial accident prevention, accident statistics and analysis, industrial safety hazards, protective equipment, transportation and general safety. Lecture and recitation, two hours a week. **Prereq: Junior classification.**

Student Assemblies

***1 INTRODUCTION TO ENGINEERING.** (0) I — Horine
Scientific lectures and demonstrations covering all branches of engineering and the allied sciences. One hour a week.

***2 ENGINEERING PROBLEMS.** (1) I, II — Staff
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. **Prereq: Math. 18.**

3a, b CLASS SOCIETY. (Sophomore)
(0 ea.) I, II — Chambers, Farris, Gard, Gerhard, Romanowitz, and Spokes
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.

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* Open to Freshmen.

4a, b CLASS SOCIETY. (Junior)
(0 ea.) I, II Chambers, Farris, Gard, Gerhard, Romanowitz, and Spokes
One hour a week. Content same as 3a.

5a, b CLASS SOCIETY. (Senior)
(0 ea.) I, II Chambers, Farris, Gard, Gerhard, Romanowitz, and Spokes
One hour a week. Content same as 3a.

MECHANICAL ENGINEERING

Estel Burdell Penrod, Merl Baker, Robert G. Beavers, Walter Mario Cannizzo, Willis Merle Carter, Oliver William Gard, Richard Bennett Knight, Fritz Mangelsen, Andre Johannes Meyer, Joseph Michael O'Byrne, William Frederick Savage, Dwight Tenney, and John Joe Willis.

****15a, b MANUFACTURING PROCESSES. (2 ea.)**
I, II, S Carter, Cannizzo, Gard, and Mangelsen
Covering machine tool operation, inspection, measurement of finished work, foundry practice, welding, and forming of metals. Lecture and recitation, one hour; machine shop, three hours.

100a MACHINE DESIGN. (3) I, S Carter, Gard, and Cannizzo
Design of machine and structural elements. Lecture and recitation, three hours. **Prereq: Eng. Dr. 18, ME 15b. Prereq. or concurrent: AM 100.**

100b MACHINE DESIGN. (3) I, II, S Carter, Gard, and Cannizzo
Continuation of ME 100a. Drawing room, nine hours. **Prereq: ME 100a.**

104a ENGINEERING THERMODYNAMICS. (3) I, S Penrod
Fundamental principles of thermodynamics. Lecture and recitation, three hours. **Prereq: Physics 3b and Math. 20b.**

104b ENGINEERING THERMODYNAMICS. (3) II, S Penrod
Continuation of ME 104a. Lecture and recitation, three hours. **Prereq: ME 104a.**

105 POWER PLANT ENGINEERING. (3) II, S Walton and Cannizzo
Study of the characteristics of steam and internal combustion engineering generating power stations. Lecture and recitation, three hours. **Prereq: ME 104b and 112.**

107 FLUID MECHANICS. (3) II Penrod, Baker, and Savage
Fundamental principles of fluid flow. Lecture and recitation, three hour. **Prereq: ME 104a.**

108 INTERNAL COMBUSTION ENGINES. (3) II Meyer and Beavers
A study of internal combustion engine cycles and the characteristics and performance of actual engines, valve gears, and materials of construction. Lecture and recitation, four hours. **Prereq: ME 105b or 134.**

109 REFRIGERATION. (3) I, S Penrod, Baker, and Knight
A course which deals with compression and absorption refrigeration machines and installations. Lecture and recitation, three hours. **Prereq: ME 104b or 134.**

110 HEATING AND VENTILATING DESIGN. (1) II Baker, Knight, and O'Byrne
Brief course for Architectural Engineers, covering the selection and layout of heating and ventilating equipment. Drawing room, three hours. **Prereq. or concurrent: ME 116.**

112 MECHANICAL LABORATORY. (2) II, S Staff
Fundamentals of mechanical engineering laboratory practice. Lecture and recitation, one hour; lab, three hours. **Prereq: ME 104a.**

113a MECHANICAL LABORATORY. (2) I Staff
Performance tests on heating, ventilating, and power plant equipment. Lecture and recitation, one hour; lab, three hours. **Prereq: ME 104b and 107.**

113b MECHANICAL LABORATORY. (2) II Staff
Continuation of ME 113a. Lecture and recitation, one hour; lab, three hours. **Prereq: ME 113a.**

** Not open to Freshmen.

114a AIR CONDITIONING, HEATING, AND VENTILATING. (3) I Baker and Knight
Theory of air conditioning and the mechanical equipment of buildings. Lecture and recitation, three hours. **Prereq. or concurrent: ME 109.**

114b AIR CONDITIONING, HEATING, AND VENTILATING DESIGN. (3) II Baker and Knight
Continuation of ME 114a and the complete design and layout of a year-round air conditioning system. Lecture, one hour; drawing room, six hours. **Prereq: ME 114a.**

116 ELEMENTARY HEATING, VENTILATING, AND AIR CONDITIONING. (3) II Baker, Knight, and O'Byrne
Fundamental principles of air conditioning. Lecture and recitation, three hours. **Prereq: Physics 1a or its equivalent.**

122a SEMINAR. (1) I Staff
Studies of current engineering literature, preparation and presentation of bibliographies and reports through the use of the Engineering Index and Industrial Arts Index. Two hours a week. **Prereq: Senior classification.**

122b SEMINAR. (1) II Staff
Continuation of ME 122a. Two hours a week. **Prereq: Senior classification.**

129 ELEMENTS OF HEAT TRANSFER. (4) I, S Penrod, Baker, and Walton
Fundamental principles of heat transfer. Lecture and recitation, four hours. **Prereq: ME 104b.**

130 APPLIED AERODYNAMICS. (3) I Savage
Fundamental principles of fluid mechanics applied to aerodynamics. Lecture and recitation, three hours. **Prereq: ME 104b and 107.**

131a AIRPLANE DESIGN. (3) Savage
Covering fundamental principles of airplane design. Lecture and recitation, three hours. **Prereq. or concurrent: ME 130.**

131b AIRPLANE DESIGN. (3) Savage
Continuation of ME 131a. Lecture and recitation, one hour; lab, two two-hour periods. **Prereq: ME 131a.**

133 TOOL DESIGN. (3) I Carter
An introduction to Tool Engineering which embodies the fundamental principles of designing jigs, fixtures, cams, guages, punches, dies, and automatic machine tools. Lecture, one hour; drawing room, six hours. **Prereq: ME 100b.**

134 ELEMENTS OF ENGINEERING THERMODYNAMICS. (3) I Staff
(For Civil, Electrical, and Mining Engineers.) General energy equations, mixtures of gases and vapors, flow of fluids, vapor power cycles, internal combustion cycles, and refrigeration cycles. Recitation, three hours. **Prereq: Physics 3b and Math. 20b.**

135 EXPERIMENTAL AERODYNAMICS. (3) II Savage
A complete wind tunnel analysis of a scale made to obtain lift, drag, pitching moment, and side force data. Lecture, one hour; lab, four hours. **Prereq: ME 130.**

136 INTERNAL COMBUSTION ENGINE LABORATORY. (1) I, II Myer and Beavers
A study of magnetos, distributors, fuel ignition, timing, carburetors, oil systems, and performance tests on engines. Aeronautical Lab, three hours. **Prereq. or concurrent: ME 108, 113a.**

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 bachelors degree in Mechanical Engineering or its equivalent.

201a-d AUTOMOTIVE ENGINEERING. (3 ea.) Meyer
An advanced course in the essentials of motor vehicle design, construction, and operation. Drafting room, lab, and lectures by appointment.

202a-d POWER PLANT ENGINEERING. (3 ea.) Penrod and Walton
Advanced work in the design, selection, layout, and operation of heat-power plant equipment.

203a HEATING, VENTILATING, AND AIR CONDITIONING. (3) Baker and Knight
Theoretical analysis of complex refrigeration cycles and treatment of advanced

refrigeration topics; intermittant heating; advanced psychrometrics and air conditioning techniques.

203b HEATING, VENTILATING AND AIR CONDITIONING. (3) Baker and Knight
Analysis of panel heating and cooling systems; theoretical development of exact radiation equations involving multiple reflections; configuration factor analysis; exact and simplified design techniques.

203c, d HEATING, VENTILATING AND AIR CONDITIONING. (3 ea.) Baker and Knight
Advanced work in the design, selection, layout, and operation of heating, ventilating and air conditioning equipment with emphasis on industrial application and heat pump design.

204a-d 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-f SPECIAL PROBLEMS IN MECHANICAL ENGINEERING. (3 ea.) Staff
For graduate students having research ability. Each course consists of individual work in one of the various fields of Mechanical Engineering. Lab. six hours. **Prereq: Approval of Head of Department.**

211a ADVANCED ENGINEERING THERMODYNAMICS. (4) I, II Penrod
Critical treatment of the laws of thermodynamics, temperature scales; applications of theory to compressors and internal combusion engines; frequent reference to research papers. Lecture, four hours. **Prereq: ME 104c or consent of instructor.**

211b ADVANCED ENGINEERING THERMODYNAMICS. (4) II Penrod
Continuation of ME 211a. **Prereq: ME 211a.**

212a ADVANCED FLUID MECHANICS. (4) I Penrod
Fundamentals of hydro- and aero-mechanics treated by the use of vector and tensor calculus. Lecture, four hours. **Prereq: ME 107 or consent of instructor.**

212b ADVANCED FLUID MECHANICS. (4) II Penrod
Continuation of ME 212a. **Prereq: ME 212a.**

213a ADVANCED HEAT TRANSFER. (4) I Baker and Penrod
Application of mathematics to heat transfer, transfer of heat in heat exchangers and furnaces, heat transmission and pressure drop, discussion of research papers. Lecture, four hours. **Prereq: ME 107, 129 or equivalent.**

213b ADVANCED HEAT TRANSFER. (4) II Penrod
Continuation of ME 213a. **Prereq: ME 213a.**

214a, b SPECIAL PROBLEMS IN AERONAUTICAL ENGINEERING. (3 ea.) I, II Meyer and Savage
Advanced course in aircraft power plant engineering dealing with special problems in reciprocating engines, gas turbines, and jet propulsion. Aeronautical Lab, nine hours. **Prereq: Approval of Head of Department.**

215a-d SEMINAR. (1 ea.) Penrod, Carter, and Knight
Review of current literature in the field of Mechanical Engineering, general discussion and presentation of papers on departmental research. Required of all graduate students. Two hours.

216 STEAM TURBINES. (4) Penrod
Steam turbine cycles; flow of stream through nozzles and blades; internal losses; reheat factor; regenerative feed-heating; turbine performance at varying loads; mixed-pressure turbines; construction of nozzles and diaphragms. **Prereq: Approval of Head of Department.**

217 GAS TURBINES AND JET PROPULSION. (4) Meyer
Momentum, energy, and thermodynamics of gas flow; performance calculations; centrifugal, axial-flow, and Lysholm compressors; gas turbine cycles and characteristics; combustion chamber; aircraft, stationary, marine, and locomotive power plants; rockets. **Prereq: Approval of Head of Department.**

218 ADVANCED GEAR DESIGN. (3) Carter
Fundamentals of gearing; involute trigonometry; design of planetary gear systems and transmission; study of gear forms such as bevel, helical, worm and spiral; study of gear manufacturing methods. Lecture and recitation, three hours. **Prereq: ME 100b.**

METALLURGICAL AND MINING ENGINEERING

Charles Stevens Crouse, Morris Wilson Beebe, Carroll Sparks Carter, Robert Carlisle Duncan, George Richard Gerhard, Joseph Pershing Hammond, Thomas Alexander Kendall, Frank Lewis Orrell, Jr., Ernest Melvin Spokes, and Clifford Earl Wenninger.

Metallurgical Engineering

26 ENGINEERING METALLURGY. (2) I, II Gerhard
An elementary terminal course in the production and treatment of metals and alloys to furnish a background for the intelligent use of these materials. Lecture and recitation, two hours. **Prereq: Chem. 2a.**

27 GENERAL ELEMENTARY METALLURGY. (3) I, II Gerhard
An elementary course covering general metallurgical principles. Fuels, refractories, furnace pyrometry and the several type alloys are considered. Lecture and recitation, three hours. **Prereq: Chem. 1a.**

29 METALLURGY OF THE FERROUS METALS. (3) I, II Beebe
Principles and processes employed in the production, treatment, and preparation of iron and steel, with a brief consideration of their constitution including the iron-carbon phase diagram. Lecture and recitation, three hours. **Prereq: Met. E. 27 and Chem. 1b.**

37 ADAPTIVE METALLURGY FOR ENGINEERS. (4) I, II Gerhard
Principles of production and treatment of metals and alloys; correlation of structures, properties, and applications for Mechanical Engineers. Lecture and recitation, four hours. **Prereq: Chem. 1b or 2b and Physics 3a.**

60 METALLURGICAL LABORATORY AND SHOP PRACTICE. (6) S Gerhard and Others
Metallurgical and allied problems worked out practically in the laboratories and shops of the College. Lab, thirty-three hours. **Prereq: Five semesters in Metallurgical Engineering or its equivalent.**

121 FUEL AND METALLURGICAL LABORATORY. (2) I, II Kendall
Analysis of ores, slags, and other metallurgical products by both wet and dry methods; determinative methods utilized in the analysis of fuels. Lab, six hours. **Prereq: Chem. 21a and Met. E. 27.**

128 METALLURGY OF NON-FERROUS METALS. (3) I, II Crouse
Principles and processes employed in the production and preparation of copper, lead, alumnium, and other non-ferrous metals; consideration of the strategic and economic importance of these metals. Lecture and recitation, three hours. **Prereq: Met. E. 27.**

132 METALLURGICAL CALCULATIONS. (5) I, II Crouse
Calculations involved in the practical application of metallurgical principles both general and specific. Recitation and problems, five hours. **Prereq: Chem. 21a, Met. E. 29 and 128.**

140 THE SCIENCE OF METALS. (3) I, II Crouse
First course in physical metallurgy; correlation of structures of metals and alloys to their physical properties together with the effects of mechanical work and heat. Lecture and recitation, three hours. **Prereq: Physics 2b, Chem. 21a, and Met. E. 29.**

142 HEAT TREATMENT. (3) I Gerhard
Correlation of compositions, heat-treatments, microstructures, and properties of ferrous metals and alloys. Engineering, tool, heat-resistant, and corrosion-resistant ferrous alloys, and cast irons are included. Lecture, two hours; lab, three hours. **Prereq: Met. E. 60, 140.**

143a PHYSICS OF METALS. (3) I Hammond
Radiography and x-ray metallography; structural metallurgical topics; elastic, plastic properties; diffusion; solubility of gases; introduction to electron and band theory of solids. Lecture and recitation, two hours; lab, three hours. **Prereq: Physics 123b, Chem. 140b, Met. E. 140.**

143b PHYSICS OF METALS. (3) II Hammond
This is a continuation of Met. E. 143a without the laboratory. Lecture and recitation, three hours. **Prereq: Met. E. 143a.**

144 FERROUS AND NON-FERROUS METALLOGRAPHY. (3) II Hammond
Correlation of compositions, heat-treatments, microstructures, and properties of non-ferrous metals and alloys. Commercially pure metals; and solid solution, cold-working, age-hardenable, and martensitic-type alloys are considered. Lecture, two hours; lab, three hours. **Prereq: Met. E. 60, 140.**

164 ELEMENTS OF LOW TEMPERATURE CARBONIZATION. (3) I, II Crouse
Principles involved in the low temperature treatment of coals and other carbonaceous materials, including hydrogenation. Lecture and recitation, three hours; assigned reference reading. **Prereq: Physics 123b and Chem. 140b.**

166 MINERALS BENEFICIATION. (5) II Spokes
Principles and mechanics of benefication involved in the preparation of mine products, principles of plant design, and current developments. Lecture and recitation, five hours. **Prereq: Chem. 21a, Physics 3b, and Met. E. 26 or 27.**

167 MINERALS BENEFICIATION LABORATORY. (1) II Spokes
Application of the principles studied in Met. E. 166. Lab, two hours. Concurrent: Met. E. 166.

175a, b SEMINAR. (1 ea.) I, II Staff
General discussions of metallurgical subjects; preparation and delivery of papers and reports; extemporaneous speaking, and the briefing of technical books and articles in current literature. Two hours. **Prereq: Six semesters 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 bachelors degree in Metallurgical Engineering or its equivalent.

205 HEAT TREATMENT OF METALS AND ALLOYS.
(6) I, II Crouse, Gerhard, and Hammond
Advanced heat treatment of metals and alloys. Special emphasis on the particular metal or alloy on which the student wishes to specialize. Reference reading and laboratory work are emphasized. Lecture, two hours; lab, eight hours.

207 TECHNOLOGY OF ALLOYS. (6) I, II Crouse and Gerhard
Principles and practices used in the production of alloys; with special stress upon any particular group of alloys that the student may choose. Reference reading and laboratory work are emphasized. Lecture, two hours; lab, eight hours.

208 ADVANCED METALLOGRAPHY. (6) I, II Crouse and Hammond
Detailed study of the structure of metals and alloys together with their preparation for examination under the microscope. Reference reading and laboratory work are emphasized. Lecture and recitation, two hours; lab, eight hours.

209 ADVANCED ORE DRESSING. (6) I, II Spokes
Ore dressing plant design and original research in concentration problems. Lecture and recitation, two hours; lab, eight hours.

210 TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. (6) I, II Crouse
Principles and practices employed in low temperature carbonization of carbonaceous materials such as oil shales, bituminous and cannel coals. Lecture and recitation, two hours; lab, eight hours. **Prereq: Permission of Head of Department.**

213 X-RAY METALLOGRAPHY. (4) I, II Hammond
Crystallography; x-ray theory. Laue, rotation-crystal, powder x-ray diffraction methods; special cameras; structure-factor equations; reciprocal lattice; stereographic, gnomonic projections; poles figures; stress-strain analysis, phase diagrams; electron diffraction. Lecture, three hours; lab, three hours. **Prereq: Physics 119.**

214 THE METALLIC STATE. (2) I, II Hammond
Interatomic forces of crystal bonding, free electron; zone theory; equilibrium and rate of approach thereto, thermal behavior, structure, free energy of alloy phases; equilibrium diagrams; diffusion; order-disorder change; nucleation and phase growth. Lecture, two hours.

215 ALLOY STEELS. (3) I, II Crouse and Hammond
Fundamental principles of the more complicated and special alloy steels and their heat treatment. Carbon, mild alloys, N.E., S.A.E., tool and super alloys

are included. Alternate alloy steels for application are considered. Lecture, three hours.

216 THE PHYSICAL CHEMISTRY OF STEEL MAKING. (6) I, II Crouse and Gerhard
Reactions involved in steel making processes. Slag constitution, slag control, and effects of additions to liquid metal. Influences of melting, refining, and deoxidizing practices on properties of finished steel are emphasized. Lecture, five hours; lab, three hours.

217 THE MICROSCOPY OF SLAGS AND REFRACTORIES. (3) I, II Gerhard
Identification of phases in slags. Emphasis is placed on the interpretation of microstructural features as indicators of high temperature reaction tendencies among silicate and oxide systems. Lecture and recitation, one hour; lab, six hours.

218 DIFFUSION AND HEAT FLOW IN METALS. (2) I, II Hammond
Fick and Fourier equations applied to diffusion and solid state transformations, and to the heating and cooling of metals in metallurgical processes. Radiation convection, and conduction are considered in principles of furnace design. Lecture, two hours.

230a-d RESEARCH IN X-RAY METALLOGRAPHY. (6) I, II Hammond
Research problems in x-ray metallography, both diffraction and radiographic, and allied subjects. Lecture and recitation, two hours; lab, eight hours.

240a-f SPECIAL PROBLEMS IN METALLURGICAL ENGINEERING. (3 ea.) I, II Staff
Literature research and planning of research programs; shop problems and technical writing, including a term paper, are required. Lab, six hours. Consultation and lecture by appointment.

250 INDUSTRIAL MINERAL PREPARATIONS AND USES. (3) I, II Beebe
Study of the more common non-metallic substances such as carbon, lime, clay, nitrogen utilized in industry. Lecture and recitation, three hours.

275a-d SEMINAR. (1 ea.) I, II Hammond
Review of current literature in the field of metallurgical engineering and presentation of papers thereon. Presentation of talks on departmental research. Group and panel discussions. Required of all graduate students. Two hours.

Mining Engineering

126 ELEMENTS OF MINING. (5) I Spokes
The origin of mineral deposits, prospecting, and mine development. Lecture and recitation, four hours; lab, three hours. **Prereq: Chem. 1b, Physics 3b, and Geol. 12b.**

127a, b MINING TECHNIQUES. (5, 4) I, II Staff
The techniques and economics of exploitation of mineral deposits. Min. E. 127a, lecture and recitation, five hours; Min. E. 127b, lecture and recitation, four hours. **Prereq: Min. E. 126.**

129 MINE VENTILATION AND DRAINAGE. (5) II Spokes
The conditioning of underground mine atmospheres and the drainage of underground mine workings. Lecture and recitation, five hours. **Prereq: Min. E. 126.**

130 MINE ADMINISTRATION. (3) I Spokes
The engineering aspects of mine administration and management, and practice in the fundamentals of mine plant design. Lecture and recitation, two hours; lab, three hours. **Prereq: Min. E. 126.**

131 MINE SURVEYING. (1) S Staff
Given at summer surveying camp at Camp Robinson, Noble, Breathitt County, Kentucky. Field practice in mine surveying and mapping. **Concurrent: CE 15 and 16b.**

132 MINE RESCUE TRAINING AND FIRST AID. (0)
Required of mining engineers. Fundamental principles of mine rescue training and first aid. Given on University campus by Kentucky Department of Mines and Minerals, U.S. Bureau of Mines or both in collaboration. **Prereq: Junior or Senior classification.**

175a, b SEMINAR. (1 ea.) I, II Spokes
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. **Prereq: Six semesters 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 bachelors degree in Mining Engineering or its equivalent.

203 MINE ORGANIZATION. (3) I, II Spokes
Detailed study of the structure and function of a mining enterprise both the financial and the engineering standpoints. Lecture and recitation, three hours.

206 EXPLOSIVE ENGINEERING. (2) I, II Spokes
The principles involved in the use of explosives in large scale mining and quarrying practice. Lecture and recitation, two hours.

207 ADVANCED PROSPECTING. (2) I, II Spokes
Study of the principles involved in the geophysical investigation of the minerals of the earth's crust. Lecture and recitation, two hours.

208 COAL DUST INVESTIGATION. (4) I, II Spokes
Research in the design and utilization of a laboratory scale gallery for the investigation of the explosive qualities of native bituminous coals. Laboratory, twelve hours.

209 ADVANCED MINE ENGINEERING. (7) I, II Spokes
Procedure and methods of collecting and recording data for the systematic development and exploitation of a mining property. Lecture and recitation, three hours; drawing and mapping, eight hours.

220a-f SPECIAL PROBLEMS IN MINING ENGINEERING. (3 ea.) I, II Spokes
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. Lab, six hours.

221a-d SEMINAR. (1 ea.) Spokes
Review of current literature in the field of Mining Engineering and presentation of papers on departmental research. Required of all graduate students. Two hours.

COLLEGE OF LAW

Elvis J. Stahr, Jr., Willburt D. Ham, Alfred B. McEwen, W. L. Matthews, Jr., Roy Moreland, Frank Murray, Paul Oberst, Dorothy Salmon, and Frederick W. Whiteside, Jr.

(All courses are lecture and recitation unless otherwise noted.)

First Year Subjects

ORIENTATION FOR LAW STUDY. (No credit) I, II — Staff
Lectures by faculty on various basic topics. Required of all new students.

101a, b CONTRACTS I-II. (3 ea.) I, II — Murray
Anderson's Cases.
Formation of contracts, offer, acceptance, consideration. Statute of Frauds, parties affected by contracts, contracts for benefit of third persons, assignments, joint and several contracts, performance, of contracts, express and implied conditions, impossibility of performance, and illegal contracts.

102a, bTORTS I-II. (3 ea.) I, II — McEwen and Oberst
Thurston and Seavey's Cases.
Intentional torts and defenses, negligence, causation, duties of occupants of land and manufacturers and vendors of chattels, contributory negligence, strict liability, deceit, defamation, malicious prosecution, interference with advantageous relations.

103 PROPERTY I AND II. (4) I — Matthews
Casner and Leach's Cases.
Basic course in property: possession, gifts, bona fide purchasers of personalty, the Statute of Uses, easements, and rights incident to ownership.

105 AGENCY. (2) I — Ham and Stahr
Mechem's Cases. (3d ed.)
Nature of relation, appointment, liabilities of principal for agent's torts, contracts, crimes, liabilities of agents, parties to writing, undisclosed principal doctrines, delegation of agency, termination, and ratification.

106a, b PLEADING I-II. (2 ea.) I, II — McEwen
Keigwin's Cases on Common Law Pleading. (2nd ed.)
Clark's Cases on Code Pleading.
Pleading I: Common law forms, theory of the case, composition of pleadings, demurrer, aider, duplicity, traverses, pleas, motions.
Pleading II: Code pleading. Claims, answers, objection and correction of pleadings, parties and joinders of actions.

107a CRIMINAL LAW. (2) 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. (2) II — Moreland and Stahr
Keedy's Cases on Administration of Criminal Law.
Arrest, preliminary examination, bail, methods of prosecution, the grand jury, indictment and information, arraignment and pleas, nolle prosequi and motions to quash, trial and verdict, motions after trial.

144 LEGAL BIBLIOGRAPHY. (1) I, II — Salmon
Putnam's How to Find the Law (4th ed.)
Practical problems in the use of statutes, reports, digests, encyclopedias, annotated cases, citation books, periodicals, reference tables, indices, and textbooks.

148 DOMESTIC RELATIONS. (2) II — Whiteside and Stahr
Madden and Compton's Cases.
Contracts to marry; and incidents of the marriage status; requitites, annulment, divorce and separation; parent and child; infants and incompetent persons.

Second Year Subjects

120 TRIAL PROCEDURE. (4) II — Stahr

Venue, service of summons, provisional remedies, discovery and pretrial practice, summary judgment, trials, verdict, judgment and appeals, including final judgment rule, and appeal practice; **res judicata**; correction of judgments; extraordinary remedies.

121a, b EQUITY I-II. (3 ea.) I, II — Moreland

Chafee and Simpson's Cases. (2nd ed.)
Basis of equity jurisdiction, specific performance of contracts, reformation, reexecution, recission and cancellation, injunctions in relation to torts, bills of peace, quia timet, interpleaders, and position of equity in the legal system.

122 PROPERTY III. (3) I — Murray and Matthews

Martin's Cases.
Titles and conveyancing. Adverse possession; prescription; accretion dedication; mode of conveyance at common law, under Statute of Uses, and modern statutes; execution of easements by implication; estates; convenants for title; estoppel by deed, and priorities.

123 NEGOTIABLE INSTRUMENTS. (3) II — Ham

Britton's Cases on Bills and Notes. (3d ed.)
A general study of the law of bills and notes following the Uniform Negotiable Instruments Law, including: operative facts of negotiability: transfer; holders in due course; defenses; the liability of primary and secondary parties.

124 EVIDENCE. (4) I — McEwen

Tracy's Cases.
Rules of admissibility, real circumstantial testimonial and documentary evidence, witnesses, hearsay rule and its exceptions, procedure of admissibility, law and fact, judge and jury, burden of proof and presumptions, judicial notice, and parol evidence rule.

145 INSURANCE. (2) II — Ham and Whiteside

Goble's Cases on Insurance.
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.

161a, b CONSTITUTIONAL LAW I-II. (2 ea.) I, II — Oberst

Dowling's Cases. (4th ed.)
Judicial review, relationships in the federal system, powers of Congress, powers of the President, powers of the state. Due process, procedural and substantive; obligation of contracts, equal protection, civil rights, privileges and immunities.

163 WILLS AND THE ADMINISTRATION OF ESTATES. (2) II — Whiteside

Mechem and Atkinson's Cases. (3d ed.)
Descent and distribution, the making and revocation of wills, probate and administration.

Third Year Subjects

125 PRACTICE COURT. (1) I — Matthews and McEwen

Busch's Law and Tactics in Jury Trials (students' ed.)
This course, conducted mainly under the Kentucky code (but treated to give a fair understanding of like work in other states) is designed to fit students for actual court practice following training in substantive law.

153 TAXATION. (3) I — Whiteside

Griswold's Cases.
Federal income tax. Nature of income, deductions, capital gains and losses, corporate distributions. Federal estate and gift taxes.

160a, b PRIVATE CORPORATIONS I-II. (4) I — Ham

Stevens and Larson's Cases.
Characteristic features of a corporation, formation, powers and liabilities, rights of stockholders, powers and duties of directors, promoters, contracts and responsibilities, dividends, legislative control under modern corporation acts.

162 PROPERTY IV (Future Interests). (3) II — Matthews

Simes' Cases.
Types of future interests; construction problems; limitations to classes, rule against perpetuities, illegal restraints and conditions.

164 CONFLICT OF LAWS. (3) II — Moreland and McEwen

Cheatham, Dowling, and Goodrich's Cases.
Nature of the subject, penal laws, procedure, judgments, domicile, capacity,

form, particular subjects, litigation, family law, inheritance, foreign administrator.

165 TRUSTS. (4) I Matthews
Scott's Cases (3d ed.)
Uses and Statute of Uses; trusts creation; elements; transfer of beneficiary's interest; administration, termination, and modification; charitable trusts; resulting and constructive trusts; powers.

166 SALES. (3) II Murray
Woodward's Cases (3d ed.)
Time of transfer of title, future goods, fungible goods, credit transactions, cash sales, conditional sales, documents of title, bulk sales, fraud and estoppel, warranties, remedies of seller, remedies of buyer, Statute of Frauds.

Elective Subjects Open to Second and Third Year Students

141 PARTNERSHIP. (2) II Ham
Gilmore's Cases. (3d ed.)
Distinction between partnership and other forms of business association, partnership by contract and estoppel, nature and character of partnership, characteristics of partnership property, powers of partners, termination of partnership.

142 WORKMEN'S COMPENSATION. (2) II Moreland and Stahr
Selected materials, including Kentucky Workmen's Compensation Decisions and the Kentucky Workmen's Compensation Act.
Common law background, employers' liability acts, safety regulations, workmen's compensation acts generally, the Kentucky act, coverage and procedure.

147 RESTITUTION. (2) S Murray
Woodruff's Cases.
Restitution at law for mistake, duress and undue influence, illegality, impossibility, benefits received without contracts.

149 MUNICIPAL CORPORATIONS. (2) Stahr
Fordham's Local Government Law.
Legislative control over municipal corporations; municipal powers—in general; licenses and franchises; appropriation of municipal funds; municipal contracts; indebtedness; torts; property; special assessments.

150 PUBLIC UTILITIES. (3) S Moreland
Robinson's Cases (2d ed.)
Nature and scope of public utility concept—historical and modern; methods of determining rate base; reasonable rates; duty to serve—extent.

152 OIL AND GAS. (2) S Moreland
Kulp's Cases (2d ed.)
Oil and gas leases—infants, married women, life tenants, and others as parties; the granting clause—lessee's interest, lessee's right to ejectment; the habendum clause—duration of lease; etc.

154 DAMAGES. (2) S Oberst
McCormick's Cases.
Nature of damages, avoidable consequences, counsel fees, certainty, compensation, damage for non-pecuniary injuries, interest damages for death, and eminent domain.

167 ADMINISTRATIVE LAW. (3) II Oberst
Establishment of administrative tribunals, limits on discretion. Notice and hearing, orders, methods of judicial relief, scope of judicial review.

170 THE LEGAL PROFESSION. (2) II Matthews and Murray
Cheatham on the Legal Profession.
A study of professional problems including: ethics, discipline, unauthorized practice, duty to court and client, bar admission and organization.

173 FEDERAL JURISDICTION AND PROCEDURE. (2) S McEwen
Dobie and Ladd's Cases.
Jurisdiction of and procedure in federal courts, diversity of citizenship, jurisdictional amount, venue, concurrent jurisdiction, original and appellate jurisdiction, procedure in federal courts.

174 CREDIT TRANSACTIONS. (3) II Matthews and Oberst
Durfee's Cases on Security.
Mortgages; creation, assignment, priority, foreclosure, redemption, pledges, suretyship rights, suretyship defenses, Statute of Frauds.

176 TRADE REGULATION. (3) II Oberst
Oppenheim's Cases.
Unfair competition in promoting sales, obstruction of access to markets, price practices and price policies, combination and monopoly, anti-trust laws.

177 STATUTORY INTERPRETATION. (2) S Murray
de Sloovere's Cases.
The process of interpretation, subject matter and purpose of the statute, content, associate words, extrinsic aids, relation to other statutes and to the common law.

178 CREDITOR'S RIGHTS. (3) II Whiteside and Ham
Hanna and McLachlan's Cases (4th ed.)
Enforcement of judgments; fradulent conveyances; general assignments; creditor's agreements; receiverships; bankruptcy, assets, and distribution.

179 LEGISLATION. (3) II Ham and Matthews
Read and Macdonald's Cases.
The history of legislation, legislative organization and procedure, legislative drafting, means of making laws effective, types of statutes, parts of a statute, methods of interpretation, and relation of traditional law to legislation.

180 LABOR LAW. (3) I Stahr
Smith's Cases and Materials
History, organization and structure of American labor unions; obligations of employers; questions of representation; privileges and obligations of unions; collective bargaining and dispute settlement.

181a, b LAW JOURNAL NOTE EDITING. (2) I, II Staff
This course, required of all senior members of the Law Journal staff, consists of study and criticism of the notes and comments prepared for publication by the student editors of the Law Journal.

183 LANDLORD AND TENANT. (2) II Murray
Walsh and Niles' Cases.
Characteristics of leases; creation of relationship of landlord and tenant; covenants implied in lease; restrictions on lessee's use of property; transfers by lessor and lessee; rent; taxes; repairs; and termination of relationship.

184 KENTUCKY PRACTICE. (No credit) I, II Staff and Guest Lecturers
Open only to seniors in their final semester.
A brief orientation for the practice of law, with emphasis on practice in Kentucky. Lectures, court visitation, and special problems. One hour per week for minimum of eight weeks.

COLLEGE OF EDUCATION

Division of Administration

Robert L. Hopper, Leo M. Chamberlain, Frank G. Dickey, May K. Duncan, Fred E. Harris, L. E. Meece, and Lee Sprowles.

101 SCHOOL ORGANIZATION. (3) I, II, S Meece and Hopper
Scope and general character of the American public school system and organizational and administrative problems as they relate to the work of the classroom teacher.

198 THE ADMINISTRATION OF PUPIL PERSONNEL. (3) S Hopper
Administrative problems relating to child accounting, including school census, attendance records and reports, social and economic factors affecting school attendance, and duties and responsibilities of school and non-school personnel and agencies.

202 LOCAL SCHOOL ADMINISTRATION. (3) I, II, S Meece
The organization, management, and control of a local school system, including such problems as federal, state, and local relationships, board of education, pupil personnel, employed personnel, public relations, finance and business management, and school services.

203 CONSTITUTIONAL AND LEGAL BASIS OF PUBLIC SCHOOL ADMINISTRATION. (3) II, S Meece
A study of court decisions to discover the legal principles involved in practical problems of school administration. **Prereq: Education 202, 213, or 232.**

207 SCHOOL BUILDINGS AND EQUIPMENT. (3) Hopper
Measurement and evaluation of existing school building facilities, planning new buildings, determining suitable equipment, and financing the building program. **Prereq: Education 202 or its equivalent.**

210a, b INDEPENDENT WORK IN SCHOOL ADMINISTRATION. (3, 3) I, II, S Staff
Includes research on a practical problem in school administration. Open only to students with at least one semester of graduate work in education. Approval of instructor necessary before registration.

213 STATE SCHOOL ADMINISTRATION. (3) S Meece
Organization, administration, and control of education at the state level, including state-federal and state-local school relationships, state support, control of the material environment, training and certification of teachers, teachers' contracts, tenure, retirement.

221a, b SEMINAR IN ADMINISTRATION. (3, 3) II, S Meece and Hopper
A critical study of selected problems in school administration. The course is designed primarily for students who have had some administrative experience. **Prereq: Education 202 and 225.**

229 THE ELEMENTARY PRINCIPAL. (3) I, S Duncan and Harris
Problems involved in the organization and administration of a modern elementary school.

231 BUSINESS ADMINISTRATION AND FINANCE OF PUBLIC EDUCATION. (3) II, S Meece
A course for prospective superintendents. Emphasizes school support, including state, local, and federal revenues; budgetary policy; procedures for purchasing, accounting, and reporting costs; management of funds, property, equipment, and supplies; payroll procedures, records and reports.

232 HIGH SCHOOL ADMINISTRATION. (3) I, II, S Hopper
This course deals with organization, administration, and problems of the modern secondary schools, including such specific problems as school staff, program of studies, records and reports, school-community relationships, school plant, finance, and scheduling.

233 THE ADMINISTRATION OF THE TEACHING PERSONNEL. (3) Hopper
The course emphasizes principles and practices in teacher preparation, selection, and placement. Includes a study of salaries, tenure, retirement, teaching loads, sick leave, personnel records, and teacher participation in school administration problems.

238 TRENDS IN HIGHER EDUCATION. (3) Dickey and Chamberlain
A survey of modern tendencies in higher education: scope and development, objectives, organization, administration, curricula, finance, faculty and student personnel. Designed primarily for prospective college administrators, teachers, and registrars.

276 ADMINISTRATIVE PROBLEMS IN TODAY'S EDUCATION. (3) Meece
A study of present-day administrative problems. The course is designed to be of assistance particularly to superintendents.

290a, b TECHNIQUE AND PROFESSIONAL WORK OF THE REGISTRAR.
(3, 3) I, II, S Sprowles
A comprehensive study of the work of the registrar in institutions of higher education, including the history, literature, and present-day tendencies; rules of the University; recommendations of the American Association of Collegiate Registrars.

301a, b RESEARCH PROBLEMS IN EDUCATIONAL ADMINISTRATION.
(3, 3) I, II, S Meece and Hopper
An independent research course for the study of special problems in educational administration. **Prereq: One year of graduate work.**

321a, b RESEARCH PROBLEMS IN HIGHER EDUCATION.
(3, 3) I, II, S Dickey, Chamberlain, and Sprowles
An independent research course for the study of special problems in higher education. **Prereq: One year of graduate work.**

Division of Foundations of Education

Ellis F. Hartford, Barry T. Jensen, Lawrence Nath, Helen Reed, and Herbert Sorenson.

35 INTRODUCTION TO EDUCATION. (2) I, II Nath
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.

119 THE ELEMENTARY SCHOOL PUPIL. (2) I, S Sorenson
The psychology of the child in the primary and intermediate grades. **Prereq: One course in Psychology.**

122 EDUCATIONAL TESTS AND MEASUREMENTS. (3) I, S Sorenson
The problems of measurement in the school program, 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 THE SECONDARY SCHOOL PUPIL. (2) II, S Sorenson and Reed
The psychology of the pupil in junior and senior high school. **Prereq: One course in Psychology.**

148 EDUCATIONAL PSYCHOLOGY. (3) I, II, S Jensen
Application of psychology to the problems of learning and teaching.

151 THE TEACHING OF HIGHER LEVEL STUDY SKILLS. (3) I, S Jensen
A course designed to demonstrate the teaching of study skills (including remedial work) in secondary schools. One approach to teaching these skills will include the study problems of college students.

200a, b PHILOSOPHY OF EDUCATION. (3, 3) I, II Hartford
An advanced course dealing with the philosophy of democratic education and applications to some of the larger educational problems of today. **Prereq: twelve semester hours in education.**

201 FOUNDATIONS IN EDUCATION. (5) I, S Hartford and Jensen
An intensive study in various fields which contribute to the development of educational theory and practice.

205 REVIEW OF CURRENT EDUCATIONAL LITERATURE. (3) II, S Hartford
An extensive study of current educational literature as found in educational periodicals. **Prereq: twelve semester hours in Education.**

217 GENERAL HISTORY OF EDUCATION. (3) Hartford
A survey of the history of education from the Greek period to the present.

218 HISTORY OF EDUCATION IN THE UNITED STATES. (3) Hartford
A history of the growth and development of education in the United States from earliest Colonial times to the present, including recent movements and trends.

219 HISTORY OF EDUCATIONAL THOUGHT. (3) I, S Hartford
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. (3) II Hartford
Comparisons of modern national systems of education.

222 METHODOLOGY OF EDUCATIONAL RESEARCH. (3) II Sorenson
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. **Prereq: twelve semester hours in Education.**

223 EDUCATIONAL STATISTICS. (3) I Sorenson
A non-mathematical study of the applications of statistical and graphical methods to educational data.

228a, b SEMINAR IN EDUCATION. (1, 1) I, II Hartford
A course planned for graduate students majoring in education, given under the direction of the faculty of the College of Education.

230 EDUCATIONAL SOCIOLOGY. (3) II, S Hartford
A course in sociological foundations of education.

237a, b INDEPENDENT WORK IN HISTORY OF EDUCATION.
(3, 3) I, II, S Hartford
Independent work problems and topics for advanced students in history of education.

241a, b SEMINAR IN FOUNDATIONS OF EDUCATION. (3, 3) S Hartford
A critical study of selected problems in the foundations of education areas.

247a, b INDEPENDENT WORK IN PHILOSOPHY OF EDUCATION.
(3, 3) I, II, S Hartford
An independent work course for students who have done a minimum of twelve semester hours of graduate work, including Education 200a, b, 219, and 230.

254 PROBLEMS IN EDUCATIONAL PSYCHOLOGY. (3) II, S Jensen
A critical survey of the psychological theories and research applicable to educational practices. **Prereq: One year of Psychology.**

255a, b GUIDANCE AND COUNSELING IN TODAY'S SCHOOLS. (3, 3) S
A course for those concerned with an effective program of guidance; deals with principles and techniques for the formulation and evaluation of a complete guidance program including inventories, counseling, placement, and follow-up.

258a, b INDEPENDENT WORK IN EDUCATIONAL PSYCHOLOGY. (3, 3) I, II, S
An independent work course for students who have done a minimum of twelve semester hours of graduate work including Education 122, 147, or 254.

260 PROBLEMS IN EDUCATIONAL SOCIOLOGY. (3) S Hartford
An advanced course in the application of sociological findings to education including consideration of Southern regional problems and potentialities. **Prereq: twelve semester hours of graduate work including Education 230 or equivalent.**

275 ADVANCED PROBLEMS IN PHILOSOPHY OF EDUCATION. (3) Hartford
A critical study of philosophical problems which relate to present day education. **Prereq: Teaching experience and six semester hours in philosophy of education.**

Division of Instruction and Placement

Lyman V. Ginger, Estelle Adams, Harold Adams, Grace Anderson, Olive Barrett, Betty Beaty, Anna Bruce Boone, Vivian Burke, Alma Carl, Louis Clifton, Frank G. Dickey, May K. Duncan, Stella Gilb, Gordon Godbey, Lola S. Hagan, Ruth Haines, Annelle Kelley, D. C. Kemper, Mildred Lewis, Opal Lee, Evelyn McElroy, David McMurtry, Vernon Musselman, Robert Myers, Ridgely Park, Anna B. Peck, Leon Porter, Helen Reed, King Richeson, Margaret Roser, Martha Shipman, Ruth Stallings, Elizabeth Taylor, Mary West, and Louise Worthington.

Business Education

104 **FOUNDATIONS OF BUSINESS EDUCATION IN THE HIGH SCHOOL.** (3) I, II, S Musselman
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, S Musselman
Special techniques and devices for teaching shorthand, typewriting, and secretarial office practice. Required of business education majors.

158b **TEACHING BOOKKEEPING AND ACCOUNTING.** (3) I, S Musselman
Methods, materials, and techniques used in the teaching of bookkeeping and accounting. Required of business education majors.

184 **TEACHING OFFICE APPLIANCES.** (2) II, S Musselman
Methods and materials used in teaching the various office appliances. Dictating machines, mimeographs, mimeoscopes, addressing machines, filing devices, calculating machines, and other office appliances are used.

192 **TEACHING GENERAL BUSINESS SUBJECTS IN THE SECONDARY SCHOOLS.** (2) S Musselman
The aims and purposes of the general business course are studied. Analysis is made of the objectives of the general business subjects, and methods and materials used in teaching them are emphasized.

194 **TEACHING CONSUMER COURSES IN THE HIGH SCHOOL.** (3) I, S Musselman
Methods, materials, and techniques of teaching high school pupils the various aspects of consumer education. Emphasis is placed on procedures and the student should have a background of training in economics before taking the course.

208a-d **PROBLEMS IN BUSINESS EDUCATION.** (3 ea.) I, II, S Musselman
A study of advanced problems of interest to business teachers such as testing in business subjects, guidance, job studies, placement and follow-up, equipment, and supervision.

256 **THE SOCIAL BUSINESS SUBJECTS IN HIGH SCHOOL.** (3) I Musselman
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) I, II, S Musselman
A study of current literature in business education with special reference to trends in this field.

259 **THE COMMERCE CURRICULUM.** (3) II, S Musselman
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.

270 **BUSINESS EDUCATION IN COLLEGES AND UNIVERSITIES.** (3) S Musselman
Consideration of the problems pertaining to the teaching of business subjects at the college level. Consideration is also given to the development of curricula to meet teacher certification requirements in various states.

271 **ADMINISTRATION AND SUPERVISION OF BUSINESS EDUCATION.** (3) II, S Musselman
Duties and responsibilities of city and state supervisors, department heads, and others engaged in directing business education.

272a, b INDEPENDENT WORK IN BUSINESS EDUCATION. (3, 3) I, II, S Musselman
An independent work course for students who have done a minimum of 12 semester hours of graduate work, one-half of which must have been in business education.

273 CLASSIFICATION AND POSSIBLE USE OF COMMUNITY RESOURCES IN BUSINESS EDUCATION. (3) I, S Musselman
Course provides for community analysis, and the development of possible ways and means to supplement the business education course in the secondary school with a study of vital community resources.

Curriculum and Instruction

107 SAFETY EDUCATION. (3) S Ginger and Myers
A course designed to aid in developing skills and techniques essential to improving automotive and pedestrian safety. Psycho-physical tests, classroom work, behind-the-wheel driving, and other basic safety education are presented.

127 THE ELEMENTARY CURRICULUM. (3)
The philosophy and techniques of curriculum construction and some practical work in construction.

175a-f MODERN EDUCATIONAL PROBLEMS. (3 ea.)
A brief survey of some of the problems in modern education.

175g MODERN EDUCATIONAL PROBLEMS: EDUCATION OF HANDICAPPED CHILDREN. (3)
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. (3)
Problems of community organizations as they affect the adult life of citizens of the community served.

175j MODERN EDUCATIONAL PROBLEMS. (3)
A brief survey of some of the problems in modern education.

186 VISUAL TEACHING. (3) I, II, S Myers and Godbey
A course in methods and techniques of visual instruction. Emphasis is on the effective use of films, film strips, pictures, maps, graphs, slides, field trips, by means of lesson plans. Surveys are made of visual materials.

206 PROBLEMS OF COLLEGE TEACHING. (3)
Methods commonly used in college teaching, bases for measuring instruction, marking systems, qualifications for college teaching, and efforts being made to improve college instruction.

224 ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. (3) S Ginger
A course designed for teachers preparing to become supervising teachers. The basic principles apply to both elementary and secondary education. Includes a presentation of the experiences deemed important in developing students into effective teachers.

225 SUPERVISION OF INSTRUCTION. (3) II, S Adams
Development, purposes, and organization of supervisory programs. Special emphasis on the nature of educational leadership. Consideration of various approaches to supervision with special attention to current in-service education programs.

226a-f PROBLEMS OF THE SCHOOL CURRICULUM. (3 ea.)
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.

227 PRINCIPLES OF CURRICULUM CONSTRUCTION. (3) I Musselman
Study of basic principles of curriculum development. Relationship of social and psychological factors to curriculum change. Survey of current approaches to curriculum organization. Consideration of means of curriculum development in school systems.

234 PROBLEMS OF CURRICULUM MAKING. (3) I Musselman
The selection of materials in the elementary and secondary fields, types of units used in modern instruction, and the various educational agencies that may be used to make the school a real community center.

245 **ORGANIZATION OF AUDIO-VISUAL AIDS.** (3) II Myers
Operation of an audio-visual program considering budgeting, training of personnel, duties of staff, sources of materials, and use of equipment. Previews are made of many audio-visual materials.

246 **MOTION PICTURES IN EDUCATION.** (3)
The history of the educational motion picture, technique in the use of films, educational scenario writing, grading and scoring films, and motion picture appreciation.

249 **EXTRACURRICULAR ACTIVITIES.** (3) S Ginger
The underlying principles and common practices of the co-curricular activities programs as developed in public schools. Home room activities, assembly programs, and clubs are the three major sections of the course; other activities included when necessary.

292a, b **FIELD PROBLEMS IN CURRICULUM AND SUPERVISION.** (3, 3) I, II Dickey
A course designed to provide direct experience in dealing with educational problems in field situations. Observations, readings, and research also required. Registration only with consent of instructor.

305a, b **RESEARCH PROBLEMS IN CURRICULUM AND SUPERVISION.** (3, 3) I, II, S Dickey
An independent research course. Students confer individually with the instructor. **Prereq: One year of graduate work.**

Elementary Education

20 **ARTS AND CRAFTS IN THE ELEMENTARY SCHOOL.** (2) I Haines
Designed to give experiences with materials for arts and crafts related to classroom activities such as the playhouse, panoramas, dioramas, puppet shows, friezes, mural painting, map making, booklets, and colonial crafts.

42 **TEACHING ARITHMETIC IN THE ELEMENTARY SCHOOL.** (3) II Duncan and Harris
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 **CHILD DEVELOPMENT AND THE CURRICULUM.** (6) I Duncan and Harris
Objectives and point of view in elementary education developed by reading and observing children in modern school. Major emphasis on social studies units and communication skills. Role of the teacher and organization of modern classroom.

110 **ADVANCED ARTS AND CRAFTS IN THE ELEMENTARY SCHOOL.** (2) II Haines
Planned to give the elementary teacher an understanding of teaching methods involved in, and construction of, art activities which would enrich the classroom program.

133 **STUDENT TEACHING IN THE ELEMENTARY SCHOOL.** (12) I, II, S Ginger and Supervising Teachers
A course designed to give the student experience with and practice in the program of an elementary school. Actual work with children in all learning situations is the basic part of the course.

141 **PROBLEMS IN DIAGNOSTIC AND REMEDIAL READING.** (3) Duncan
Prevention, diagnosis, and corrective measures for reading difficulties. Study of investigations and literature in this field.

172 **THE TEACHING OF READING.** (3) II Duncan
A study of major factors in learning to read. Objectives, readiness, abilities needed for silent and oral reading. Methods of word attack, diagnostic and corrective techniques. Testing and materials for each level.

173 **CHILDREN'S LITERATURE.** (3) II Duncan
Planned to acquaint students with literature for children, kindergarten through grade 8. Review of interests at different ages. Discussion of types of literature — folklore, modern fairy tales, myths and legends, realistic stories, biography and poetry.

174 **TEACHING IN THE KINDERGARTEN.** (3) I Burke
The nature, development, and education of the child of kindergarten age. Organization, equipment, curriculum, and procedures used with children of

this age. Regular periods are scheduled for observing and participating in the kindergarten.

196 SCIENCE IN THE ELEMENTARY SCHOOL. (3) I Harris
A background of elementary science usable with children in the first six grades. Includes planning units of work, organizing and using materials and references, making bibliographies for teachers and children, use of illustrative materials, and excursions.

212 THE ELEMENTARY SCHOOL. (3) II Duncan and Harris
Recent research and modern trends in teaching the skills and content subjects in the elementary school. Planned for supervisors, superintendents, principals, and teachers for better understanding of a modern elementary school.

215a, b INDEPENDENT WORK IN ELEMENTARY EDUCATION. (2, 2) I, II Duncan and Harris
An independent work course for students who have done a minimum of twelve semester hours of graduate work including Education 212 or 229.

308a, b RESEARCH IN ELEMENTARY EDUCATION. (3, 3) I, II Duncan and Harris
An independent research course. Students confer individually with the instructor. **Prereq: One year of graduate work.**

Music Education

251 PROBLEMS IN PUBLIC SCHOOL AND COMMUNITY MUSIC. (2) Lewis
Problems in teaching, supervising, organizing, and leading public school and community music activities. Students in service have an opportunity to bring problems from their schools or community situations and, when possible, the instructor visits them in the field.

252 FIELD PROBLEMS IN MUSIC. (2) Lewis
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. (2)
A course designed for graduate students who undertake research problems in music education, conducted in regular consultation with the instructor.

Secondary Education

105 FUNDAMENTALS OF SECONDARY EDUCATION. (3) I, II, S Myers and Reed
A consideration of problems which develop in connection with student teaching at the secondary level. This course is to be taken during the same semester in which the student is engaged in student teaching.

111 REMEDIAL READING IN THE SECONDARY SCHOOL. (2) Duncan
Diagnosis and corrective measures for junior and senior high schools. Study of plans of organizing a corrective program and suitable materials.

142 STUDENT TEACHING IN ART. (8) I, II Haines
Designed to give the student practical experience through observation, planning, teaching and evaluating procedures. The student works with children on all grade levels under the guidance of the supervising teacher.

153 STUDENT TEACHING IN ENGLISH. (9) I, II, S Anderson, Carl, and Shipman
Observation and practice in teaching high school English. Included are objectives and content of English courses in high school, planning and methods of teaching, testing, textbook analysis, audio-visual material and equipment, and safety education.

154 STUDENT TEACHING IN LANGUAGES. (9) I, II, S West
Aims and objectives, courses of study, materials, methods, and testing in French, Spanish, and Latin. Includes observation and practice in the content field, safety education, audio-visual aids, and planning conferences with the supervising teacher.

155 STUDENT TEACHING IN THE SCIENCES. (9) I, II, S Kemper
Aims and objectives, courses of study, methods, tests, equipment, general science, biology, physics, and chemistry. The course includes observation and practice, safety education, audio-visual aids, and planning conferences with the supervising teacher.

156 STUDENT TEACHING IN MATHEMATICS. (9) I, II, S — Porter
Aims and objectives, courses of study, materials, methods, and testing in algebra, geometry, and trigonometry. Includes observation and practice in the content field, safety education, audio-visual aids, and planning conferences with the supervising teacher.

157 STUDENT TEACHING IN THE SOCIAL STUDIES.
(9) I, II, S — Peck, Shipman, and Carl
Includes a study of the development and present status of social studies programs, classroom methods and activities, teaching materials, testing and evaluation, professional aids to teachers, safety education, and observation and participation in actual classroom experiences.

169a, b STUDENT TEACHING IN PHYSICAL EDUCATION.
(4, 4) I, II — Richeson and Gilb
For students who expect to teach and who meet the requirements for a major in physical education. Experience in working with children in physical education activities comprises basic part of course. Safety education also included.

177a, b STUDENT TEACHING IN MUSIC. (4, 4) I, II — Stallings and Adams
A course planned for teachers who expect to become either instructors or supervisors of music in the public schools. Observation, teaching, work on research problems, and conferences with the supervising teacher included.

193 STUDENT TEACHING IN BUSINESS EDUCATION. (9) I, II, S — McMurtry
Student teaching in business subjects such as general business, shorthand, typewriting, and bookkeeping. Observation and practice in the content field. Safety education, audio-visual aids, and planning conferences with the supervising teacher.

214 THE SECONDARY SCHOOL. (3) I, II, S — Adams
A course designed to acquaint the secondary teacher and the administrator with the nature and function of the secondary school.

248a, b INDEPENDENT WORK IN SECONDARY EDUCATION.
(3, 3) I, II, S — Dickey, Ginger, and Adams
An independent work course for students who have done a minimum of twelve semester hours of graduate work including Education 214 or 232.

307a, b RESEARCH PROBLEMS IN SECONDARY EDUCATION.
(3, 3) I, II, S — Ginger and Dickey
An independent research course. Students confer individually with the instructor. **Prereq: One year of graduate work.**

Division of Vocational Education

Carsie Hammonds, Watson Armstrong, Ruth Averitt, W. Maurice Baker, Harold Binkley, Charles R. Crumpton, William Judge, Thelma Monical, Charles O. Neel, Ethel L. Parker, Evangeline Smith, Ruth Sneed, William Roy Tabb, J. P. Truitt, Harlan Veal, Maurice Stanley Wall, and Charles V. Youmans.

Agricultural Education

179 DETERMINING CONTENT IN VOCATIONAL AGRICULTURE. (3) S — Hammonds and Wall
Interpretation of local 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.
(15) I, II — Hammonds, Binkley, Neel, Tabb, Truitt, and Veal
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 — Hammonds
A general introduction to adult-farmer schools and young-farmer courses with some observation of work in both of these fields.

185a-d PROBLEMS IN AGRICULTURAL EDUCATION.
(3 ea.) I, II, S — Hammonds, Wall, and Tabb
Class work on current problems in agricultural education common to special groups of students (not individual-problem work).

188 FARM PRACTICE SUPERVISION. (1) **I, II, S** Hammonds and Tabb
Practice and directed study in supervising farming programs in vocational agriculture.

280 METHOD IN TEACHING VOCATIONAL AGRICULTURE. (3) S Hammonds
The principles of method applied to the teaching of agriculture. **Prereq: Experience in teaching vocational agriculture.**

281 TEACHING PREVOCATIONAL AGRICULTURE. (3) Hammonds
Aims, purposes, and methods of teaching prevocational agriculture. Each student works out the content of a course, including selecting the teaching materials.

285a-d MODERN PROBLEMS IN AGRICULTURAL EDUCATION. (3 ea.) **I, II, S** Hammonds and Tabb
Class work (not individual-problem work) on modern problems in agricultural education.

287a ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION. (3) **I, II, S** Hammonds, Armstrong, and Tabb
Specific problems selected according to the needs of the individuals.

287b SELECTING TEACHING MATERIALS. (3) S Wall
Selection of specific references and other teaching materials to be used in the teaching of vocational agriculture.

287c ADULT-FARMER SCHOOLS. (3) S Tabb
Preparation for teaching adult farmers; organization of adult-farmer schools, curriculum content, method of teaching, and follow-up work.

287d DIRECTING FARM PRACTICE. (3) S Hammonds
Supervised farming as a method of teaching; standards, planning, supervision, and records.

287e TEACHING FARM SHOP. (3) S Tabb
A study of necessary content for shop, plans for securing and equipping the shop, and methods of teaching farm shop.

287f YOUNG-FARMER SCHOOLS. (3) S Hammonds and Armstrong
Content and method of teaching young-farmer courses in vocational agriculture.

289a, b RESEARCH IN AGRICULTURAL EDUCATION. (3, 3) **I, II, S** Hammonds, Armstrong, and Tabb
Individual problems of importance to agricultural education.

Distributive Education

112 DETERMINING TEACHING CONTENT IN DISTRIBUTIVE EDUCATION. (3) **I, II, S** Baker
Course construction in the field of distributive education. This course is planned to meet the needs of persons engaged as instructors in the field of distributive education.

115a, b PROBLEMS IN DISTRIBUTIVE EDUCATION. (3, 3) **I, II, S** Baker
Problems 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. **Prereq: Education 112 and 128.**

116 PROBLEMS OF THE COORDINATOR IN DISTRIBUTIVE EDUCATION. (3) **I, II, S** Baker
Class work on problems of the coordinator of a high-school program in distributive education, including selecting students for the program, placing students in stores, rating students, use of advisory committee, and over-all planning.

128 TECHNIQUE OF TEACHING DISTRIBUTIVE EDUCATION. (3) **I, II, S** Baker
A study of the methods of teaching as applied to distributive education. The purpose of the course is to train prospective teachers to teach in the field of distributive education.

Home Economics Education

160 TECHNIQUE OF TEACHING HOME ECONOMICS. (3) **I, II** Parker
A study of methods of teaching as applied to home economics. **Prereq: Home Economics 26, 27, and 61; Education 147.**

162 STUDENT TEACHING IN HOME ECONOMICS. (6) I, II Parker, Averitt, and Smith
Practical application of methods in teaching various phases of home economics. **Prereq: Education 160.**

165 ADULT EDUCATION IN HOME ECONOMICS. (3) I, II, S Parker, Averitt, and Smith
Problems in teaching vocational homemaking in day, part-time, and evening schools. **Prereq: Education 160; parallel 162.**

166a-d PROBLEMS IN HOME ECONOMICS EDUCATION. (3 ea.) S Parker and Sneed
Problems in teaching home economics for high school students and adults. The course may include such subjects as teaching in, and supervision of, the school community cannery and the teaching of housing.

261 HOME ECONOMICS SUPERVISION. (3) I, S Parker
A course planned primarily to help prepare teacher-trainers and supervisors of home economics education. **Prereq: Education 160 and 162; experience in teaching; approval of instructor.**

263 CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. (3) II, S Parker and Sneed
Recent developments in home economics education. **Prereq: Education 160 and 162; experience in teaching.**

264 MODERN TRENDS IN HOME ECONOMICS EDUCATION. (3) I, S Parker
A basic course for students in home economics education. The course includes the development of home economics education and modern trends in curriculum, methods of teaching, and evaluation.

265a, b INDEPENDENT WORK IN HOME ECONOMICS EDUCATION. (3, 3) I, II, S Parker
An independent work course for students who have done at least 12 semester 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, S Parker
Individual investigations and reports on special problems in home economics education.

267 DIRECTED SUPERVISION IN HOME ECONOMICS EDUCATION. (3) I, II Parker
This course includes practice in teaching for observation by others, student teaching, and school visiting. **Prereq: Two years of teaching experience and Education 261.**

268 HOME ECONOMICS CURRICULUM CONSTRUCTION. (3) S Parker and Sneed
A study of the underlying principles of curriculum building for junior and senior high school and adult education in home economics. **Prereq: Education 160 and 162.**

269 EVALUATION IN HOME ECONOMICS EDUCATION. (3) I, S Parker
A course to acquaint teachers of home economics with techniques used in measuring attainment in home economics in the junior and senior high school and college. **Prereq: Teaching experience.**

Industrial Education

71 TRADE ANALYSIS. (2) S Crumpton and Youmans
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. (2) S Crumpton and Youmans
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. (2) S Crumpton and Youmans
Methods of presenting subject matter so as to 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. (2) I, II, S Crumpton and Youmans
Selecting and arranging course material in trade and industrial subjects. Prep-

aration of instruction and check sheets with emphasis on their uses. **Prereq: Education 71.**

83 PRINCIPLES OF TRADE TEACHING. (2) I, II, S Crumpton and Youmans
This course deals with the fundamentals of learning and teaching that have special significance in trade and technical subjects.

123 VOCATIONAL GUIDANCE. (2) I, II, S Crumpton and Youmans
Course content includes units on aims and purposes, individual inventory, and counseling techniques. Emphasis is placed on occupational information and guidance, placement, follow-up, and organization and administration of a guidance program.

134 ORGANIZATION AND OPERATION OF PART-TIME AND EVENING CLASSES. (2) I, II, S Crumpton and Youmans
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. (2) I, II, S Crumpton and Youmans
This course deals with the basic methods and techniques used in making a survey to determine the needs for trade and industrial education. Emphasis is placed on gathering, evaluating, and interpreting the data.

137 SPECIAL PROBLEMS IN INDUSTRIAL EDUCATION. (2) I, II, S Crumpton and Youmans
The supervised study of approved problems in industrial education on a research basis.

143 MODERN INDUSTRIAL ANALYSIS. (2) I, II, S Crumpton and Youmans
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. (2, 2) I, II, S Crumpton and Youmans
A course planned primarily for the advanced student in industrial education. It covers the general philosophy of vocational education as it relates to the problems and principles of industrial education.

183a, b METHODS IN INDUSTRIAL EDUCATION. (2, 2) S Crumpton and Youmans
The most approved methods in instructional management, including lesson planning, in the field of vocational industrial education.

Vocational Education

211 THE ADMINISTRATION OF VOCATIONAL EDUCATION. (3) I, II Hammonds
A course designed for superintendents, high-school principals, and other administrators. Its purpose is to train for administering and supervising vocational education in schools.

282 SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (3) I, II, S Hammonds and Staff
An independent work course for students interested in vocational education. Students make individual investigations and report on special problems.

286a, b SEMINAR IN VOCATIONAL EDUCATION. (2, 2) I, II, S Hammonds, Parker, and Baker
A critical study of selected problems in vocational education. The course is open only to students with experience in the field.

COLLEGE OF COMMERCE

Cecil C. Carpenter, Wendell Everett Beals, Lucian Hugh Carter, Virgil Christian, Robert H. Cojeen, William S. Connor, Frank G. Coolsen, Herman A. Ellis, Russell S. Grady, Herbert W. Hargreaves, Robert D. Haun, William W. Haynes, Margaret Bell Humphreys, Walter W. Jennings, Homer C. Lewis, Robson Duncan McIntyre, James Walter Martin, Joe Logan Massie, John T. Masten, Andrew Paton, Walter Pearce, Ralph R. Pickett, Eldred C. Speck, Rodman Sullivan, Ruth E. Thomas, and William Allan Tolman.

ECONOMICS

2 ECONOMIC HISTORY OF EUROPE. (3) I, II — Jennings and others
A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, industry, and finance. **Open only to freshmen and sophomores.**

3 ECONOMIC HISTORY OF THE UNITED STATES. (3) I, II — Jennings and others
A brief sketch of economic life in the colonies, followed by a more detailed account of the national evolution in agriculture, manufacture, transportation, commerce, and finance. **Open only to freshmen and sophomores.**

4 RESOURCES AND INDUSTRIES. (3) I, II — Jennings
The economic factors which govern the utilization of world resources and the exchange of products.

7a, b PRINCIPLES OF ACCOUNTING. (4, 4) I, II — Ellis and others
Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation, two hours; lab, four hours a week.

16 TUTORIAL WORK IN ECONOMICS. (1) I, II — Carter
Open only to Arts and Sciences majors.

51 PRINCIPLES OF ECONOMICS. (3) I — Hargreaves and others
An introductory course: The Theory of Income and Employment and Value Theory. **Not open to freshmen.**

52 PRINCIPLES OF ECONOMICS. (3) II — Hargreaves and others
The major emphasis is on distribution theory and public policy. **Prereq: Econ. 51.**

102 LABOR ECONOMICS. (3) I — 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. **Prereq: Econ. 52.**

103 TRANSPORTATION. (3) I — Sullivan
Railways, waterways, highways, and airways. Rates, service, management, and regulation. **Prereq: Econ. 51.**

104 PUBLIC FINANCE. (3) I — Martin and Sullivan
A study of public receipts; public expenditures; the principles of taxation with special reference to their application to the tax systems, federal and state. **Prereq: Econ. 52.**

105 MONEY AND BANKING. (3) II — Masten
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. **Prereq: Econ. 52.**

107 STATISTICAL METHOD. (3) I — Connor and Massie
Introduction to the sources of business data, the use of calculating machinery, tabulation, simple charts and graphs, the average, dispersion, correlation, and the time series analysis.

110 BUSINESS CYCLES. (3) II — Haynes
The nature and characteristics of the economic factors which underlie the cyclical fluctuations in business conditions and the methods of business and investment forecasting. **Prereq: Econ. 51 and an elementary course in statistics.**

112a-f INDIVIDUAL WORK IN ECONOMICS. (1) I, II — Staff
Students confer individually with the instructor.

115 VALUE AND DISTRIBUTION THEORY. (3) I — Sullivan
The major emphasis is on current theory.

124 STATE AND LOCAL TAXATION. (3) II — Martin
Classified property taxes; separation of sources of revenue; taxation of banks, forests, public utilities, mines, and rural and urban real estate; income, inheritance, and sales taxes.

125 EVOLUTION OF ECONOMICS INSTITUTIONS. (3) II — Jennings
The rise of economic institutions such as property rights, capital formation, contractual labor, et cetera. **Prereq: Econ. 2 or consent of instructor.**

126 ECONOMICS OF PUBLIC UTILITIES. (3) II — Haynes
Growth and development of public utilities; valuation; rate-making; financing, the holding company, regulations, current problems, and accounting. **Prereq: Econ. 52.**

127 INTERNATIONAL ECONOMICS. (3) II — Sullivan
Free trade, protectionism, preferential tariffs, colonial tariff policies, dumping, commercial treaties, control of raw materials, and the movement of capital, international debts, and reparation. **Prereq: Econ. 52.**

130 LABOR LEGISLATION. (3) II — Carter
The status of labor law, mediation, conciliation, arbitration, the minimum wage, the eight-hour day, unemployment relief, safety and health legislation, and social insurance. **Prereq: Econ. 51.**

134 ADVANCED ECONOMIC HISTORY OF THE UNITED STATES. (3) II — Jennings
Population growth, immigration, territorial expansion, agriculture, manufactures, tariff, labor, industrial combinations, commerce, transportation facilities, money and banking, and conservation.

142 INDEX NUMBERS. (2) II — Connor
The problems of sampling, selection of formula and weighting in the construction of index numbers. **Prereq: 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. **Prereq: Econ. 3 or consent of instructor.**

148 EUROPEAN BUSINESS LEADERS. (1) II — Jennings
Biographical sketches of a selected list of men including their business achievements and their relationships to the economic and social life of their time. **Prereq: Econ. 2 or consent of instructor.**

153 THE ECONOMICS OF CONSUMPTION. (2) II — Sullivan
The place of consumption in economic theory; the institutional background of our consumer habits; sources of information on consumption; and government regulation of consumer standards. **Prereq: Econ. 51.**

154 URBAN REAL ESTATE. (3) II — Pickett
Urban land economics; the real estate business; essentials of real estate law and contracts; financing of real estate transactions, property valuation and appraisal, the management of real estate properties. **Prereq: Econ. 52.**

155 INDUSTRIAL RELATIONS. (3) II — 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; union-management cooperation. **Prereq: Econ. 51.**

157 GOVERNMENT FINANCE ADMINISTRATION. (3) II — Martin
Government budget, accounting, debt, purchasing, treasury, revenue, and auditing administration is examined; illustrations are drawn from federal, state, and local experience. **Open to commerce, economics, and political science seniors.**

165 COMPARATIVE ECONOMIC SYSTEMS. (3) I Masten
A study of capitalism, socialism, fascism, communism, and cooperation, with attention to current experiments in economic planning. **Prereq: Econ. 52.**

202a-f SEMINAR. (1 ea.) I, II Carpenter
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. (3) I Hargreaves
A survey of the history of economic thought from the ancient period to about the end of the classical school. **Prereq: Econ. 52.**

204 SURVEY OF ECONOMIC THEORY SINCE THE AUSTRIAN SCHOOL. (3) II Hargreaves
This course is virtually a continuation of course 203.

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) I, II Martin
Depending on varying needs of public finance students from time to time, specific subject matter will be selected for study. Each student's report will indicate the class of problems intensively examined.

209 HISTORY AND THEORY OF MONEY AND PRICES. (3) II Carpenter
The evolution of money, the rise of banking processes, and the causes of fluctuations in the general price level.

210 RESEARCH STATISTICS. (2) I Connor
The place of statistics in research method, the theory of statistical averages, the application of advanced statistical methods to economic data, and the testing of economic theory. **Prereq: An elementary course in statistics.**

211 ADVANCED MONEY AND BANKING. (3) II Carpenter
A theoretical study of contemporary money and banking institutions with emphasis on central bank functions.

212a-f RESEARCH PROBLEMS IN ECONOMICS. (1) I, II Staff
Students confer individually with the instructor.

218a-b ECONOMIC THEORY. (3, 3) II Haynes
An intensive course covering the whole field of contemporary economic theory and the various analytical techniques used therein. **Prereq: Econ. 51 and 52.**

COMMERCE

6 SECRETARIAL ACCOUNTING. (3) II Thomas
A continuation of the practice afforded in Commerce 7a; also a study of accounting systems for the professions, small businesses, and institutions in which the secretary ordinarily keeps the records. **Prereq: Commerce 7a.**

7a, b PRINCIPLES OF ACCOUNTING. (4, 4) I, II Ellis and others
Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation, two hours; lab, four hours a week.

13a SECRETARIAL PRACTICE, SHORTHAND. (3) I, II, S Humphreys and Thomas
The theory of Gregg shorthand with sufficient practice to develop skill in writing. Emphasis is placed upon a good foundation for transcription. Credit for this course will not be given until 13b is completed. **Prereq. or concurrent: English 1a.**

13b SECRETARIAL PRACTICE, SHORTHAND. (3) I, II, S Humphreys and Thomas
A continuation of Gregg shorthand with sufficient practice to develop a speed of approximately 100 words a minute in dictation. Transcription is introduced and developed to a usable skill. **Prereq: Commerce 13a or its equivalent.**

14a ADVANCED SECRETARIAL PRACTICE. (3) I, II, S Humphreys and Thomas
This course continues the transcription of shorthand notes and develops secre-

tarial proficiency. Dictation speed of approximately 120 words a minute is reached. **Prereq: Commerce 13b, 17b or their equivalent.**

14b ADVANCED SECRETARIAL PRACTICE. (3) I, II, S Humphreys and Thomas
A continuation of Commerce 14a with special emphasis on secretarial duties and traits. A speed of 140 words a minute in dictation and of 40 to 50 words a minute in transcription is developed. **Prereq: Commerce 14a or its equivalent.**

17a SECRETARIAL PRACTICE, TYPEWRITING. (2) I, II Humphreys and 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. **Prereq. or concurrent: English 1a.**

17b SECRETARIAL PRACTICE, TYPEWRITING. (2) I, II Humphreys and 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. **Prereq: 17a.**

19 OFFICE APPLIANCES AND PROCEDURES. (3) I, II, S Speck
Operation and care of dictating, duplicating, addressing, and calculating machines and other appliances; the general principles, procedures, and systems of filing. **Prereq: Commerce 17a.**

60 PRINCIPLES OF MARKETING. (3) I, II Coolsen
The general store, chain store, department store, and mail order house. Market finance, market risk, market news, competition and prices, market price, unfair competition, and the cost of marketing. **Prereq: Econ. 51.**

61 MARKETING MANAGEMENT. (3) II Coolsen
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. **Prereq: Commerce 60.**

62 PRINCIPLES OF ADVERTISING. (3) I, II McIntyre
The function of advertising in its relation to the broad field of marketing. The scope and organization of advertising and its economic implications. Advertising media and various testing devices are examined. **Prereq: Commerce 60.**

63 SALESMANSHIP. (2) I, II 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. **Prereq: Econ. 51.**

96a INTERMEDIATE ACCOUNTING. (3) I Cojeen and Grady
Principles of financial statement, arrangement, and content. Corporation accounting. Accounting for consignment and installment sales. **Prereq: Commerce 7b.**

96b INTERMEDIATE ACCOUNTING. (3) II Cojeen and Grady
Accounting for partnerships, ventures, agencies, and branches. Accounting features of insolvent concerns and of consolidations and mergers. Estate accounting. **Prereq: Commerce 96a.**

101a, b c SECRETARIAL JOB TRAINING. (1 ea.) I, II Thomas
This course is designed to provide laboratory and office experience for senior secretarial students. **Prereq: Commerce 14b.**

108 ACCOUNTING THEORY. (2) I Haun
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. **Prereq: Commerce 96b.**

109a, b BUSINESS LAW. (3, 3) I, II Haun and Lewis
A survey of the principles of contracts, sales, bills and notes, and that portion of the law of torts applicable to business practices. **Prereq: two years of Commerce Curriculum.**

113 AUDITING. (3) II 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. **Prereq: Commerce 7b.**

117 CORPORATION FINANCE. (3) I, II Pickett
Principles concerning the issue of securities, the management of the corporate income, the disbursement of dividends, the creation of sinking funds, and reorganization procedure. **Prereq: Econ. 52 and Commerce 7b.**

118 COST ACCOUNTING. (3) II — Beals
The place of cost accounting in the general field of accounting, special records and cost statistics, and application to particular business. **Prereq: Commerce 7b.**

119 RETAIL MERCHANDISING. (3) II — McIntyre
Selecting a business location, internal layout, departmentalization, merchandizing control, store policies toward the public, training and management of personnel, and related subjects. **Prereq: Commerce 60.**

128 ADVANCED COST ACCOUNTING. (3) II — Beals
The use of standard costs, estimated cost systems and procedures, non-manufacturing costs, budgetary control, and management uses of cost data. **Prereq: Commerce 118.**

129 CREDIT AND STATEMENT ANALYSIS. (2) I — Haun and Beals
The theory underlying credit-granting, credit administration, and analysis and interpretation of financial statements. **Prereq: Commerce 7a.**

131 INVESTMENTS. (3) II — Pickett
Analysis of corporation statements for investment purposes, the security market, market influences on security prices, effect of interest changes on security prices, and the development of investment programs. **Prereq: Econ. 105 and Commerce 117.**

132a, b C. P.A. PROBLEMS. (3, 3) I, II — Haun and Beals
The course is designed to prepare students for C. P. A. examinations. Advanced accounting theory is stressed through the study of a wide range of problems. **Prereq: Commerce 96b.**

133 INCOME TAX PROCEDURE. (3) II — Haun
The preparation of income tax returns for individuals and corporations of all classes and a practical application of principles of accounting. **Prereq: Commerce 96b.**

136 SALES MANAGEMENT. (3) I — McIntyre
The case method is used, supplemented with outside reading and written reports. **Prereq: Commerce 60. Open only to seniors in the College of Commerce.**

137 INDUSTRIAL MANAGEMENT. (3) I, II — Carter and Haynes
Emphasis is placed upon factory management, but an attempt is made to coordinate managerial aspects of business in its entirety. **Open to seniors of the College of Commerce and to graduate students.**

138 CASES IN MANAGEMENT. (3) II — Haynes
Emphasizes production, plant layout, wage payments, personnel management, production control, and related problems. **Prereq: Commerce 137.**

139 INDUSTRIAL PURCHASING. (3) II — Coolsen
Organization of purchasing; relations with other departments; qualifications and training of buyers. Purchasing procedures; sources of supply; price negotiation; stores control; value analysis. Prereq: **Econ. 51.**

140 PROBLEMS IN ADVERTISING. (2) I — McIntyre
A study of specific problems confronted by the marketing executive in the use of advertising as a selling tool, and of the general economic effects of advertising. **Prereq: Commerce 62.**

141 INDUSTRIAL MARKETING. (3) I — Coolsen
The structure of the industrial market to manufacturing, agricultural, mining, construction, trade, and other industries. **Prereq: Econ. 51.**

143 LIFE INSURANCE. (3) I — Hargreaves
Economics of life insurance, organization and control, special forms of life insurance, and fundamental principles of rate-making. **Prereq: Econ. 51.**

144 PROPERTY AND CASUALTY INSURANCE. (3) II — Pickett
Public control, nature of contracts, analysis of reserve functions, and rate-making processes. **Prereq: Econ. 51.**

145 OFFICE MANAGEMENT. (3) II — Speck
Planning and scheduling of work; employment procedures; supervision of employees, retraining, promotion, and equipment.

146 SPECIALIZED ACCOUNTING PROBLEMS. (3) II — Grady
Fiduciary accounting, consolidations and mergers, foreign exchange and foreign

branches or subsidiaries, utility accounting, and stock brokerage accounting. **Prereq: Commerce 96a and b.**

149 MARKET RESEARCH. (3) II Coolsen
Training in the application of scientific method to research in fields of marketing. A major marketing investigation will be conducted by the class. **Prereq: Commerce 60 and a course in statistics.**

150 BUSINESS STATISTICS. (2) II Connor and Massie
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. **Prereq: An elementary course in statistics.**

156 BUSINESS REPORTS. (2) II Speck
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 GOVERNMENT ACCOUNTING. (2) II Beals
The requirement of adequate accounting systems for various governmental units, including the recording of usual transactions and the form and content of reports. **Prereq: Commerce 7b**

160 BUSINESS COMBINATIONS. (2) II Massie
Forms of combination; the problem of monopoly; federal and state anti-trust legislation and court decisions. **Prereq: Econ. 51.**

162 SMALL BUSINESS OPERATION. (2) II Coolsen
Application of management principles and techniques to the special problems of establishing and operating a small business enterprise. **Prereq: Senior standing in the College of Commerce.**

222 TAX ACCOUNTING PROBLEMS. (3) II Haun
Advanced tax accounting problems of a complex nature involved in income taxes, gift taxes, and death taxes under the federal and state laws. **Prereq: Commerce 133.**

Courses in Mathematics of Finance, Psychology of Advertising, Industrial Psychology, and Business English are offered by departments of the College of Arts and Sciences.

COLLEGE OF PHARMACY

CHEMISTRY

Ewen Gillis, James W. Miles, and D. C. Summerford.

23a PRINCIPLES OF PHYSICS. (3) I Summerford
A lecture-demonstration course involving the basic principles of physics. Designed to prepare the student for an understanding of the application of such principles to pharmaceutical and chemical operations. Lecture and demonstration, three hours.

23b PRINCIPLES OF PHYSICS. (3) II Summerford
A continuation of course 23a. Lecture and demonstration, three hours.

31a ORGANIC PHARMACEUTICAL CHEMISTRY. (5) I Miles
A comprehensive course in the preparation and properties of aliphatic compounds with emphasis on those compounds which are related to pharmacy. Lecture, three hours; lab, six hours. **Prereq: Chemistry 1a and 1b.**

31b ORGANIC PHARMACEUTICAL CHEMISTRY. (5) II Miles
A course similar to Chemistry 31a in which the aromatic compounds are studied. Official products are emphasized in their proper sequence as the course progresses. Lecture, three hours; lab, six hours. **Prereq: Chemistry 31a.**

32 INORGANIC PHARMACEUTICAL CHEMISTRY. (2) I, II Miles
A review of inorganic chemistry in which a comprehensive study is made of the physical and chemical properties of all official inorganic chemicals. Lecture, two hours. **Prereq: Chemistry 1a and 1b.**

33 QUANTITATIVE PHARMACEUTICAL ANALYSIS. (4) I, II Gillis and Miles
This course includes a study of the fundamental theory and methods of gravimetric and volumetric analysis. The laboratory work consists of assays selected from the USP and NF. Lecture, two hours; lab, six hours. **Prereq: Chemistry 1a and 1b.**

***101a ADVANCED ORGANIC PHARMACEUTICAL CHEMISTRY. (3) I** Gillis
A study of the classification, source, properties, synthesis, and uses of organic medicinal chemicals used as therapeutic agents. Lecture, one hour; lab, four hours. **Prereq: Chemistry 31a and 31b.**

***101b ADVANCED ORGANIC PHARMACEUTICAL CHEMISTRY. (3) II** Gillis
A continuation of Chemistry 101a. Lecture, one hour; lab, four hours. **Prereq: Chemistry 31a and 31b.**

102 BIOCHEMISTRY. (4) I Gillis
Chemistry of carbohydrates, lipids, proteins, enzymes, and vitamins in relation to physiological processes. Special reference is made to compounds used in pharmacy. Included is practice in the use of the polarimeter, refractometer, colorimeter, Westphal balance, etc. Lecture, two hours; lab, six hours. **Prereq: Chemistry 31a and 31b.**

103a ADVANCED QUANTITATIVE PHARMACEUTICAL CHEMISTRY. (3) I Gillis
Chemistry and assay of medicinal products, including newer synthetics, fixed oils, volatile oils, alkaloids, vitamins, and enzymes. Laboratory exercises selected on basis of application to pharmaceutical products. Lecture, one hour; lab, six hours. **Prereq: Chemistry 33 and 102.**

103b ADVANCED QUANTITATIVE PHARMACEUTICAL CHEMISTRY. (3) II Gillis
Continuation of Chemistry 103a. Lecture, 1 hour; lab, six hours. **Prereq: Chemistry 103a.**

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* May be elected only by permission of instructor and with the consent of the Dean. Hours to be arranged.

PHARMACY

Abraham E. Slesser, D. H. Robinson, Jesse Y. Hubbard, Charles A. Walton, and Charles T. Lesshafft, Jr.

21 THEORETICAL PHARMACY. (4) I Lesshafft
A study of the fundamental principles and processes used in pharmacy and the development of proper pharmaceutical technique in the laboratory. Lecture, three hours; lab, three hours.

24a PHARMACEUTICAL PREPARATIONS. (4) II Lesshafft
A critical study of each official preparation and the development of techniques used in small scale production of typical examples of each class of official preparations. Lecture, three hours; lab, three hours. **Prereq: Pharmacy 21.**

24b PHARMACEUTICAL PREPARATIONS. (4) II Walton
A continuation of Pharmacy 24a. Lecture, two hours; lab, six hours. **Prereq: Pharmacy 24a.**

25 PHARMACEUTICAL ECONOMICS. (2) I, II Hubbard
Production, distribution, and consumption of drug products; grouping of products; distribution of profits; purchasing channels; purchasing and selling problems; types of wholesale and retail distributors; meeting competition; joint buying; classification of pharmacies; interdependence of businesses. Lecture, three hours.

26 PHARMACEUTICAL CALCULATIONS. (3) I, II Staff
A systematic study of arithmetical problems encountered in pharmacy. Lecture, three hours.

27 INTRODUCTORY DISPENSING. (4) I Walton
The objective of this course is to introduce the student to the principles and problems of prescription dispensing. The student learns techniques and manipulations which are to be more extensively covered in the advanced dispensing course. Lecture, two hours; lab, six hours. **Prereq: Pharmacy 24b.**

30 MANUFACTURING PHARMACY. (3) I, II Slesser
Methods of larger scale manufacture of compressed tablets, solutions, mixtures, ointments and creams, and suppositories. The use and care of equipment involved. Field trips to medium-sized pharmaceutical manufacturing concerns. Lecture, two hours; lab, three hours. Admission: By special permission of department head.

31 DRUG STORE MANAGEMENT. (3) II Robinson
A course in the principles of drug store accounting with practice in selected problems. Advertising, display, buying, selling, profits, layout, stock control, and taxation are covered. Lecture, three hours.

111a DISPENSING PHARMACY. (4) I Slesser
The application of fundamental pharmaceutical principles and techniques to the compounding ot the various types of preparations encountered on prescriptions. Practical methods for insuring qualitative and quantitative accuracy are stressed. Lecture, two hours; lab, six hours. **Prereq: Pharmacy 27.**

111b DISPENSING PHARMACY. (4) II Slesser
Methods of detecting and handling common types of prescription incompatibilities. Film studies of projected handwritten prescriptions selected from current drug store files. Methods of prescription pricing. Lecture, two hours; lab, six hours. **Prereq: Pharmacy 111a.**

122 U.S.P. & N.F. DRUGS. (3) I Lesshafft
A study of the official drugs with special attention to chemical drugs. Emphasis is given to synonyms, proprietaries of like composition, uses, dosage and common compounding incompatibilities. Lecture, three hours. **Prereq: Pharmacy 24b.**

123 MODERN DRUGS. (3) II Lesshafft
A comprehensive comparative study of the newer drugs used in pharmacy. Their uses, chemistry, and proprietary forms of administration are considered. Lecture, three hours. **Prereq: Pharmacy 122.**

125a PHARMACEUTICAL JURISPRUDENCE. (3) I Hubbard
Business law; food, drug and cosmetic laws; narcotic and poison laws; liquor and beverage laws; postal regulations; pharmacy laws; fair trade laws; social security; taxes; license; sanitation laws; court decisions relative to pharmacy. Lecture, three hours.

125b PHARMACEUTICAL JURISPRUDENCE. (3) II Hubbard
A continuation of Pharmacy 125a. Lecture, three hours. **Prereq: Pharmacy 125a.**

MATERIA MEDICA

Earl P. Slone, Harold Clifford Morris, Charles Tucker, and Charles A. Walton.

11a ANATOMY AND PHYSIOLOGY. (3) I — Tucker

Lectures and demonstrations of the anatomy and physiology of the circulatory, nervous, muscular, lymphatic, genito-urinary, skeletal, digestive, endocrine and respiratory systems. As preparation for a study of drugs in disease. Lecture and demonstration, three hours. **Prereq: Zoology 1.**

11b ANATOMY AND PHYSIOLOGY. (3) II — Tucker

Continuation of 11a. Lecture and demonstration, three hours. **Prereq: Materia Medica 11a.**

27a PHARMACOGNOSY. (3) I — Slone

A study of official and non-official drugs of vegetable and animal origin. Macroscopic and microscopic examinations are made. Newer drugs and synthetics related to natural products are included. Lecture, two hours; lab, two hours. **Prereq: Botany 1 and Chemistry 31a, b.**

27b PHARMACOGNOSY. (3) II — Slone

A continuation of Materia Medica 27a. Lecture, two hours; lab, two hours. **Prereq: Materia Medica 27a.**

131a BACTERIOLOGY AND SANITATION. (3) I — Walton

Primarily an introduction to the fundamentals of general bacteriology. Includes lecture and laboratory studies on morphology, physiology, cultivation, identification and influences of bacteria. Lecture, two hours; lab, two hours.

131b BACTERIOLOGY AND SANITATION. (3) II — Walton

A continuation of Materia Medica 131a. This course is designed to acquaint the pharmacy student with the practical applications of bacteriological principles. Particular emphasis is placed on the pharmaceutical and medicinal aspects, and special consideration is given toxins, antitoxins, serums, and similar biologicals. Lecture, two hours; lab, two hours.

133 HYGIENE AND PUBLIC HEALTH. (2) I, II — Tucker

A study of various public health agencies and their functions, and the relationship of the pharmacist to them and to the public. Special consideration is given diseases and conditions constituting major health problems. Lecture, two hours.

138a PHARMACOLOGY AND TOXICOLOGY. (5) I — Morris

A presentation of the pharmacodynamic actions, modes of administration, toxic manifestations of drugs, and the relationship of pharmacodynamic action to therapeutic use. Lecture, four hours; lab, two hours. **Prereq: Materia Medica 11a, b and Chemistry 31a, b.**

138b PHARMACOLOGY AND TOXICOLOGY. (5) II — Morris

A continuation of 138a. Presenting to the student emergency treatment in cases of acute poisoning and mechanical injury. Standard first aid methods are demonstrated. Acute and chronic poisoning by noxious agents and application of remedial measures are discussed. Lecture, four hours; lab, two hours.

PART IV

SPECIAL SERVICES OF THE UNIVERSITY

SPECIAL SERVICES OF THE UNIVERSITY

While the major function of the University is that of instruction, it renders important service to the state in other ways. Through the efforts of individual members of the staff and by means of special agencies and publications it makes important contributions in research, experimentation, and public service. The divisions, the publications, and the institutes or meetings through which such work is carried on are described in the following paragraphs.

AGRICULTURAL EXPERIMENT STATION

The Kentucky Agricultural Experiment Station, an institution for investigation and research, established September 25, 1885, functions 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.

Through carefully planned experiments, the Experiment Station investigates problems of basic and applied science as affecting agriculture and interprets the results in terms of the needs of the state. The main station farm of 600 acres is located at Lexington. Two substations, one of 15,000 acres at Quicksand and the other of more than 600 acres at Princeton, greatly facilitate investigations dealing with regional problems.

The Experiment Station publishes bulletins and circulars giving the results of its research.

AGRICULTURAL EXTENSION DIVISION

The Division of Agricultural Extension carries the teachings of the College of Agriculture and Home Economics, and the U. S. Department of Agriculture to rural folk in every county in Kentucky. Field agents representing all departments, county farm agents, and county home agents cooperate in building a program of work for the state and for each county.

The Extension Division publishes circulars written in popular form for use by farm people in improving methods and practices in the home and on the farm.

Farm and Home Week is held during the last week in January. The purpose of this meeting is 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 4-H Club Week program is held annually early in June. At that time county champion demonstration teams and champions in the various projects compete for state championships. Nearly a thousand boys and girls from all over the state are in attendance for the entire week.

Short courses in many fields of interest to farmers and homemakers are held from time to time to meet the needs of special groups.

BUREAU OF AUDIO-VISUAL MATERIALS

The University maintains, in the Department of University Extension, a library of teaching films and other visual materials which is available to schools, churches, clubs, and colleges in the State for a nominal rental. This department also furnishes all campus classes with projection services without charge. Projection services are provided for clubs, and honorary and social groups on the campus at a nominal fee. The Bureau 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 CLUB AND COMMUNITY SERVICE

This Bureau is one of the divisions of the Department of University Extension. It was organized for the purpose of giving service to the citizens of this Commonwealth, and serves such groups as American Association of University Women; Kentucky Federation of Women's Clubs; Council of Parents and Teachers; Garden Clubs; League of Women Voters; Business and Professional Women's Groups; Men's Luncheon Clubs; Council of Church Women; and independent groups. It assists with program planning; maintains package library materials, and books from the shelves of the University Library for loan; conducts forums and institutes, for organizations or agencies requesting same, either on the Lexington campus or at points throughout the state; has available numerous club studies for discussion groups on questions of International Affairs, the United Nations and the Specialized Agencies, Kentucky Government, Community Planning, Modern Art, Nutrition, Recreation, and Neighbors to the South. It is also pleased to make available to civic groups the services of members of its faculty and staff as lecturers and leaders of discussion groups.

BUREAU OF COMMUNITY SERVICE

The Bureau of Community Service is a part of the Social Research Consultation Service of the Sociology Department. It sponsors a program of research and education to promote an understanding of the nature of community-life to assist those working for community improvement; maintains an inventory of social and demographic data pertaining to individual Kentucky communities; acts as a clearing house for information pertaining to community development and the experiences of other communities in this regard; advises and cooperates with local, county, and private agencies

in order to facilitate community programs; cooperates with public, private, and University departments and agencies in the collecting of information important to local community projects.

BUREAU OF GOVERNMENT RESEARCH

This Bureau is the research division of the Department of Political Science. It conducts research and investigations in the problems of state and local government and renders such consultative services to the agencies and officials of the various units of government in Kentucky as it may be called upon to give. It also assists civic groups by making desired studies and in a consultative capacity.

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 the 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.

CHILD GUIDANCE SERVICE

The Child Guidance Service offered at the University, through the cooperation of the Lexington Community Chest, provides expert psychological diagnoses 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.

DEPARTMENT OF PUBLIC RELATIONS

The Department of Public Relations has the two-fold 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 and sports

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 serves school officials in Kentucky and other states by assisting them to secure well-qualified teachers. The Bureau serves students and alumni by assisting them to secure positions. It furnishes to prospective employers information concerning applicants. Students who are now enrolled in any College in the University and those persons who have formerly attended this institution are eligible for registration. This service is without charge. The Bureau is located in Room 115 of the Education Building.

EDUCATIONAL CONFERENCE

Annually 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 elementary and secondary schools and from colleges and universities of the state come together to study current educational problems. Outstanding authorities are brought to these conferences to work with the people in Kentucky in an effort to arrive at a better understanding of the problems under consideration and to aid in planning for their solution.

ENGINEERING EXPERIMENT STATION

The objectives of the Engineering Experiment Station 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.

Research under the direction of the Station covers a variety of fields and is done in the Civil, Electrical, General, Mechanical, and Mining and Metallurgical Departments. Included under these are the Aeronautical Research Laboratory, the Coal Laboratory, and the Highway Materials Research Laboratory.

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 quarterly 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 Col-

lege of Engineering, to reporting research projects, and to other matters of general interest to the engineering profession.

FAMILY LIFE INSTITUTE

The fifth annual Family Life Institute will be held on the campus June 26, 27, and 28, 1951. Outstanding authorities in the field will appear on the conference program. The purpose of the Institute is to try to find solutions to the various problems involved in family living, and to give to the citizens of this Commonwealth an opportunity to discuss said problems with eminent leaders in the field. It is felt that through this type of conference real progress can be made in the analysis and understanding of family relationships. The Institute on Family Life illustrates combined action by staff members in four colleges and at least eight departments of the University, each specifically interested in some aspects of family living. The institute is a demonstration of cooperation among the numerous units of a large institution, and the logical next step is co-operation for education in family living among the several state- wide and local groups, organizations. and agencies which should be deeply concerned with the family.

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.

KENTUCKY LAW JOURNAL

The Kentucky Law Journal is published quarterly in November, January, March, and May by students and faculty of the College of Law. Each issue contains: (a) leading articles; (b) notes and case comments by students; and (c) book reviews.

The most important purpose of the publication is to train Law students in legal research and writing. The recent cases discussed are mainly from Kentucky. The leading articles are written by legal scholars and practicing lawyers in the various fields of the Law and are intended to be of benefit to practitioners. Publication has been continuous since 1912.

PUBLIC SERVICE INSTITUTES

The University promotes, organizes, and administers short institutes or study courses for various groups of public officials and persons interested in public issues.

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.

SPEECH CORRECTION CLINIC

A clinic for the correction of speech disorders, such as stuttering and retarded speech development, is operated by the Department of Psychology. The services of this clinic are available to university students, students and teachers in public schools, and to other interested persons.

UNIVERSITY OF KENTUCKY PRESS

The purpose of the University of Kentucky Press is to make available in published form the results of significant scholarly study and research, with particular emphasis on works by members of the University faculty and works about Kentucky and its region.

The University Press is maintained by a grant from the Haggin Fund, an appropriation from the general fund of the University, and revenues derived from the sale of books. It is the responsibility of the director, who is assisted by an advisory committee appointed by the President of the University, to select the works to be published by the University Press and to direct the editing, production, and distribution of these works.

The director of the University Press is also charged with supervision of the Kernel Press.

THE UNIVERSITY LIBRARIES

The University of Kentucky Libraries make available to the citizens of the state and region outstanding research collections in the various fields emphasized by the University's programs of study and research. These materials are available on loan to readers who live outside of Lexington. In addition a competent staff of reference librarians is maintained to answer bibliographical and informational queries. Citizens who need the assistance of the library staff in any problem should write to the Reference Librarian, University of Kentucky Library, Lexington 1, Kentucky.

PART V

THE ACADEMIC AND ADMINISTRATIVE STAFF OF THE UNIVERSITY

THE ACADEMIC AND ADMINISTRATIVE STAFF

Adams, Estelle, M.A., Second Grade, University School
Adams, Harold P., M.A., Ed.D., Assistant Professor of Education; Assistant Director of the Bureau of School Service
Adams, Leslie Keene, LL.B., Supervisor of Electrical Engineering Laboratories
Adams, Staley Fields, M.S. in C.E., Assistant Professor of Applied Mechanics
*Adler, Jacob Henry, M.A., Instructor in English
Albro, Clarence Hal, Jr., M.A., Instructor in Romance Languages
Allen, Harry Raymond, M.A., Chief Chemist in Charge of Fertilizer Analysis
Allen, Richard Sweetnam, M.S., Professor of Anatomy and Physiology, Head of the Department of Anatomy and Physiology
Allen, William Ray, M.A., Ph.D., Professor of Zoology; Curator of Zoological Museum
Allison, Nathan Breckinridge, M.A., Ph.D., Associate Professor of Electrical Engineering
Allred, Bobby Jean, B.S., Assistant Instructor in Home Economics
Amyx, Clifford, M.A., Assistant Professor of Art
Anderson, C. Arnold, M.A., Ph.D., Professor of Sociology
Anderson, Grace, M.A., English, University School
Anderson, Charles Herbert, Professor of Engineering Design, Emeritus
Anderson, Josiah E., Inspector of Feed and Fertilizer
*Anderson, Mary Littell, A.B., Seed Analyst, Entomology and Botany
Anderson, Walter Sewell, M.A., Professor of Genetics, Special Assignment
Archdeacon, James William, M.S., Ph.D., Associate Professor of Anatomy and Physiology
*Armstrong, Watson, M.A., Associate Professor of Agricultural Education
Armstrong, William Davis, B.S., Horticulturist
*Atkins, Delbert Ferrell, M.S., Instructor in Mathematics
*Austin, Calvin Murray, A.B., Assistant Chemist, Agronomy
Averitt, Ruth, M.S. in Ed., Home Economics, Lafayette School
*Averitt, Saxe Dabney, M.S., Chemist, Agronomy, Special Assignment
*Babcock, Lawrence B., B.S., Lieutenant Colonel, U.S. Army, Assistant Professor of Military Science and Tactics
*Bach, Hager, M.A., Instructor in Political Science
*Back, William B., M.S. in Agr., Assistant in Farm Management
Baker, Emily, M.S., Assistant Instructor in Home Economics
*Baker, John A., M.A., Part-time Instructor in Psychology
*Baker, June, A.B., Part-time Instructor in Journalism
Baker, Merl, M.S., Assistant Professor of Mechanical Engineering
Baker, Walter Maurice, M.A., Associate Professor of Education; Head of the Department of Distributive and Industrial Education
Ball, William B., A.B., In Charge of Service Office, Agricultural Experiment Station
*Balows, Albert, M.S., Instructor in Bacteriology
Barber, Harold, Head Herdsman

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* See appended list of changes of status, p. 337.

Barber, William Jackson, M.S. in M.E., Assistant Professor of Applied Mechanics
Barbour, Roger W., Ph.D., Instructor in Zoology
Barkenbus, Charles, Ph.D., Professor of Organic Chemistry
Barkley, Marie Rodes, M.A., Associate Professor of Home Economics
Barkman, John Orville, B.S. in Agr., Associate Professor of Dairy Manufactures; Field Agent in Dairy Manufactures
Barnett, Brinkley, B.M.E., Associate Professor of Electrical Engineering
Barnhart, C. Raymond, M.A., Assistant Professor of Art
Barnhart, Charles E., M.S., Assistant Professor of Animal Husbandry, Assistant in Animal Husbandry
Barrett, Olive, M.A. in Ed., Fifth Grade, University School
Barron, Judith T., M.A., Librarian, College of Pharmacy
*Barron, Robert, B.S. in Ed., M.A., Instructor in English
Baskett, Virginia Stuart, M.A., Instructor in Mathematics
Bastin, Garland, B.S. in Agr., Superintendent of Dairy Center
*Battle, Guy A., M.A., Instructor in English
Bauder, Ward W., M.S., Ph.D., Professor of Rural Sociology; Rural Sociologist
Baugh, Lucy Gaines, B.S., Seed Analyst, Entomology and Botany
Baulch, Walter Monroe, B.S., M.E., Part-time Instructor in Physics, Northern Kentucky Extension Center
Beals, Wendell Everett, M.B.A., C.P.A., Associate Professor of Accounting
Beaty, Betty, B.S., Third Grade, University School
Beavers, Robert G., B.S., M.E., Assistant Director of Aeronautical Research Laboratory
Beebe, Morris Wilson, M.S., Part-time Associate Professor of Metallurgical Engineering
Beers, Howard Wayland, M.S., Ph.D., Professor of Rural Sociology, Head of the Department of Rural Sociology
Begin, John, B.S. in Agr., Field Agent in Poultry
*Bell, Graydon D., B.S., Instructor in Physics
Bentley, Leora, B.S., Instructor in Home Economics
*Bergamo, Ralph, M.A., Instructor in English
Berger, Carl, M.A., Part-time Instructor in Chemistry
*Best, Harry, LL.B., M.A., Ph.D., LL.D., Professor of Sociology
Bigelow, Gordon E., M.A., Instructor in English
Bigge, Adolph Edmund, M.A., Ph.D., Professor of German, Head of the Department of German Language and Literature
Bills, Robert E., M.A., Ed.D., Assistant Professor of Psychology
Binger, Norman Henry, Ph.D., Instructor in German
Binkley, Harold, B.S. in Agr., M.S. in Ed., Instructor in Agricultural Education
Binkley, Wendell Chester, M.S. in Agr., Assistant Economist in Agricultural Marketing
*Bishop, Charles E., B.S. in Agr., Assistant in Farm Management
Bjork, C. Kenneth, M.A., Part-time Instructor in Chemistry
Black, Ben Wather, M.A., Instructor in English
Blackburn, Arnold, M.M., Assistant Professor of Applied Music (Organ)
Blanchet, Rose Marie, B.S., Assistant Chemist, Feed and Fertilizer

* See appended list of changes of status, p. 337.

Blythe, David Knox, M.C.E., Assistant Professor of Civil Engineering
Blyton, Gifford, M.A., Ph.D., Associate Professor of Speech
Boleyn, John C., B.S., Captain, Infantry, U.S. Army; Assistant Professor of Military Science and Tactics
Bondurant, John Harvey, M.S., Ph.D., Economist in Farm Economics
Boone, Anna Bruce, M.A., Fourth Grade, University School
*Boron, Leo F., M.A., Part-time Instructor in Mathematics
Bortner, Charles Eugene, M.S. in Agr., Associate Agronomist
Bostick, Lew, B.S. in Com., Assistant Professor in the Department of Athletics; Assistant Football Coach
Boughton, Bessie M., A.B., B.S., Cataloger, University Library
*Bower, William Clayton, M.A., LL.D., D.D., Part-time Professor of Sociology
Bowling, Lawrence E., M.A., Ph.D., Visiting Lecturer, Department of English, Speech, and Dramatic Arts
Boyarsky, Louis L., M.S., Ph.D., Assistant Professor of Anatomy and Physiology
*Boyd, Joseph Aubrey, M.S. in E.E., Assistant Professor of Electrical Engineering
Boyd, Paul Prentice, M.A., Ph.D., LL.D., Professor of Mathematics, Special Assignment; Dean Emeritus, College of Arts and Sciences
Boyden, Ruth, M.A., Assistant in Home Economics
Bradford, Lawrence Allen, M.S. in Ed., Professor of Farm Economics
Brady, George Keyports, M.A., Ph.D., Professor of English
*Brake, Evelyn Reep, M.A., Assistant Professor of Bacteriology, College of Pharmacy
Brakebill, Kenneth, A.B., Part-time Instructor in Chemistry
Brauer, Alfred Charles, M.A., Ph.D., Professor of Zoology
Briggs, Wallace Neal, M.A., Assistant Professor of English; Director of Guignol Theatre
*Brockett, Oscar G., M.A., Instructor in English
*Brook, William Varina, B.S., Instructor in Physical Education
Brooks, Jesse B., B.S., Assistant Professor of Agricultural Engineering
Brown, Aubrey J., M.S., Ph.D., Professor of Marketing, Head of the Department of Markets and Rural Finance
Brown, Carl Dee, M.S., Assistant Entomologist
Brown, James Stephen, M.A., Assistant Professor of Rural Sociology; Assistant in Rural Sociology
Brown, Joe Beckman, B.S. in Agr., Inspector in Creamery License Section
Brown, Linwood Arnold, Pharm.D., Ph.G., Head, Public Service Laboratories
Brown, Louis, B.S., Practicum Supervisor, Department of Psychology
Brown, Marion Clay, M.A., Assistant Professor of Mathematics
Brown, Ralph C., Jr., M.S., Part-time Instructor in Mathematics
Brown, Ross, M.S., D.V.M., Associate Professor of Veterinary Science, Associate Veterinarian
Brown, William Randall, M.A., Ph.D., Associate Professor of Geology
Bryant, Paul William, A.B., Head Football Coach; Lecturer, Department of Physical Education
Bryant, Thomson Ripley, M.S. in Agr., Professor of Agricultural Extension; Assistant Director of Agricultural Extension

* See appended list of changes of status, p. 337.

Buckner, Garrett Davis, Ph.D., Chemist in Charge of Animal Nutrition Section
Buckner, Robert C., M.S. in Agr., Assistant Agronomist
Budd, Louis John, M.A., Ph.D., Instructor in English
Buldra, Frank J., Technical Sergeant, U.S. Air Force, Instructor in Air Science and Tactics
Bull, Jacqueline Page, A.B., Head of Archives Department, University Library
Burke, Vivian, M.A. in Ed., Kindergarten, University School
Burkeen, Emmett D., B.S., Research Assistant, Division of Foundations of Education
Bureau, Ernest Adolphe, Ph.B., B.S. in E.E., E.E., Professor of Electrical Engineering, Head of the Department of Electrical Engineering
*Bush, Linville J., B.S. in Agr., Assistant Superintendent, Western Kentucky Experiment Substation
Button, Myra, M.A., Field Agent in Home Economics
Byers, George Boyd, M.S. in Agr., Ph.D., Economist in Farm Economics
Caldwell, Lowry McReynolds, B.S. in Agr., Assistant Superintendent, Western Kentucky Experiment Substation
Callender, Jack T., M.A., Part-time Instructor in English
*Callihan, Anne Worthington, A.B., Assistant Professor of Art
Calvin, James Sutherland, M.A., Ph.D., Associate Professor of Psychology, Acting Head of the Department of Psychology
Canizzo, Walter Mario, M.S. in M.E., Assistant Professor of Mechanical Engineering
*Cantrell, David M., Sergeant, First Class, U.S. Army, Instructor in Military Science
Card, Dana George, M.S., Ph.D., Professor of Agricultural Economics; Associate Economist in Agricultural Prices
Carl, Alma V., A.B. in Ed., Seventh Grade, University School
Carpenter, Cecil C., M.S., Ph.D., Professor of Economics; Dean of the College of Commerce
Carr, Martha Geraldine, M.A., Ed.D., Associate Professor of Physical Education
Carr, Wilbert L., A.M., LL.D., Visiting Professor of Ancient Languages
Carrel, William Joseph, C.E., Professor of Structural Engineering, Emeritus
*Carter, Carroll Sparks, E.M., Professor of Mining Engineering
Carter, James E., Jr., Master Sergeant, U.S. Air Force, Instructor in Air Science and Tactics
Carter, Lucian Hugh, M.A., Ph.D., Professor of Economics
Carter, Willis Merle, M.S. in M.E., Professor of Machine Design
Cass, Norma Beatrice, B.S., M.A. in L.S., University Library, Head, Reference Department
*Caswell, Randall S., Ph.D., Associate Professor of Physics
*Caton, Stanley, B.S. in Agr., Field Agent in Poultry Husbandry
Cavagnol, J. Charles, M.S., Ph.D., Assistant Professor of Chemistry
Chamberlain, Leo Martin, M.A., Ph.D., Vice-President of the University
Chambers, Alvin Lee, C.E., Associate Professor of Testing Materials
Chambers, John Sharpe, M.S., M.D., F.A.C.P., Professor of Hygiene and Public Health, Head of the Department of Hygiene and Public Health; Director of University Health Service

* See appended list of changes of status, p. 337.

Chaplin, Carl E., M.S., Assistant Horticulturist
Chapman, Richard A., Ph.D., Associate Plant Pathologist
Chaudet, Julian H., M.S., Part-time Instructor in Chemistry
*Cherry, Rufus Adrian, M.A., Part-time Instructor in Romance Languages
Cheek, Frank Jacobs, Jr., A.B., C.E., M.S., Professor of Sanitary Engineering
Christian, Virgil Langdon, Jr., B.S., M.S., Instructor in Economics
Church, Elsie T., M.A., Instructor in Mathematics
Clark, Carl McKinley, M.S., Assistant Professor of Markets and Rural Finance; Associate Economist in Agricultural Marketing
*Clark, Harold B., Ph.D., Instructor in Agricultural Marketing; Assistant Economist in Agricultural Marketing
*Clark, Paul B., M.A., Th.M., Ph.D., Instructor in English, Northern Extension Center
*Clark, Thomas D., M.A., Ph.D., Distinguished Professor of History, Head of the Department of History
Clay, Maurice A., M.A., Instructor in Physical Education
Claypool, Don P., M.S., Part-time Instructor in Chemistry
Clemmons, Anne McAdams, M.S. in H.E., Instructor in Home Economics
*Clifton, Carl M., M.S. in Agr., Field Agent in Dairying
Clifton, Louis, M.A., Professor in University Extension, Director of University Extension; Professor of Education
Cline, Ruth, M.A., Part-time Instructor in English
Cochran, Lewis Wellington, M.S., Instructor in Physics
Cojeen, Robert H., M.B. A., Associate Professor of Accounting
Coleman, Lee, M.S., Ph.D., Assistant in Rural Sociology
Comley, Thelma, Jr., Seed Analyst
Cone, Carl Bruce, M.A., Ph.D., Associate Professor of History
*Connor, William Stokes, M.A., Associate Professor of Economics
Cook, Ancel E., A.B., Part-time Instructor in Physics
Cooke, Arthur Louis, M.A., Ph.D., Associate Professor of English
Coolsen, Frank G., B.S., M.S., Assistant Professor of Marketing
*Cooper, Lake Cornell, M.A., Instructor in Mathematics
*Cooper, Thomas Poe, B.S. in Agr., D.Sc., LL.D., Dean, College of Agriculture and Home Economics; Director of Experiment Station; Director of Agricultural Extension Division
Couey, John E., M.S., Field Agent in Dairying
Cowling, Vincent F., Ph.D., Associate Professor of Mathematics
*Cox, Virginia Boyd, A.B., Part-time Instructor, University School
Criswell, James E., M.S. in Agr., Assistant in Farm Management
Crabb, Alfred L., Jr., M.A., Instructor in English
Croft, Lysle Warrick, M.A., Ph.D., Part-time Associate Professor of Psychology; Director of University Personnel Office
Cromer, Roy F., M.A., Part-time Instructor in English
Crouse, Charles Stevens, E.M., Professor of Metallurgical Engineering, Head of the Department of Mining and Metallurgical Engineering
*Crowdus, Dorothy H., M.S., Assistant Parisitologist, Animal Pathology
Crowdus, Paul, A.B., News Editor, Department of Public Relations
Crumrine, Frances H., M.A., Assistant Professor of Home Economics
Crumpton, Charles R., B.S. in Chem. Engr., M.S., Assistant Professor of Industrial Education

* See appended list of changes of status, p. 337.

Cullis, Lela W., Instructor in Applied Music (Organ and Piano)
Culton, Thomas Grover, M.S. in Agr., Ph.D., Assistant in Poultry Husbandry
Curnutt, Vivian Lee, M.A., Field Agent in Home Economics
*Curtsinger, Thomas A., B.S. in Agr., Field Agent in Cream Grading
Cutler, John Levi, M.A., Ph.D., Assistant Professor of English
Daingerfield, Mary W., M.A., Practicum Supervisor, Department of Psychology
Daly, Douglas Lowell, M.A., Instructor in Mathematics
Daniel, Eddie F., M.S. in Agr., Field Agent in Farm Management
Dantzler, Lehre Livingston, M.A., Litt.D., Professor of Philology, Special Assignment
Davenport, O. Malcolm, M.S., Associate Professor of Forestry; In Charge of Section of Forestry
Davis, Edward G., B.S., Lieutenant Colonel, U.S. Air Force, Professor of Air Science and Tactics
Davis, Morris S., Ph.D., Instructor in Mathematics
Dawson, Lyle R., M.S., Ph.D., Professor of Physical Chemistry, Head of the Department of Chemistry
Day, Ollie E., Technical Sergeant, U.S. Air Force, Instructor in Air Science and Tactics
DeBoer, Jesse, M.A., Ph.D., Associate Professor of Philosophy
Deen, Encil, B.S. in Agr., Seed Inspector, Entomology and Botany
Diachun, Stephen, M.S., Ph.D., Assistant Professor of Plant Pathology; Plant Pathologist
Dicken, John C., Assistant Agronomist
Dickey, Frank G., M.A., Ed.D., Professor of Education, Dean of the College of Education
Didlake, Mary LeGrand, M.S., Associate Entomologist and Botanist, Special Assignment
Diehl, Charles F., M.A., Ph.D., Assistant Professor of Psychology
Dimmick, Graham B., M.A., Ph.D., Professor of Psychology
*Dimock, William Wallace, D.V.M., Professor of Veterinary Science; Veterinarian
Dilly, Mary E., Registrar Emeritus, College of Pharmacy
Doll, Elvis Roger, M.A., D.V.M., Veterinarian
Donovan, Herman Lee, M.A., Ph.D., LL.D., President of the University
Downing, Harold Hardesty, B.C.E., M.S., Ph.D., Professor of Mathematics and Astronomy, Head of the Department of Mathematics and Astronomy
Dozier, Emmitt, Jr., M.S., Superintendent of Creamery, Instructor in Dairying
Drennen, Charles E., Technical Sergeant, U.S. Air Force, Instructor in Air Science and Tactics
*Duff, Mike, B.S. in Agr., Assistant Field Agent in Poultry Improvement
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., Supervisor of Metallurgical Engineering Laboratories
Dunning, Mose W., Jr., M.S. in Agr., Field Agent in Cream Grading
Durham, Margaret Wilson, A.B., Secretary, Young Women's Christian Association

* See appended list of changes of status, p. 337.

Dutt, Ray H., M.S., Ph.D., Assistant in Animal Husbandry
Eaton, William Clement, M.A., Ph.D., Professor of History
*Echols, Livingston M., B.S., Part-time Instructor in Chemistry
Edney, James Marion, M.S., Assistant Professor of Zoology, Acting Head of the Department of Zoology
*Edwards, Ernest P., M.A., Ph.D., Instructor in Zoology
Edwards, Ogden Frazelle, M.S., Ph.D., Associate Professor of Bacteriology
Eilertsen, Betty J., M.A., Ph.D., Assistant Professor of Romance Languages
Elliott, Norris Raymond, B.S. in Hort., Professor of Landscape Architecture and Floriculture; Field Agent in Horticulture
Elliott, Ralph F., Ph.D., Assistant Professor of Dairy Husbandry; Assistant in Dairy Husbandry
Elliott, William J., M.A., Part-time Instructor in Chemistry, Northern Kentucky Extension Center
Ellis, Herman A., M.A., Assistant Professor of Economics
Elliston, Pauline, Assistant in Service Office, Agricultural Experiment Station
Elsey, Edward Everett, M.E., Associate Professor of Engineering Research
Emmert, Emory Myers, M.S., Ph.D., Professor of Horticulture; Assistant in Horticulture
England, James Merton, M.A., Ph.D., Associate Professor of History
*English, Albert C., M.S., Ph.D., Assistant Professor of Chemistry
Erikson, Statie Estelle, Ph.D., Professor of Home Economics; Head of the Department of Home Economics
Essene, Frank J., Ph.D., Associate Professor of Anthropology
Estes, Betsy Worth, M.A., Ph.D., Part-time Instructor in Psychology
Estes, Reedus Ray, M.S., Ph.D., Assistant Professor of Chemistry
*Evans, Alvin Eleazar, M.A., Ph.D., J.D., Professor of Law, Special Assignment, Dean Emeritus of the College of Law
Evans, Anna Marie, M.A., Part-time Instructor in Education
Fallis, Robert White, Assistant Bacteriologist, Public Service Laboratories
Farquhar, Edward Franklin, M.A., Professor of Literature
Farris, Elgan Brooks, C.E., Chief Engineer, Department of Maintenance and Operations
Farris, Hansford White, M.A., M.S., Assistant Professor of Electrical Engineering
Farris, Jacob Duncan, M.A., M.D., Part-time Professor of Hygiene and Public Health; Physician, University Health Service
*Faust, George P., M.A., Ph.D., Associate Professor of English, Director of Freshman English
Fergus, Ernest Newton, M.S., Ph.D., Professor of Farm Crops; Agronomist in charge of Pastures and Forage Crops
Feiler, Charles E., A.B., Part-time Instructor in Chemistry
Field, Thomas Parry, M.A., Ph.D., Assistant Professor of Geography
*Finnie, William Horace, B.S. in C.E., Part-time Instructor in Civil Engineering
Fish, Ernest Ellsworth, M.S., Field Agent in 4-H Club Work
Fisher, Frank, A.B., Part-time Assistant Geologist, Kentucky Geological Survey
Fisher, Irving S., M.A., Assistant Professor of Geology

* See appended list of changes of status, p. 337.

Fitz, Dord Edward, M.A., Assistant Professor of Art
Fitzgerald, Cornelius G., B.S., Part-time Instructor in Chemistry
Flack, James C., Ph.D., Instructor in Mathematics
Flannery, Roy L., M.S. in Agr., Field Agent in Agronomy
*Fleming, John Lewis, B.S. in Com., Bursar-Recorder, College of Pharmacy; Lecturer in Pharmaceutical Administration
Flowers, Kenneth, M.S., Assistant Agronomist
*Floyd, James Robert, B.M., Instructor in Applied Music (Piano)
Foley, John Francis, M.A., Instructor in Geology
Ford, Elizabeth E., Technician in Animal Husbandry
Ford, Robert H., B.S. in Agr., In Charge of Radio, Agricultural Extension
Foster, Achilles E., M.A., Instructor in Mathematics
Foster, James Douglas, M.S. in Agr., Inspector in Charge of Creamery License Section
Foster, John W., B.S., Field Agent in Dairying
Foster, Samuel J., Master Sergeant, U.S. Army, Instructor in Military Science and Tactics
Freels, Pauline, M.S. in H.E., Instructor in Home Economics
Freeman, Joe Frank, M.S. in Agr., Associate Agronomist; Superintendent of Experiment Station Farm
Freeman, Theodore R., M.S., Ph.D., Associate Professor of Dairy Manufacturing; Associate in Dairy Manufacturing
French, Scott L., B.S., Instructor in Animal Husbandry and Assistant in Animal Husbandry
*Fults, Frank R., M.S., Instructor in Anatomy and Physiology
Gail, Irving A., A.B., M.D., Diplomate, American Board of Psychiatry; Visiting Lecturer in Social Work; Psychiatric Consultant for Training in Clinical Psychology
*Gard, Oliver William, B.S. in M.E., Instructor in Mechanical Engineering
Gardner, John Samuel, M.A., M.S., Field Agent in Horticulture
Garrigus, Wesley Patterson, M.S., Ph.D., Professor of Animal Husbandry; Chairman, Animal Industry Group
Garrott, William Lawrence, B.S. in E.E., Instructor in Electrical Engineering
Garside, Matthew Stanley, B.S., Field Agent in 4-H Club Work
Gault, Lelah Vaughn, B.S. in H.E., Assistant Chemist, Feed and Fertilizer
Gerhard, George Richard, Met.E., M.S., Associate Professor of Metallurgical Engineering
Gentry, Dorothy, B.S. in H.E., Field Agent in 4-H Club Work
Gibson, Harry Best, B.S. in Agr., Field Agent in 4-H Club Work
Gifford, Chloe, LL.B., M.A., Assistant in University Extension
Gilb, Stella Spicer, B.P.E., M.A., Hygiene and Physical Education, University School
Gillett, Leone, B.S. in H.E., Assistant State Leader of Home Demonstration Agents
Gilliam, William D., Jr., M.A., Ph.D., Assistant Professor of History
Gillis, Ewen, M.S., Ph.D., R.Ph., Professor of Chemistry, College of Pharmacy
Gillis, Ezra L, A.B., Director, Bureau of Source Materials in Higher Education
Ginger, Lyman Vernon, M.A., Ed.D., Director, University School; Chairman of the Division of Instruction and Placement

* See appended list of changes of status, p. 337.

Ginocchio, Oleva Louise, Administrative Assistant, Agricultural Experiment Station
Given, John Higson, A.B., Field Director, Bureau of Community Service; Part-time Instructor in Sociology
Gladden, James W., M.Ed., Ph.D., Assistant Professor of Sociology
*Glaser, Robert, M.A., Ph.D., Assistant Professor of Psychology
*Godbey, Gordon C., M.A., Assistant in University Extension
Godfrey, Robert G., M.A., Part-time Instructor in English
*Goldstone, Richard H., M.A., Instructor in English, Northern Kentucky Extension Center
Gooch, Ernest D., M.S. in Agr., Assistant Economist in Agricultural Marketing
Good, Edwin Stanton, M.S., Professor of Animal Husbandry, Special Assignment
Goodman, Adolph W., Ph.D., Associate Professor of Mathematics
Gordon, George S., Sergeant, U.S. Army, Instructor in Military Science and Tactics
Gordon, Saul, M.S., Part-time Instructor in Chemistry
Gormley, James Frederick, M.S., Part-time Instructor in Chemistry
Graddy, Ivan Clay, M.S. in Agr., Assistant State Agent, County Agent Work
Grady, Russell Shelby, M.S., C.P.A., Associate Professor of Accounting
Graham, James Hiram, C.E., Dean of the College of Engineering, Emeritus
Gravitt, Bernard Coleman, A.B. in Ed., Research Assistant, College of Education
Gray, William Arthur, B.S. in C.E., B.Arch., M.Arch., Assistant Professor of Architectural Engineering
Grayson, Ulysses G., M.S. in Agr., Assistant in Markets
Green, Anne Guerrant, M.A., Instructor in Art
Gregg, Lowell Edward, M.S.E., Part-time Lecturer, Soil Mechanics
Griffith, Edward J., M.S., Part-time Instructor in Chemistry
Griffith, Richard R., M.A., Instructor in English, Northern Kentucky Extension Center
*Grove, Arthur M., B.Ed., M.S., Part-time Instructor and Director of Cartography Laboratory, Department of Geography
Guenther, Ruth M., M.A., Instructor in Home Economics
Gulley, Margaret, B.S. in H.E., Field Agent in 4-H Club Work
Gump, J. R., M.S., Part-time Instructor in Chemistry
*Gunston, Paul Harold, Jr., A.B., Instructor in Physical Education (Swimming)
Guthrie, A. B., Jr., A.B., Litt.D., Visiting Lecturer in English
Haak, Pearl Jones, B.S. in H.E., Field Agent in Foods
Hackensmith, Charles William, M.A., Ph.D., Professor of Physical Education
*Hagan, Lola Stokes, M.S., Hygiene and Physical Education, University School
Hagman, Ida Catherine, M.A., Field Agent in Home Economics
Hahn, Thomas Marshall, Jr., Ph.D., Associate Professor of Physics
Haines, Ruth, M.A., Instructor in Public School Art and Elementary Education
Ham, Willburt Dunn, B.S., LL.M., Associate Professor of Law
*Hamilton, Daniel K., M.S., Ph.D., Assistant Professor of Geology

* See appended list of changes of status, p. 337.

Hamilton, Helen Houden, M.S., Instructor in Applied Music (Voice)
Hamilton, William Brooks, M.S., Ph.D., Associate Professor of Hygiene and Public Health; Bacteriologist for University Health Service
Hammond, Joseph Pershing, M.S. in Met.E., D. of E., Assistant Professor of Metallurgical Engineering
Hammonds, Carsie, M.A. in Ed., Ph.D., Professor of Agricultural Education; Chairman of the Division of Vocational Education; Head of the Department of Agricultural Education
Hanau, Richard, M.S., Ph.D., Associate Professor of Physics
Hankins, Thomas L., M.S., Associate Professor of Education; Director of the Northern Extension Center
*Hansen, Merle F., M.A., Ph.D., Associate Parisitologist, Animal Pathology
Hanson, Mary Elizabeth, A.B., B.S. in L.S., Head of Serials Department, University Library
Hardin, Mary Muedeking, Ph.D., Assistant Professor of Bacteriology
*Hargreaves, Herbert Walter, M.A., Ph.D., Professor of Economics
Harned, Jessie Hewitt, A.B., Seed Analyst, Entomology and Botany
Harris, Charles Edgar, B.S. in Agr., Field Agent in Poultry Husbandry
Harris, Fred Earl, M.S., Ed.D., Associate Professor of Education
Harris, Leila Gott, M.A., Instructor in English
Harrison, John Scovill, B.S. in Agr., Assistant Agronomist
Harrison, Lura Claude, A.B., M.T. (A.S.C.P.) Part-time Instructor in Bacteriology
Hart, Ruby Evans, M.A., Assistant in University Extension
Hartford, Ellis Ford, M.A., Ed.D., Professor of Education; Chairman of the Division of Foundations of Education
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, Maurice A., M.A., Ph.D., Assistant Professor of English
Hatcher, Walter M., Jr., B.S., Captain, U.S. Air Force, Assistant Professor of Air Science and Tactics
Haun, Robert Dee, M.A., J.D., C.P.A., Professor of Accounting
Hauser, Robert E., B.S., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Hawkins, Robert Dawson, M.E., M.S., Professor of Applied Mechanics; Head of the Department of General Engineering
Haynes, William Warren, M.B.A., Assistant Professor of Economics
Hays, Rodney M., B.S., Assistant Chemist
Hecker, Stanley E., Jr., M.A., Research Assistant, College of Education
Heffner, Ray L., Jr., M.A., Instructor in English
Hegeman, Daniel VanBrunt, Ph.D., Professor of German Language and Literature
Heinz, Wilbur August, M.S.P.H., Associate Professor of Hygiene and Public Health
Helton, Stella Elizabeth, M.S., Assistant Professor of Home Economics
Henderson, Camille Sue, A.B., Part-time Instructor in Radio Arts
Henning, Alda, B.S., Assistant State Leader of Home Demonstration Agents
Henrickson, Carl E., M.S., Ph.D., Assistant Professor of Botany
Henry, Amanda Harms, B.S., Assistant in Animal Nutrition

* See appended list of changes of status, p. 337.

Henson, Lawrence, M.S. in Agr., Associate Agronomist in Forage Crop Investigations
Hernandez, Juan Eduardo, M.A., Ph.D., Associate Professor of Romance Languages
*Heskamp, Henry Reade, B.S., Assistant Microscopist, Feed and Fertilizer
Hill, Raymond C., B.S., Forester
Hoffman, Clinton Kelly, C.E., Associate Professor of Engineering Drawing
Hogg, Frances, A.B., Assistant in Rural Sociology
Holloway, Earl Ray, M.A., Choral Director, Department of Music
Holmes, Elwyn S., B.S. in A.E., Extension Agricultural Engineer
Holmes, Sarah Bennett, M.A., Part-time Associate Professor of Sociology; Dean of Women
Hopkins, James Franklin, M.A., Ph.D., Associate Professor of History
Hopper, Ray C., B.S. in Agr., Field Agent in Animal Husbandry
Hopper, Robert L., M.Ed., Ph.D., Associate Professor of Education
*Hopson, Alice K., B.S., Assistant Bacteriologist, Animal Pathology
*Hopson, James Edward, M.S., Part-time Instructor in Physics
Horine, John Sherman, M.E., Professor of Engineering Drawing and Co-ordinator for Engineering Freshmen
Horlacher, Levi Jackson, M.S., Professor of Animal Husbandry; Assistant Dean in Resident Teaching, College of Agriculture and Home Economics
*Hornback, William B., A.B., Part-time Instructor in English
Hornbeck, Benn Lee, B.S. in For., Forester
*Hornowski, Edward B., M.A., Ed.D., Assistant Professor of Music
Horsfield, Margaret Bennett, M.A., Diplome d'Etudes Francaises de l'Universite de Montpelier, Assistant Professor of Romance Languages
Hotchkiss, Margaret, Ph.D., Professor of Bacteriology
Houston, Forrest G., M.A., Ph.D., Assistant Chemist, Agronomy
Howard, Noel Judson, B.S. in Agr., Inspector, Feed and Fertilizer
*Howard, Richard John, M.S., Instructor in Physics
Howell, Samuel W., Jr., B.S., Captain, U.S. Army, Assistant Professor of Military Science and Tactics
Hubbard, Jesse Y., Ph.G., LL.B., R.Ph., Lecturer in Pharmaceutical Jurisprudence, College of Pharmacy
Hughes, James W., M.A., Instructor in Sociology
*Hukill, Joyce, B.S., Instructor in Physical Education
Hulette, Neville, Inspector, Feed and Fertilizer
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 Husbandry
*Humphreys, Herbert H., M.A., Ph.D., Associate Professor of Psychology
Humphreys, Margaret Bell, M.A., Assistant Professor of Commerce
Humphries, James Charles, M.S., Ph.D., Associate Professor of Bacteriology
Hunt, Russell Aubrey, M.S. in Agr., Field Agent in Tobacco
*Hutchcraft, Helen, M.A. in Ed., Part-time Instructor, University School
Hyatt, Mildred, M.S., Assistant Botanist
Imlay, Florence, M.A., Field Agent in Home Economics
Insko, Wyatt Marion, Jr., M.S. in Agr., Professor of Poultry Husbandry, In Charge of Poultry Section
Irvine, Jessie, M.A., Practicum Supervisor, Department of Psychology

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* See appended list of changes of status, p. 337.

Irvine, Kate Tipton, B.S. in L.S., M.A., Head of Circulation Department, University Library
*Jackson, Maurice, A.B., Coach, University School
Jackson, William Edward, Jr., B.S. in For., F.Engr., Field Agent in Forestry
*Jacobsen, Lynn, M.S., Instructor in Geology
Jansen, William Hugh, Ph.D., Assistant Professor of English
Jasper, Robert L., M.S., Instructor in Anatomy and Physiology
Jennings, Walter Wilson, M.A., Ph.D., Professor of Economics
Jensen, Barry T., M.A., Ph.D., Assistant Professor of Education
Jessee, Jack W., M.A., Part-time Instructor in English
Jewett, Howard Herman, M.A., Associate Entomologist
Johnson, Bernard Mason, M.A., Instructor in Physical Education
Johnson, David T., B.S. in Ed., Practicum Supervisor, Department of Psychology
Johnson, Edward Marshall, Ph.D., Consultant in Plant Pathology
Johnson, Ernst Vern, M.F.A., Part-time Associate Professor of Architectural Engineering
Johnson, Glenn L., M.A., Ph.D., Associate Professor of Farm Economics; Associate Economist in Farm Economics
Johnson, James Richard, B.M.E., Professor of Applied Mechanics, Emeritus
Johnson, John L., B.A., Research Assistant, College of Commerce
Johnson, Orinne, B.S. in H.E., Assistant in Information, Agricultural Extension Division
Johnson, Ray Smith, Maintenance Supervisor, Mechanical Engineering Laboratory
Johnston, Philip Preston, A.B., Instructor in Art
Johnstone, William Clarkson, B.S. in Agr., Field Agent in Agronomy
Jones, Carl Wilfred, B.S., Field Agent in 4-H Club Work
Jones, Daniel J., M.S., State Geologist, Kentucky Geological Survey, Department of Geology
Jones, Kenneth H., B.M., Part-time Instructor in Music (Band), Northern Kentucky Extension Center
Jones, Roger Walter, Superintendent, Robinson Experiment Substation
*Jones, Sadocie Connellee, M.S., Soil Technologist, Special Assignment
Jones, Theodore Tolman, M.A., Ph.D., Professor of Ancient Languages, Special Assignment; Dean of Men Emeritus
*Jongeward, Mattys, Ph.G., M.S., R.Ph., Associate Professor of Pharmacy; Director of Pharmaceutical Laboratories, College of Pharmacy
Josephson, Leonard Melvin, Ph.D., Associate Agronomist
Kammerer, Gladys Marie, M.A., Ph.D., Associate Professor of Political Science
Karraker, Perry Elmer, M.A., Professor of Soils; Agronomist in Soil Technology
*Karsner, Milo Gist, A.B. in Ed., M.S., Assistant Professor of Physical Education
Katterjohn, Catherine Lynn, A.B., B.S. in L.S., Serials Cataloger, University Library
Kauffman, Earl, Jr., M.A., Ed.D., Associate Professor of Physical Education
Kauffman, William B., A.B., Part-time Instructor in Chemistry
*Kaufman, Ruth C., B.S., Assistant Analyst, Agronomy

* See appended list of changes of status, p. 337.

Kelley, Annelle, A.B., Sixth Grade, University School
*Kelley, George W., B.S., Assistant Parisitologist, Animal Pathology
Kelley, James Byron, B.S. in A.E., B.S. in M.E., Professor of Agricultural Engineering; Agricultural Engineer, in Charge of Section of Agricultural Engineering
Kelley, Miriam J., B.S., Field Agent in Extension Marketing
Kemper, Durbin Collins, M.A., Science, University School
Kendall, Thomas Alexander, M.E., Research Analyst in Department of Mining and Metallurgical Engineering
Kennard, Clifford deBock, Pattern Maker and Foundry Technician
*Kennedy, Catherine Latimer, M.A., Instructor in Sociology
Kenney, Ralph, B.S. in Agr., Field Agent in Agronomy
Kerr, Bernard D., M.S., Ph.D., Assistant Professor of Physics
Kilpatrick, Elmer James, M.S. in Agr., Assistant State Agent, County Agent Work
King, Helen Galvin, A.B., Executive Secretary, Alumni Association
King, Margaret Isadora, A.B., B.S., University Librarian
King, Wallace L., B.S. in Agr., Field Agent in Cream Grading
Kinkaid, Alice Hopson, B.S., Assistant Bacteriologist, Department of Animal Pathology, Agricultural Experiment Station
Kinker, Elmer O., Master Sergeant, U.S. Army, Instructor in Military Science and Tactics
Kinney, Edmund J., B.S. in Agr., Professor of Agronomy, Special Assignment
Kinney, Gordon J., M.M., Assistant Professor of Applied Music (Cello and String Bass)
*Kinsley, Mary T., B.S., Part-time Instructor in Chemistry
*Kirwan, Albert Dennis, M.A., LL.B., Ph.D., Part-time Associate Professor of History; Dean of Students
*Kiviniemi, Aimo Justus, B.S. in Mus. Ed., Assistant Professor of Applied Music (Voice)
Klinker, John Edward, Ph.D., Assistant Horticulturist
Kloecker, Phyllis, Physical Education University School
Knight, Grant Cochran, M.A., Distinguished Professor of English
Knight, Richard Bennett, B.S. in E.E., M.S. in E.E., Associate Professor of Heating and Ventilating
Koppius, Otto Townsend, Ph.D., Professor of Physics
Kraehe, Enno Edward, M.A., Ph.D., Associate Professor of History
Kuhn, Kenneth, A.B. in Journ., Sports Editor, Department of Public Relations
Kuiper, John, M.A., Professor of Philosophy, Head of the Department of Philosophy
Kuiper, John, M.A., Professor of Philosophy, Head of the Department of Philosophy
Lacy, Edith, M.S., Field Agent in 4-H Club Work
Lafferty, Jean Payne, M.A., Part-time Instructor in English
Lancaster, Harry Current, M.A., Assistant Basketball Coach
Lange, Karl Otto, M.E., D.Eng., Assistant Professor of Physics
Latzke, Verna, M.S., Field Agent in Home Economics
Lawrence, Chester, Assistant Inspector, Creamery License Section

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* See appended list of changes of status, p. 337.

*Lawson, Austin H., B.S., Instructor in Animal Husbandry
Leader, Gordon R., Ph.D., Assistant Professor of Chemistry
Leamon, Charles O., M.Bus.Ed., Driver Training Instructor, University School
Lee, Opal V., B.S. in Ed., First Grade, University School
*Leggett, James Llewellyn, Jr., M.S. in C.E., Assistant Professor of Civil Engineering
Leonard, Lyle B., B.S. in Agr., Field Agent in Soil Conservation
Leser, Tadeusz, M.E., Ph.D., Assistant Professor of Mathematics
Lesshafft, Charles Thomas, Jr., B.S., R.Ph., Assistant Professor of Pharmacy
Lewis, Chester Arthur, B.J., Editor, Agricultural Extension Division
Lewis, Gordon, A.B., Community Analyst, Department of Sociology
Lewis, Homer C., M.B.A., LL.B., Associate Professor of Commerce
Lewis, Lovaine Carol, M.A., Part-time Instructor in Physical Education
Lewis, Mildred Sinclair, B.S. in Mus., M.A., Associate Professor of Music
Lickert, Raymond Henry, B.S. in Agr., Assistant State Agent, County Agent Work
Ligon, Moses Edward, M.A., LL.D., Professor of Education Emeritus; Director of Placement Bureau
Lindblad, Eugene C., A.B., Part-time Instructor in Chemistry
Link, Harold Forest, M.S. in Agr., Assistant State Agent, County Agent Work
Link, Leo A., B.S. in Agr., Assistant in Agronomy
Linville, Dorothy C., A.B., Admissions Officer
Livesay, Elizabeth Ann, M.A., Instructor in Geology
Lockhart, Madelyn, M.A., Research Associate, College of Commerce
Logan, Lulie Elizabeth, A.B., Assistant State Leader of Home Demonstration Agents
*Long, Norman O., Ph.D., Associate Professor of Inorganic Chemistry
Long, Ulman Eugene, M.A., Part-time Instructor in English
Loudenslager, Ellen Whaley, Ph.D., Part-time Instructor in Psychology, Northern Kentucky Extension Center
Lovelady, Venice, B.S. in H.E., Field Agent in Home Economics
Lowden, William H., B.S., Part-time Instructor in Chemistry
Lowry, Samuel Jechonias, B.S. in Agr., Superintendent, Western Kentucky Experiment Substation
Lunde, Ragnhild, A.B., Part-time Instructor, University School
Lunde, Robert Gerhard, M.A., Associate Professor of History
Luttrell, Eugene H., B.S., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Lutz, Warren, B.M., M.A., Instructor in Music
*Lykins, Dorothy W., M.A., Instructor in Mathematics, Northern Kentucky Extension Center
*McAteer, Robert H., B.S., Lt. Colonel, Signal Corps, U.S. Army, Assistant Professor of Military Science and Tactics
McCarville, Margaret, B.S., Assistant Geologist, Kentucky Geological Survey, Department of Geology
McCauley, J. Ardery, B.J., M.A. in Ed., Assistant Professor of Journalism
McClain, Beryl T., M.S. in Agr., Assistant in Animal Husbandry
McCloy, Shelby Thomas, A.B. (Oxon.), Ph.D., Professor of History
McCollum, William M., M.S., Assistant Bacteriologist, Animal Pathology

* See appended list of changes of status, p. 337.

*McComas, Paul S., M.S., Ph.D., Associate Professor of Farm Economics; Associate Economist in Farm Economics
McConnell, Jean Marie, B.S. in Mus., M.A., Part-time Instructor in Music, Northern Kentucky Extension Center
McCubbin, William Edward, M.A. in Ed., Assistant Professor of Physical Education
McDaniel, Alice Marrs, A.B. in Ed., Seed Analyst, Entomology and Botany
McDavitt, Edgar A., B.S. in Agr., Field Agent in Cream Grading
McElroy, Evelyn C., A.B., Seventh Grade, University School
McEuen, James B., M.A., Research Assistant, College of Education
McEwen, Alfred Buffin, M.S., LL.B., Professor of Law
McFarlan, Arthur Crane, Ph.D., Professor of Geology, Head of the Department of Geology; Director of Kentucky Geological Survey
McFarland, Frank T., M.S., Ph.D., Research Professor of Botany
McGrain, Preston, M.A., Assistant State Geologist, Kentucky Geological Survey, Department of Geology
McGuire, Henry Sanders, Jr., B.S. in Med. Tech., Assistant Bacteriologist, Public Service Laboratories
McHargue, James Spencer, M.S., Ph.D., D.Sc., Research Chemist, Special Assignment
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
McKitrick, John Leslie, B.S. in Agr., Field Agent in Agricultural Engineering and Soil Management
McLaughlin, Marguerite, A.B., Assistant Professor of Journalism
McMillian, Nathaniel Bowles, M.A., Part-time Instructor in Education
McMurtry, David C., M.A., Business Education, University School
McQuown, O. Ruth, A.B., Research Associate, Bureau of Government Research, Department of Political Science
McVey, Frank LeRond, Ph.D., LL.D., L.H.D., President Emeritus
Mackenzie, Gabriel T., M.S., Colonel, U.S. Army, Professor of Military Science and Tactics, Head of the Department of Military Science and Tactics
Mackey, Everette, B.S. in Agr., Field Agent in Poultry and Dairy Inspection
Mackey, Richard Thomas, M.A., Ed.D., Instructor in Physical Education
MacLaury, Donald Wayne, M.S., Assistant in Poultry Husbandry
Magill, Wilbur William, B.S. in Agr., Field Agent in Horticulture
Mahan, Charles Alfred, M.S. in Agr., State Agent, County Agent Work
Mandia, James William, M.S., Assistant Bacteriologist, Animal Pathology
Maney, Charles Thomas, B.S. in E.E., M.S., Instructor in Electrical Engineering
Maney, Howard S., Warrant Officer, U.S. Army, Assistant Adjutant, Department of Military Science and Tactics
Mangelsen, Fritz, Superintendent of Machine Shop
Margulis, Harold R., B.S., Instructor in Pharmacy
Martin, C. Perry, M.S., Instructor in Mathematics, Northern Kentucky Extension Center
Martin, James Henderson, Ph.G., Assistant Chemist, Public Service Laboratories, Special Assignment

* See appended list of changes of status, p. 337.

Martin, James Walter, M.A., Distinguished Professor of Economics; Director of Bureau of Business Research
Martin, Laura Katherine, M.A., Associate Professor of Library Science
*Martin, Leslie Leon, M.S., Part-time Instructor in Psychology; Assistant Director for Counseling, University Personnel Office
Massie, Joe Logan, M.A., Assistant Professor of Economics
Mathews, Robert, Chief Inspector and Assistant Administrator, Feed and Fertilizer
Matthews, John Watson, M.S., Field Agent in Poultry Improvement
Matthews, William Lewis, Jr., A.B., LL.M., S.J.D., Professor of Law
Maxwell, Elmer Stephens, M.D., Part-time Professor of Bacteriology
Maxwell, Robert Sidney, M.A., Ph.D., Assistant Professor of History, Northern Kentucky Extension Center
Meacham, Lomon D., Technical Sergeant, U.S. Air Force, Instructor in Air Science and Tactics
Meader, Arthur Lloyd, A.B., Assistant Chemist, Special Assignment, Public Service Laboratories
Meadow, Jacob R., M.A., Ph.D., Professor of Industrial Chemistry; Director of Freshman Instruction
Meece, Leonard E., M.A., Ph.D., Professor of Education
Meek, Robert Edroy, B.S. in E.E., Instructor in Electrical Engineering
Mellenbruch, Parl L., M.A., Ph.D., Associate Professor of Psychology
Melzer, John Henry, M.A., Ph.D., Assistant Professor of Philosophy
Meyer, Andre Johannes, Director of Aeronautical Research Laboratory
Meyers, Ernest, M.A., Instructor in Psychology
Midkiff, Valva C., B.S., Assistant Chemist, Feed and Fertilizer
Miles, James William, M.S., Associate Professor of Chemistry, College of Pharmacy
Miller, Harold Franklin, B.S. in Agr., Assistant Agronomist
Miller, Larry B., M.B.A., Assistant Professor of Accounting, Northern Kentucky Extension Center
Miller, Richard Clarence, M.S. in Agr., Field Agent in Animal Husbandry
*Mills, Robert, M.A., Research Assistant, Bureau of School Service; Assistant in University Extension
Milton, Mary Page, A.B., University Recorder
Miner, Louis R., M.A., Part-time Instructor in English
Mitchell, John Richard, A.B., Assistant Professor of Chemistry
Mitchell, Wilson, Jr., B.S., County Forestry Assistant
*Mitts, Mary Louis, M.S., Assistant in Home Economics
Mock, Clifton O'Neal, M.E., Associate Professor of Engineering Drawing
Moldovan, Earl, B.S. in C.E., Instructor in Civil Engineering
Monical, Thelma, M.S. in Ed., Instructor in Home Economics Education
Monroe, Zelma, A.B., B.S., Assistant State Leader of Home Demonstration Agents
Montgomery, Ford, M.M., Assistant Professor of Applied Music (Piano)
Moore, Arthur K., M.A., Ph.D., Assistant Professor of English
Moore, Cordell B., M.S., Instructor in Mathematics
Moore, William M., M.A., Ph.D., Associate Professor of Journalism
Moores, Maple, Assistant Registrar
Moran, Alice Barbara, B.S., Associate Bacteriologist, Animal Pathology

* See appended list of changes of status, p. 337.

Moreland, Roy, A.B., LL.B., J.D., S.J.D., Professor of Law
Morris, Harold Clifford, M.S., M.B., R.Ph., M.D., Associate Professor of Pharmacology
Morrison, Henry Bartlett, M.S., Ph.D., Professor of Dairying; Associate in Dairying
Morrison, Thomas C., Jr., M.S. in Agr., Assistant in Agricultural Marketing
Morton, Margaret, A.B., Seed Analyst, Entomology and Botany
Mory, Samuel Albert, Jr., C.E., Professor of Structural Engineering
Mumford, Mary, M.S., Assistant Professor of Home Economics
Murray, Frank, A.B., LL.B., S.J.D., Professor of Law
*Musselman, Vernon A., Ed.M., Ed.D., Professor of Education, Head of the Department of Business Education
*Myers, Georgia, M.A., Part-time Instructor in English
Myers, Robert, M.A., Instructor, Division of Instruction and Placement
Myers, William S., B.A., Research Assistant, College of Commerce
*Nagge, William, M.A., Practicum Supervisor, Department of Psychology
Nath, Lawrence H., M.A., Part time Instructor, College of Education
Neel, Charles O., B.S., Agriculture, Nicholasville High School
*Neel, Joe Kendall, M.S., Ph.D., Assistant Professor of Zoology
Nelson, Ralph A., County Assistant in Forestry, Agricultural Extension Division
Nelson, Vincent Edward, Ph.D., Professor of Geology
Nesius, Ernest Joseph, M.S. in Agr., Ph.D., Assistant Economist in Farm Economics
Newbury, Edward N., M.A., Assistant Professor of Psychology
Newman, James, B.S., County Forestry Assistant
Nicholls, William Durrett, M.S. in Agr., Ph.D., Professor of Farm Management; Head of the Department of Farm Economics
Nierenberg, Arthur A., A.B., M.S. in E.E., Assistant Professor of Electrical Engineering
Noble, Earl T., M.S. in E.E., Assistant Professor of Electrical Engineering
Noe, James Thomas Cotton, M.A., Litt.D., Professor of Education, Emeritus
Nollau, Louis Edward, M.E., Professor of Engineering Drawing
*Norment, Elizabeth Gay, M.A., Instructor in English
Norris, Sarah T., A.B., Assistant in Home Economics
North, Robert D., M.A., Ph.D., Assistant Professor of Psychology; Assistant Director for Testing, University Personnel Office
Oberst, Paul, A.B., LL.M., Professor of Law
O'Byrne, Joseph Michael, B.S. in M.E., Instructor in Mechanical Engineering
*Ockerman, Louis Thomas, M.S., Chemist, Agronomy
Olds, Durward, D.V.M., Assistant in Dairying
Olney, Albert Jackson, M.H., M.S., Professor of Horticulture, Head of the Department of Horticulture
Orcutt, Albert W., M.A., Community Analyst, Department of Sociology
*Orr, David H., M.A., Practicum Supervisor, Department of Psychology; Psychometrist, University School
*Orrell, Frank Lewis, Jr., M.S. in Met., Assistant Professor of Metallurgical Engineering
Ott, Joseph W., Staff Sergeant, U.S. Air Force, Instructor in Air Science and Tactics

* See appended list of changes of status, p. 337.

*Papatsos, Cleo, B.S., Instructor in Physical Education
*Pardue, Louis Arthur, M.S., Ph.D., Professor of Physics; Dean of the Graduate School
*Park, Ridgely, M.A., Instructor, University School
Parker, Ethel Lee, M.A., Ph.D., Professor of Home Economics Education, Head of the Department of Home Economics Education
*Parks, Esther Laverne, M.A., Assistant Professor of Home Economics
Parrott, Thomas Marc, Ph.D., Visiting Professor of English
Patch, Nathaniel Maxwell, M.M., Associate Professor of Applied Music (Piano)
Paton, William Andrew, Jr., A.B., M.B.A., Instructor in Economics
Patterson, George Clinton, M.A., Part-time Instructor in Physics
Pattie, Frank A., M.A., Ph.D., Professor of Psychology
Pattyn, Martin J., B.S., Field Agent in Agricultural Engineering
Peak, Bart Nixon, A.B., LL.B., Executive Secretary, University Young Men's Christian Association
Pearce, Walter H., M.A., Instructor in Economics
Peck, Anna Browning, M.A., Social Sciences, University School
Pelfrey, Charles J., M.A., Part-time Instructor in English
Pence, Sallie Elizabeth, M.A., Ph.D., Associate Professor of Mathematics
Pendley, Laurence Chester, M.S. in C.E., Assistant Professor of Civil Engineering
Penrod, Estel Burdell, M.S., M.M.E., Professor of Mechanical Engineering, Head of the Department of Mechanical Engineering
Perbix, Joyce A., M.S., Instructor in Physical Education
Peter, Alfred Meredith, M.S., D.Sc., Professor of Soil Technology, Special Assignment
Peterson, Frank D., A.B., University Comptroller
Phillippe, Paul Merwin, M.S., Ph.D., Associate Professor of Farm Crops
Phillips, Carroll Davidson, M.S., Ph.D., Associate Economist in Agricultural Marketing
Pickett, Joseph R., A.B., Major, Infantry, U.S. Army, Assistant Professor of Military Science and Tactics
Pickett, Ralph R., M.A., Ph.D., Professor of Economics
Pinney, Paul M., B.S. in Com., Assistant in Service Office, Agricultural Experiment Station
Plummer, Leonard Niel, M.A., Ph.D., Professor of Journalism, Head of the Department of Journalism
Poe, Nancy Margaret, M.A., Instructor in Physical Education
Poole, James L., Jr., A.B., Assistant in Visual Aids, Agricultural Experiment Station
Porter, Leon, A.B., Mathematics, University School
Portmann, Victor Rowe, B.J., Assistant Professor of Journalism
Poste, Leslie Irlyn, A.B., B.S., F.L.A., Professor of Library Science, Head of the Department of Library Science
Poundstone, Albert Bruce, M.S. in Agr., Head of the Department of Feed and Fertilizer
Price, Hugh Bruce, M.A., Ph.D., Professor of Agricultural Economics; Economist in Markets and Rural Finance
Price, Robert N., B.S., Assistant Chemist

* See appended list of changes of status, p. 337.

Price, Vandilla, A.B., Assistant State Leader of Home Demonstration Agents
Price, Walter Allen, M.S., Professor of Entomology, Head of the Department of Entomology and Botany
Prindl, Frank Joseph, M.M., Assistant Professor of Music (Brass and Percussion); Director of University Bands
Pryor, Joseph William, M.D., Professor of Anatomy and Physiology, Special Assignment
Pullen, James F., Captain, U.S. Air Force, Assistant Professor of Air Science and Tactics
*Puryear, Robert C., B.S., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Quisenberry, Benson F., M.S., Assistant Entomologist
*Raber, Edward B., Master Sergeant, Infantry, U.S. Army, Instructor in Military Science and Tactics
Rabin, Marvin J., A.B., M.M., Assistant Professor of Music
*Rainwater, Frank, M.A., Ph.D., Instructor in English
Raley, F. Porter, A.B., Research Assistant, College of Commerce
Ramsey, Ralph J., M.A., Field Agent in Rural Sociology
*Randall, Frank Hall, A.B., LL.B., S.J.D., Professor of Law, Special Assignment
Rannells, Edward Warder, M.A., Professor of Art, Head of the Department of Art
Raulin, Ernest C., B.S., Major, Signal Corps, U.S. Army, Assistant Professor of Military Science and Tactics
*Rayburn, Louis Alfred, B.S., Instructor in Physics
Reading, Carolyn, A.B., B.S., Head of Acquisition Department, University Library
Redman, John C., M.S. in Agr.. Assistant Economist
Reed, Helen M., A.B., Instructor, Division of Instruction and Placement
Reece, Alfred M., Jr., M.A., Assistant Professor and Director of Swimming, Department of Physical Education
Reeves, John Estill, M.A., Assistant Professor of Political Science
*Rehring, Margaret C., B.S. in L.S., M.A., Part-time Instructor in Library Science, Northern Kentucky Extension Center
Reid, David Alexander, M.S., Associate Agronomist
Reinhard, Karl R., Ph.D., Bacteriologist
Rhodes, Ernest L., M.A., Instructor in English; Technical Director of Guignol Theatre
Richards, Mabel G., B.S., Assistant Bacteriologist
Richeson, King, A.B., Hygiene and Physical Education, University School
*Richter, John, A.B., Part-time Instructor in Geography
Riley, Herbert Parkes, M.A., Ph.D., Professor of Botany; Head of the Department of Botany
Rider, Robert Raymon, B.S., Field Agent in Forestry
Ripy, Sara Louise, M.A., Instructor in Mathematics
Roberts, A. Dudley, M.A., Ph.D., General Clinical Practicum Supervisor, Department of Psychology
Roberts, George, M.S., Professor of Agronomy, Special Assignment
Roberts, John Bissell, M.S. in Agr., Assistant Professor of Marketing; Associate Economist in Agricultural Marketing

* See appended list of changes of status, p. 337.

Roberts, Leonard, M.A., Part-time Instructor in English
Roberts, William Lewis, M.A., J.D., S.J.D., Professor of Law, Special Assignment
Robinson, Don Harry, B.S. in Com., Bursar-Recorder, College of Pharmacy; Lecturer in Pharmaceutical Administration
Robinson, Lolo Lemme, A.B., Assistant Professor of English
Rodriguez, Juan, Ph.D., Assistant Entomologist
*Rohde, Florence Virginia, M.M., M.A., Instructor in Mathematics
Romanowitz, Harry Alex, E.E., M.S., Ph.D., Professor of Electrical Engineering
Rose, Donald Clayton, M.A., Instructor in Mathematics
Roseman, Morris, Ph.D., Part-time Lecturer in Psychology
Roseman, Shirley, B.S., Assistant Analyst
Roser, Margaret, A.B., Librarian, University School
Ross, James Pheane, B.S., Field Agent in 4-H Club Work
*Rowley, Nyana Raynes, M.A. in Ed., Part-time Instructor, University School
Royster, Wimberly C., M.A., Instructor in Mathematics
*Rucker, Alice Kennedy, B.Ph., M.A. in Soc. Adm., Assistant Professor of Social Work
Rudd, Robert W., M.S., Assistant Economist in Agricultural Marketing
Rupp, Adolph Fred, M.A., Head Basketball Coach; Lecturer, Department of Physical Education
*Rusch, Thomas A., M.A., Instructor in Political Science
*Rushton, George L., Jr., A.B., Part-time Instructor in Chemistry
Ryen, Kob, Instructor in Animal Husbandry
Ryland, Hobart, M.A., Docteur de l'Universite, Professor of Romance Languages, Head of the Department of Romance Languages
Salmon, Margaret Dorothy, B.S. in Com., LL.B., Instructor in Law; Law Librarian
*Sanders, Irwin T., Ph.D., Professor of Sociology, Head of the Department of Sociology; Chairman, Graduate Study in Sociology
Savage, William Frederick, M.S. in Aero. Engr., Assistant Professor of Aeronautical Engineering
*Sawin, Horace Lewis, M.A., Part-time Instructor in Radio Arts
Sawyer, Elizabeth L., M.A., Ph.D., Assistant Professor of Zoology
Scharfschwerdt, Ida Mary, M.S., Instructor in Bacteriology
Schenck, Melville B., First Sergeant, U.S. Army, Instructor in Military Science and Tactics
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
Schreyer, James Marlin, Ph.D., Assistant Professor of Chemistry
Schwendeman, Joseph Raymond, Ph.D., Professor of Geography, Head of the Department of Geography
Seath, Dwight Moody, M.S., Ph.D., Professor of Dairy Husbandry; In Charge of Dairy Section
Seaton, Don Cash, M.S., Ed.D., Professor of Physical Education, Head of the Department of Physical Education; Varsity Track Coach
*Seay, Maurice F., M.A., Ph.D., LL.D., Dean of the University

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* See appended list of changes of status, p. 337.

Seay, William A., Ph.D., Assistant Professor of Soils; Assistant Agronomist
*Sebastian, William R., M.A., Part-time Instructor in Zoology, Northern Kentucky Extension Center
Seely, Maurice E., Sergeant, 1st Class, U.S. Army, Instructor in Military Science and Tactics
Sellards, Henry Grady, B.S. in Agr., Field Agent in Animal Husbandry
Server, Alberta Wilson, M.A., Docteur de l'Universite, Associate Professor of Romance Languages
Settle, Harry W., B.S., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Shane, James F., M.S. in Agr., Assistant Agronomist
Shannon, Jasper Berry, M.A., Ph.D., Professor of Political Science
Shannon, John Francis, B.A., Research Assistant, College of Commerce
Sharpton, Clarence T., M.A., Assistant for Veterans Affairs, University Personnel Office
Shaver, Robert Ezekiel, C.E., Professor of Civil Engineering, Head of the Department of Civil Engineering
*Shaw, Revel Estill, M.A., Assistant Professor of Physical Education
*Shedd, Oliver March, M.S., Research Chemist, Special Assignment
Shipman, Martha Virginia, M.A., Eighth Grade, University School
Shine, Hill, M.A., Ph.D., Professor of English
Shively, Bernie Armstead, B.A., Director of Intercollegiate Athletics; Lecturer, Department of Physical Education
Shrader, John Aaron, M.S., Ph.C., Microscopist, Feed and Fertilizer
Shropshire, William Oscar, M.S., Instructor in Physics
Sigafus, Roy E., Ph.D., Assistant Agronomist
Sims, Nancy Lowe, A.B. in Ed., First Grade, University School
Skiles, Jonah W. D., M.A., Ph.D., Professor of Ancient Languages, Head of the Department of Ancient Languages
*Skinner, Robert E., M.S., Agricultural Engineer
Slaughter, Susan Kidd, Records and Budgetary Assistant, Agricultural Extension
Slesser, Abraham Edward, Ph.D., R.Ph., Professor of Pharmacy
Slone, Earl Platt, Ph.G., B.S., R.Ph., Professor of Pharmacognosy; Dean of the College of Pharmacy
Smisko, Joe, M.S., Part-time Instructor in Chemistry
Smith, Evangeline, B.S., Home Economics, Bryan Station School
Smith, Gustavus Edward, Ch.E., M.S. in E.E., Assistant Professor of Electrical Engineering
Smith, J. Allan, M.A., Ph.D., Publications Editor, Agricultural Experiment Station and Agricultural Extension
*Smith, Marianne F., D.V.M., Assistant Veterinarian
*Smith, William G., Draftsman-Geologist, Kentucky Geological Survey, Department of Geology
Sneed, Ruth, M.S., Assistant Professor of Home Economics Education
*Snider, Genevieve, A.B., Instructor in Mathematics
Snodgrass, Grace Lee, A.B., Librarian, Agricultural Experiment Station
Snow, Charles Ernest, M.A., Ph.D., Professor of Anthropology
*Soper, Frances Poe, B.S. in H.E., Field Agent in Home Economics

* See appended list of changes of status, p. 337.

*Sorenson, Herbert, M.A., Ph.D., Distinguished Professor of Educational Psychology
South, Dudley Eugene, M.A., Ph.D., Professor of Mathematics
*Spears, Lawrence E., A.B., Captain, U.S. Air Force, Assistant Professor of Air Science and Tactics
Spears, Woodridge, M.A., Part-time Instructor in English
Speck, Eldred C., M.A., Assistant Professor of Commerce
*Spivey, Herman Everette, M.A., Ph.D., Professor of English; Dean of the Graduate School
Spokes, Ernest Melvern, M.S. in E.M., Assistant Professor of Mining Engineering
Sprowles, Lee, M.A., Ed.D., Associate Professor of Education; Registrar of the University
Stafford, William T., M.A., Part-time Instructor in English
Stahr, Elvis J., Jr., M.A., A.B. in Jur., B.C.L., Professor of Law, Dean of the College of Law
Stallard, Frances, M.S., Field Agent in Home Economics
Stallings, Ruth, M.A., Music, University School
Stallings, Virginia, M.A., Instructor in Music (Piano)
Standish, Frederick D., II, B.S., Major, Infantry, U.S. Army, Adjutant, Department of Military Science and Tactics
*Stanford, John, A.B., Assistant, Vocational Education
Steele, Dewey George, M.A., Ph.D., Professor of Genetics; In Charge of Genetics Section
Stein, Edwin E., M.M., Ph.D., Professor of Music, Head of the Department of Music
Stephenson, Claude Bernard, Jr., M.A., Instructor in Political Science
Stephenson, Elmer B., A.B., Assistant Inspector
Sternbergs, Erica, Painter, Art Academy of Latvia, Instructor in Art
Sternbergs, Janis, Master in Copper Engraving, Vienna, Austria, Instructor in Art
Sterrett, Jack Reid, M.A., Ph.D., Associate Professor of Speech
*Stewart, Albert F., M.A., Part-time Instructor in English
Stewart, Olus Jesse, M.S., Ph.D., Professor of Analytical Chemistry
Stewart, Paul H., B.S., Instructor in Chemistry
*Stille, Glenn, B.S., Museum Supervisor, Department of Anthropology
*Stokley, John A., M.S., Instructor in Geology
Stone, Albert L., B.S., Part-time Instructor in Chemistry
Stout, Florence Offutt, Professor of Physical Education; Special Assignment
Straus, Erwin W., A.B., M.D., Part-time Lecturer in Psychology
*Strier, Murray P., B.Chem.E., M.S., Part-time Instructor in Chemistry
Stroup, Thomas B., M.A., Ph.D., Professor of English
Stutsman, Ellen Butler, A.B., M.S., Head, Catalog Department, University Library
Sullivan, Merrell Rodman, M.A., Ph.D., Professor of Economics
Sulzer, Elmer Griffith, M.S., Associate Professor of Radio Arts, Head of the Department of Radio Arts
Summerford, DeAlva Clinton, B.S., Instructor in Physics, College of Pharmacy
Summers, George Perry, M.S. in Agr., Field Agent in Marketing

* See appended list of changes of status, p. 337.

Summers, Hollis S., M.A., Ph.D., Assistant Professor of English
Survant, William Gregory, M.S. in Agr., Assistant Professor of Soils; Field Agent in Soils
*Sutherland, Lyda Mae, B.S. in H.E., Field Agent in 4-H Club Work
*Sutherland, Raymond C., A.B., D.Th., Part-time Instructor in English
Swift, Elizabeth Ann, B.S., Assistant Chemist, Feed and Fertilizer
Swing, Marie L., B.S., Instructor in Botany, Northern Kentucky Extension Center
Tabb, William Roy, M.S. in Ed., Associate Professor of Agricultural Education
Tapp, Hambleton, M.A., Ph.D., Part-time Instructor in History; Assistant to the President of the University
Taylor, Artie Lee, Reserve Book Librarian, University Library
Taylor, Elizabeth Ellis, A.B., Instructor, University School
Taylor, Rhea Alec, M.A., Ph.D., Assistant Professor of History
Taylor, Roberta S., M.S., Assistant Professor of Home Economics
*Teague, Peyton C., M.S., Ph.D., Assistant Professor of Chemistry
Teborek, Raymond G., Major, U.S. Air Force, Associate Professor of Air Science and Tactics
*Tenney, Dwight, Chem.E., Part-time Lecturer in Engineering Administration; Part-time Instructor in Mechanical Engineering Laboratory
Terman, Maurice J., M.A., Instructor in Geology
Terrell, Daniel Voiers, C.E., Professor of Civil Engineering, Dean of the College of Engineering
Terry, George Sylvester, M.A., Bacteriologist, Public Service Laboratories
Thaxton, Robert, M.S. in Agr., Assistant Agronomist
Theobald, Beulah, A.B., M.A., Visiting Lecturer in Social Work
Thomas, George R., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Thomas, Ruth E., M.A., Ph.D., Professor of Commerce
Thomas, Walter Earl, M.S., Ph.D., Assistant Professor and Assistant in Animal Husbandry
Thompson, Lawrence Sidney, M.A., Ph.D., Director of University Libraries
Threlkeld, Dorothy Elizabeth, B.S. in H.E., Field Agent in Home Economics
Tiffany, Burris D., M.S., Ph.D., Instructor in Chemistry
Tilson, Howard Gilbert, M.S. in Agr., Nursery Inspector, Entomology and Botany
Todd, Anne, B.S. in H.E., Seed Analyst, Entomology and Botany
Todd, Arlie C., M.S., Ph.D., Parasitologist, Animal Pathology
Todd, Jack, M.S,, Assistant Agronomist
Tolman, William Allan, M.A., Associate Professor of Economics
Townsend, Lee Hill, M.S., Ph.D., Professor of Agricultural Entomology
Tracy, Leonard G., M.A., Part-time Instructor in English
Trimble, Ernest Greene, Ph.D., Professor of Political Science
Troutman, Joseph L., B.S. in Agr., Assistant in Plant Pathology
Truitt, Jack Paschal, M.A., Agriculture, Lafayette High School
Tucker, Charles Elsey, M.S., M.P.H., Lecturer in Anatomy and Public Health, College of Pharmacy
*Tucker, Nellie, M.A., Part-time Instructor in Romance Languages
Turner, Earl K., M.A., Research Associate, Bureau of Business Research

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* See appended list of changes of status, p. 337.

Turner, Mildred S., A.B., Head Resident of Patterson Hall
Tuthill, James Edward, M.A., Ph.D., Professor of History, Special Assignment
Tuthill, Richard Lovejoy, M.A., Ed.D., Professor of Geography
Tuttle, John W., B.S. in Agr., Field Agent in Poultry Improvement
Tuttle, Margaret Helmsing, A.B., B.S. in L.S., Librarian in Charge of Departmental Libraries
*Tyree, Mabel, M.A., Part-time Instructor in English
Ubben, John Harms, M.A., Ph.D., Assistant Professor of German
Valleau, William Dorney, Ph.D., Distinguished Professor of Plant Pathology; Pathologist
Vandenbosch, Amry, Ph.D., Distinguished Professor of Political Science, Head of the Department of Political Science
Vanlandingham, Kenneth E., M.A., Ph.D., Instructor in Political Science
Vaughn, Erle Cleveland, A.B., Field Agent in Improved Seed Production, Entomology and Botany
Veal, Harlan Hale, B.S. in Agr., Agriculture, Versailles High School
Vennes, Leon Angus, M.S., Assistant Professor of Marketing; Field Agent in Markets and Rural Finance
Vice, Keith R., M.S. in Agr., Assistant in Farm Management
Vollmer, William L., B.S., Instructor in Pharmacy
Wachs, Elizabeth, Technician in Animal Nutrition
Wagner, William F., M.S., Ph.D., Assistant Professor of Chemistry
Walker, Frank H., A.B., Assistant Geologist, Kentucky Geological Survey, Department of Geology
Walker, Thomas C., M.A., Ph.D., Associate Professor of Romance Languages
Wall, Bennett Harrison, M.A., Ph.D., Assistant Professor of History
Wall, Maurice Stanley, M.S. in Ed., Instructor in Agricultural Education
Wallace, Elizabeth, B.S., Assistant Bacteriologist, Animal Pathology
Waltman, Clair Smith, M.S., Ph.D., Professor of Horticulture; Associate Horticulturist
Walton, Charles Anthony, B.S., M.S., R.Ph., Assistant Professor of Pharmacy
Walton, Warren Ware, Jr., B.S. in M.E., Instructor in Mechanical Engineering
Ward, James A., Ph.D., Professor of Mathematics
Ward, William Smith, M.A., Ph.D., Associate Professor of English; Head of the Department of English, Speech, and Dramatic Arts
*Warner, Jacob Larue, B.S., Instructor in Physics
Warnick, Betty Jane, M.A., Instructor in English, Northern Kentucky Extension Center
Watson, Walter E., Ph.D., Part-time Lecturer in Psychology
*Wear, Pat W., M.A., Research Assistant, Bureau of School Service
Weaver, Ralph Holder, M.S., Ph.D., Professor of Bacteriology
Webb, Louise Gray, Librarian Emeritus, College of Engineering
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Allen Edward Crowe, B.S. in Med. Tech., R.M.T., A.S.C.P., A.S.M., Director of Laboratory and X-Ray
Ann Lee Brown, R.N., B.S., Supervisor of Nurses
Margaret Davis, R.N., Infirmary Nurse
Pauline Morton, Nurse in Dispensary
Kathleen O'Leary, R.N., Infirmary Nurse
Vivian Combs Morris, Receptionist
Katherine W. Owens, Secretary

PERSONNEL OFFICE

Lysle Warrick Croft, M.A., Ph.D., Director
*Leslie Leon Martin, M.S., Assistant Director for Counseling
Robert D. North, M.A., Ph.D., Assistant Director for Testing
Clarence T. Sharpton, M.A., Assistant for Veterans Affairs
*Bertha G. Brisbay, A.B., Secretary

* See appended list of changes of status, p. 337.

Kathleen Poor Caughey, B.S., Clerk
*Emily Cox, B.S., Clerk
Ordie U. Davis, B.S., Assistant in Testing
Dorothy Dean, A.B., Secretary
*Howard B. Lyman, M.S., Counselor
Frank B. Martin, A.B., Counselor
Margaret W. Fogg, A.B., Clerk
Mary Ann Mitchell, Clerk
Helen Scott, Clerk
*Betty L. Shepherd, Test Assistant
Virginia I. Vance, Secretary
Anne H. Wells, Secretary
Raymond D. Johnson, M.A., Counselor

DEPARTMENT OF PUBLIC RELATIONS

Raymond W. Wild, A.B., Ph.M., Director of Public Relations
Paul Crowdus, A.B., News Editor
Kenneth L. Kuhn, A.B., Sports Editor
Marilyn Wheeler Maupin, Secretary

UNIVERSITY RADIO STATION

Elmer Griffith Sulzer, M.S., Director
Camille Sue Henderson, A.B., Program Supervisor
J. Ransford Davis, Engineering Supervisor
Ruth Brophy, Secretary

UNIVERSITY Y.M.C.A.

Bart Nixon Peak, A.B., LL.B., Secretary
Martha Huber, Assistant Secretary

UNIVERSITY Y.W.C.A.

Margaret Wilson Durham, A.B., Secretary

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 Glenn Allen, B.S., Assistant Football Coach
Harry Current Lancaster, M.A., Assistant Basketball Coach
Carney Graham Laslie, B.S., Assistant Football Coach
Clarence Emory Underwood, M.A., Assistant Football Coach
Charles Edwin Harper, A.B., Trainer
James Kevin Murphy, Equipment Manager
David Thomas Doyle, Bookkeeper
Louise Loving Gilchrist, A.B., Secretary to the Athletic Director

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* See appended list of changes of status, p. 337.

Harvey Griffin Hodges, B.S., Manager of Ticket Sales
Elizabeth Lawson Robinson, Account Clerk
Betty Jean Snedegar, Secretary in Basketball and Publicity
Jane Williamson, Secretary to the Football Coach

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

Ezra L Gillis, A.B., Director
Mary Hester Cooper, M.A., Assistant Director
Winifred Lewellen, A.B., Clerk-Typist

ALUMNI ASSOCIATION

Helen G. King, A.B., Executive Secretary
Sue B. Heidenreich, Assistant Secretary

OFFICE OF THE COMPTROLLER

Frank D. Peterson, A.B., Comptroller
Helen Ruth Bromley, Clerk-Stenographer
David Howard Peak, LL.B., M.A., Business Agent Emeritus
Ena Jones Whitis, Secretary

Accounting Division

Walter Evans Bromley, C.P.A., Accountant
LeGrand Briggs, M.A., Account Clerk
Ethel Burrier, Bookkeeping Machine Operator
Barbara Criswell, Bookkeeping Machine Operator
Lillian Marie Donovan, A.B., Payroll Clerk
Ruth Earnest, Assistant Accountant
Virginia Baxter Earnest, Bookkeeper
Edward Gabbard, B.S., Special Assistant
Powers Jones, M.A., Internal Auditor
Kate Kearns, Senior Account Clerk
Dorothy Leonard, Fiscal Analyst
Eva Lewis, A.B., Clerk
Margaret Lewis, Cashier
Mary Ellen Maguire, Stenographer
Clay Maupin, Internal Auditor
Emma Grace Merrell, Payroll Clerk
Nila Jean Miller, Stenographer
Mary Louise Ransdell, Clerk
Anne Scott, Clerk-Typist
Nelson B. Turner, Senior Account Clerk
Madge Walters, Bookkeeping Machine Operator

Purchasing and Stores Division

Ken Broomell, A.B., Supervisor
Juanita Hayden Baker, Clerk
Bill Howard, Storeroom Clerk

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* See appended list of changes of status, p. 337.

Anne Carr McCarthy, Stenographer
Edith Miller, Senior Clerk Stenographer
Minnie Pherigo, Order Clerk Emeritus
H. Devaughn Pratt, A.B., Inventory Supervisor
Joy Rice, B.S., Clerk
Janet Stark, Clerk-Typist
Clarence Todd, Storeroom Clerk
Howard Murphy West, B.M.E., Specifications Writer

Division of Maintenance and Operation

Elgan B. Farris, C.E., Chief Engineer
Watts Bean, Assistant Supervisor of Janitors
Joseph L. Boston, B.S. in E.E., Engineer-Inspector
Reva Chapman, Clerk-Typist
Sally Denny, Clerk-Typist
Claude Dickerson, Steamfitting and Plumbing Foreman, Emeritus
Martha Featherston, Secretary
John Tyler Gess, B.S. in M.E., Assistant Engineer
Fleming Butner Griffith, A.B., Accounts Clerk
Elizabeth Holsclaw, Clerk-Typist and Relief Telephone Operator
John M. Howard, B.S. in M.E., Assistant Chief Engineer
G. C. Jones, Carpenter Foreman
L. D. Kitchen, Electrician Foreman
Clyde Lilly, Chief Clerk
Jackie Lutes, Clerk-Stenographer
Irene Menne, Relief Telephone Operator
Glenmore Moberly, Garage Foreman
J. Y. Peck, Foreman Heating Plant
Carroll Reeves, Night Telephone Operator
William C. Rice, B.S. in C.E., Assistant Engineer
Julius Rominger, Grounds Foreman, Emeritus
Janet Scanlon, Telephone Operator
Laura Johnson Shade, Clerk-Typist
Carl Stephenson, Plumbing Foreman
Bettie Swope, Chief Telephone Operator
Seth E. Taylor, Supervisor of Janitors
Joe Underwood, Senior Grounds Foreman
Irene Wells, Telephone Operator
James Wood, Painter Foreman

Stenographic Bureau

Katherine W. Shelburne, Director
Mary Johnston, Stenographer
Calvin R. Miller, Senior Typist
Frances Sallee, Mimeograph Operator

University Station

Carrie Bean, Superintendent
Margaret D. Berryman, Clerk
Adrain Bradshaw, Clerk

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* See appended list of changes of status, p. 337.

Wilde Burtis, Mail Carrier
Edna Owings, Clerk
Eloise Gray Webb, Assistant Superintendent
Barbara Young, Clerk

University Press

Bruce F. Denbo, M.A., Director
Jacqueline M. Dominick, Secretary
William Donald Grote, A.B., Manager of Printing Plant, Assistant Director of Student Publications
Stella Mae Ison, A.B., Bookkeeper-Secretary

Student Union Building

Mackie Rasdall, M.A., Director
William Byrd, Bookkeeper
Margaret Bruce Cruise, A.B., Social Director
Margaret Crutcher, Hostess
Allie Frances Evans, Hostess and Clerk
Anne Jackson, Hostess

Student Union Cafeteria

Anna Louise File, B.S., Director
Mamie Duke Elliott, Clerk-Bookkeeper
Elizabeth Gault, Assistant Director
Elizabeth Hutchison, Assistant Director
Imogene Moore, Bookkeeper
Homer Randal, Storeroom Clerk
Laurence Roberts, Manager of Grill
Mary Elizabeth Sullivan, B.S., Assistant Director

Training School Cafeteria

Maurine Mauser, B.S. in H.E., Director

Campus Book Store

James E. Morris, A.B., Manager
Lavena Kelly, Clerk
Lloyd Q. Mautz, Assistant Manager
Bess Dudley Mayes, Secretary
Helen Trigg, A.B., Clerk

Veterans Housing Project

Stanley Atwood Boles, M.A., Manager
Thelma Gillis, Bookkeeper

CHANGES IN STATUS AFFECTING MEMEBERS OF THE UNIVERSITY STAFF 1950-51

Adler, Jacob Henry, Appointed through 1949-50
Anderson, Mary Littell, Resigned September 30, 1950
Armstrong, Watson, On leave 1950-51
Atkins, Delbert Ferrell, Appointed through 1949-50
Austin, Calvin Murray, Resigned November 30, 1950
Averitt, Saxe Dabney, Died February 10, 1951
Babcock, Lawrence B., Transferred January 31, 1950
Bach, Hager, Appointed through August 31, 1950
Back, William B., On leave 1950-51
Bailey, Mildred, Resigned December 1, 1950
Baker, Jerry, Appointed through April 30, 1950
Baker, John A., Appointed through 1949-50
Baker, June, Appointed through January 31, 1950
Ballenger, Sara E., Appointed through June 30, 1950
Balows, Albert, Appointed Graduate Assistant 1950-51
Barnhill, Juanita, Resigned June 15, 1950
Barron, Robert, Appointed through 1949-50
Battle, Guy A., Resigned September 1, 1950
Bell, Graydon D., Appointed through August 1950
Bergamo, Ralph, Resigned September 1, 1949
Best, Harry, Special Assignment February 1, 1951
Bingham, Ermany, Resigned June 30, 1950
Bishop, Charles E., Resigned June 1, 1950
Borland, Robert A., On indefinite military leave
Boron, Leo F., Resigned November 30, 1950
Bower, William Clayton, Appointed through 1949-50
Boyd, Joseph Aubrey, On leave 1949-50; 1950-51
Brake, Evelyn Reep, Resigned June 30, 1950
Brisbay, Bertha G., Resigned February 1, 1951
Brockett, Oscar G., Resigned September 1, 1950
Brook, William Varina, Appointed through 1949-50
Brown, Beverly Anne, Resigned June 15, 1950
Brown, Grace Hardman, Resigned September 30, 1950
Bush, Linville J., Resigned August 31, 1950
Byrd, Varncille Kathryn, Resigned
Caldwell, Burma W., February 1, 1951
Callihan, Anne Worthing, Special Assignment July 1, 1950
Cantrell, David M., Transferred March 1950
Carter, Carroll Sparks, On indefinite military leave
Caswell, Randall S., On leave 1st semester, 1950-51
Caton, Stanley, Died March 27, 1950
Cherry, Rufus Adrian, Appointed through 1949-50
Clark, Harold B., On military leave October 9, 1950
Clark, Paul B., Appointed through 1950-51
Clark, Thomas D., On leave 2nd semester 1950-51
Clifton, Carl M., Resigned May 20, 1950
Coffman, Bonner S., Resigned January 15, 1951
Coleman, Jean Taylor, Resigned June 27, 1950
Connor, William Stokes, On leave 1950-51

Cooke, Helene, Resigned August 1, 1950
Cooper, Lake Cornell, Resigned September 1, 1950
Cooper, Thomas Poe, Special Assignment effective July 1, 1951
Emily Cox, Resigned February 28, 1951
Cox, Virginia Boyd, Resigned July 1, 1950
Crowdus, Dorothy H., Resigned December 15, 1950
Currens, Vivian C., Resigned September 15, 1950
Curtsinger, Thomas A., Resigned July 15, 1950
Dean, Robert S., Resigned December 31, 1949
Dimock, William Wallace, Special Assignment, July 1, 1950
Duff, Mike, Resigned December 31, 1949
Dunaway, Frieda J., Resigned September 6, 1950
Echols, Livingston M., Resigned September 1, 1950
Edwards, Ernest P., Resigned June 30, 1950
Elmore, John L., Resigned August 15, 1950
English, Albert C., Resigned January 31, 1951
Evans, Alvin Eleazar, On leave 1950-51
Farney, Jean C., Resigned December 31, 1949
Faust, George P., On leave 1951 Summer Session
Fields, Sarah Louise, Resigned May 8, 1950
Finnie, William Horace, Appointed for first and second semesters, 1949-50
Fish, Lola, Resigned June 1, 1950
Fleming, John Lewis, Resigned June 30, 1950
Floyd, James Robert, Appointed through June 30, 1950
Fults, Frank R., Appointed through June 30, 1950
Gard, Oliver William, On leave April 1 to September 1, 1951
Garrison, Anne Elizabeth, Resigned April 1, 1951
Geary, Marjorie, Resigned October 31, 1950
Gilbert, Mary Frances, Resigned June 1, 1950
Glaser, Robert, On leave second semester of 1950-51 and first semester of 1951-52
Godbey, Gordon C., On leave 1950-51
Goldstone, Richard H., Appointed through June 30, 1950
Grove, Arthur M., Appointed through May 31, 1950
Gullett, Henry, Appointed through June 30, 1950
Gumm, Mabel Claire, Resigned August 31, 1950
Gunston, Paul Harold, First semester, 1950-51
Hagan, Lola Stokes, On leave February 1 to August 31, 1951
Hall, Patricia Ann, Resigned August 31, 1950
Hamilton, Daniel K., Resigned July 1, 1950
Hansen, Merle F., Resigned June 15, 1950
Hargreaves, Herbert Walter, On leave 1950-51
Harp, Dudley B., Resigned December 31, 1950
Henderson, Ruthe Maxedon, On leave effective January 3, 1951
Heskamp, Henry Reade, Resigned June 15, 1950
Hollingsworth, Thelma K., Resigned June 24, 1950
Hopson, Alice K., Resigned December 31, 1950
Hopson, James Edward, Resigned December 31, 1950
Hornback, William B., Appointed through June 30, 1950
Hornowski, Edward B., Appointed through June 30, 1950
Howard, Richard John, Appointed through January 31, 1951
Hukill, Joyce, Appointed for first semester 1950-51

Humphreys, Herbert H., Resigned September 1, 1950
Humphress, Mary Catherine, Resigned November 7, 1950
Humphries, Margaret, Resigned December 31, 1950
Hutchcraft, Helen, Resigned July 1, 1950
Hutchinson, Harryette Rupard, Resigned July 1, 1950
Irby, Marjorie R., Resigned June 24, 1950
Jackson, Maurice, Resigned December 1, 1950
Jacobsen, Lynn, Appointed through August 31, 1950
Jacoby, Mary Jane, Resigned September 30, 1950
Jones, Sadocie Connellee, Change of work April 13, 1950
Jongeward, Mattys, Resigned June 30, 1950
Karsner, Milo Gist, On leave 1950-51 and Summer Session 1951
Kaufman, Ruth C., Resigned March 31, 1949
Kayse, E. E., On indefinite military leave
Kelley, George W., Resigned June 15, 1950
Kennedy, Catherine Latimer, Appointed through August 31, 1950
King, Carl A., Resigned December 31, 1949
King, Violet, Resigned February 10, 1950
Kinsley, Mary T., Appointed through June 30, 1950
Kirwan, Albert Dennis, Dean of Students June 1, 1950
Kiviniemi, Aimo Justus, On leave first semester 1950-51
Lamb, Sara Frances, Resigned June 1, 1950
Lassiter, Robbie, Resigned August 15, 1950
Lawson, Austin H., Resigned August 19, 1950
Leggett, James Llewellyn, Jr., On leave 1950-51
Long, Norman O., Appointed through June 30, 1950
Lyman, Howard B., Resigned February 7, 1951
Lykins, Dorothy W., Resigned June 1950
McAteer, Robert H., Transferred August 1950
McComas, Paul S., Resigned August 31, 1950
Marcum, Clara See, Resigned June 3, 1950
Martin, Leslie Leon, On leave March 16 to June 11, 1951
Martin, Mary, Appointed through June 30, 1950
Massey, Phyllis H., Resigned March 2, 1950
Meadors, Harriet, Resigned November 17, 1949
Milby, Anita, Resigned July 10, 1950
Mills, Robert H., Resigned from Bureau of School Service July 1, 1950
Mitts, Mary Louis, Resigned June 30, 1950
Musselman, Vernon A., On leave Summer Session 1951
Myers, Georgia, Appointed through June 1950
Nagge, William, Appointed through June 1950
Neel, Joe Kendall, Resigned June 30, 1950
Norment, Elizabeth Gay, Appointed through June 30, 1950
O'Berg, Evelyn, Resigned June 30, 1950
Ockerman, Louis, Died April 11, 1950
Orr, David H., Appointed through June 30, 1950
Orrell, Frank Lewis, Jr., On leave 1950-51
Papatsos, Cleo, Appointed through June 30, 1950
Pardue, Louis Arthur, Resigned October 15, 1950
Park, Ridgely, Resigned July 1, 1950
Parks, Esther Laverne, Resigned July 12, 1950
Parrott, Thomas Marc, Appointed through June 30, 1950

Patterson, Mack J., Transferred, November 1950
Puryear, Robert C., Resigned October 31, 1950
Raber, Edward B., Transferred September 1950
Rainwater, Frank, Resigned September 1, 1950
Randall, Frank Hall, On leave 1950-51
Rayburn, Louis Alfred, Resigned September 1, 1950
Rehring, Margaret C., Appointed through June 30, 1950
Rice, Dorothy, Died January 1951
Richter, John, Appointed through June 30, 1950
Rodgers, Evelyn, Resigned September 1, 1950
Rohde, Florence Virginia, Appointed through August 31, 1950
Rowe, Evelyn Bell Rowe, Resigned July 31, 1950
Rowley, Nyana Raynes, Resigned July 1, 1950
Rucker, Alice Kennedy, Resigned January 31, 1951
Rusch, Thomas A., Resigned September 1, 1950
Rushton, George L., Appointed through June 30, 1950
Sanders, Irwin T., On leave first semester 1950-51
Sawin, Horace Lewis, Appointed through June 30, 1950
Schick, Blaine Wilhelm, On leave 1950-51
Seay, Maurice F., Resigned May 20, 1950
Sebastian, William R., Appointed through June 30, 1950
Shaw, Revell Estill, Resigned October 31, 1950
Shedd, Oliver March, Change of work March 17, 1950
Shepherd, Betty L., Resigned December 31, 1950
Sims, Nancy Lowe, Resigned September 1, 1950
Skinner, Ann Norton, Resigned July 1, 1950
Skinner, Robert E., Resigned January 26, 1951
Smith, Marianne F., Resigned July 21, 1950
Smith, William G., Resigned October 31, 1950
Snider, Genevieve, Appointed through June 30, 1950
Soper, Frances Poe, Resigned June 30, 1950
Sorenson, Herbert, On leave 1950-51 and Summer Session 1951
Southworth, Doris B., Appointed through June 30, 1950
Spears, Lawrence E., Transferred February 20, 1950
Spence, Agnes, Resigned June 1, 1950
Spivey, Herman Everette, Dean, beginning October 15, 1950
Stanford, John, Resigned January 1, 1951
Stewart, Albert F., Appointed through June 30, 1950
Steele, Cora J., Resigned June 16, 1950
Steele, Mildred, Resigned September 5, 1950
Stille, Glenn, Appointed through June 30, 1950
Strader, Annita, Resigned December 22, 1950
Strier, Murray P., Appointed through June 30, 1950
Stroube, Barbara, Resigned January 19, 1951
Sutherland, Lyda Mae, Resigned November 30, 1950
Sutherland, Raymond C., Appointed through June 30, 1950
Tanner, Edna Y., Resigned September 6, 1950
Teague, Peyton C., Appointed through June 30, 1950
Tenney, Dwight, On leave February 1949-June 30, 1951
Toadvine, Amanda June, Resigned June 7, 1950
Trapp, Francis Joseph, Deceased February 6, 1950
Tucker, Nellie, Appointed through June 30, 1950

Turner, Josephine, Resigned May 31, 1950
Tyree, Mabel, Appointed through June 30, 1950
Umstead, George E., Jr., Resigned December 31, 1949
Underhill, Kitty Simrall, Resigned July 1, 1950
Utterback, Robert W., Resigned September 1, 1950
Warner, Jacob Larue, Appointed through August 1950
Waters, Irene C., Resigned October 31, 1950
Wear, Pat W., Resigned June 1, 1950
Welch, Frank James, Dean and Director, effective July 1, 1951
Wells, Betty, Resigned April 30, 1950
Whitenack, Carolyn Irene, Appointed through August 31, 1950
Wick, Madge B., Resigned January 14, 1950
Williams, Joseph A., Resigned September 1, 1950
Williams, Mark L., Appointed through June 30, 1950
Williams, Mary Ann, Resigned January 3, 1951
Wilson, Ollie J., Resigned November 1, 1950
Withers, Ann Leet, Resigned May 31, 1950
Wofford, Azile May, On leave Summer Session 1951
Wooldridge, Mary Carolyn, On leave 1950-51
Worthington, Louise Willson, On leave 1950-51
Wyatt, Jesse, Resigned December 31, 1949
Yates, Martha, Resigned September 1, 1950

UNIVERSITY OF KENTUCKY ADMINISTRATIVE COMMITTEES[1]

1950-51

Commencement Exercises — H. W. Farris, A. E. Bigge, Anne Callihan, C. B. Cone, Margaret B. Cruise, E. B. Farris, Jane Haselden, Helen King, A. D. Kirwan, Colonel G. T. MacKenzie, Mary Page Milton, B. A. Shively, Lee Sprowles, E. E. Stein, R. W. Wild.

Foreign Students — A. E. Bigge, H. W. Beers, Chloe Gifford, Jane Haselden, J. E. Hernandez, W. H. Jansen, A. D. Kirwan, Dorothy Linville, W. L. Matthews, W. A. Price, Amry Vandenbosch.

Founders Day — L. J. Horlacher, T. R. Bryant, L. M. Chamberlain, F. G. Dickey, E. B. Farris, E. L. Gillis, R. D. Haun, Helen King, L. N. Plummer, E. P. Slone, E. J. Stahr, E. E. Stein, E. G. Sulzer, D. V. Terrell, M. M. White, R. W. Wild.

Freshman Week — L. W. Croft, J. S. Calvin, Margaret B. Cruise, W. A. Heinz, Sarah B. Holmes, J. S. Horine, A. D. Kirwan, L. E. Meece, B. N. Peak, Lee Sprowles, D. G. Steele, L. S. Thompson, W. A. Tolman.

Honors Day — M. M. White, W. D. Ham, Sarah B. Holmes, L. J. Horlacher, A. D. Kirwan, J. T. Masten, A. K. Moore, Maple Moores, V. A. Musselman, D. M. Seath, D. V. Terrell, R. W. Wild.

Insurance — C. C. Carpenter, J. S. Brown, O. F. Edwards, F. E. Harris, R. B. Knight, Paul Oberst, F. D. Peterson, R. R. Pickett, R. L. Tuthill, Anne Wilson.

Library — T. B. Stroup, T. D. Clark, Bruce F. Denbo, R. S. Grady, T. M. Hahn, R. L. Hopper, J. W. Martin, L. I. Poste, H. B. Price, H. P. Riley, H. A. Romanowitz, J. B. Shannon, E. J. Stahr.

Non-Resident Fees — Lee Sprowles, Frank Murray, F. D. Peterson.

Patents — E. N. Fergus, Carsie Hammonds, S. T. McCloy, J. W. Martin, J. R. Meadow, A. J. Meyer, Frank Murray, C. E. Snow, D. V. Terrell.

Personnel Office — L. W. Croft, C. C. Carpenter, T. P. Cooper, F. G. Dickey, Sarah B. Holmes, A. D. Kirwan, E. P. Slone, D. V. Terrell, M. M. White.

Research Fund — H. E. Spivey, R. E. Bills, L. M. Chamberlain, R. H. Cojeen, A. L. Cooke, B. F. Denbo, F. G. Dickey, E. E. Elsey, A. C. English, Margaret Hotchkiss, E. E. Kraehe, W. L. Matthews, D. G. Steele.

Schedule of Classes — O. T. Koppius, H. P. Adams, W. R. Brown, L. R. Dawson, G. P. Faust, L. J. Horlacher, J. L. Massie, Roy Moreland, Morris Scherago, D. C. Seaton, R. E. Shaver, Lee Sprowles, T. C. Walker.

Scholarships — L. M. Chamberlain, L. A. Bradford, L. H. Carter, L. W. Croft, May K. Duncan, Chloe Gifford, Robert Glaser, Sarah B. Holmes, A. D. Kirwan, E. P. Slone, D. V. Terrell, M. M. White, F. W. Whiteside.

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[1] When not otherwise included, the Vice President of the University is ex-officio a member of each administrative committee. In each instance the first named member is the chairman of the committee.

Scholarship and Attendance — A. D. Kirwan, A. J. Brown, C. C. Carpenter, L. W. Croft, F. G. Dickey, Jane Haselden, L. J. Horlacher, R. G. Lunde, E. J. Stahr, D. V. Terrell, J. A. Ward, M. M. White.

Social Program — Sarah B. Holmes, Margaret B. Cruise, Margaret Durham, E. P. Kauffman, A. D. Kirwan, B. N. Peak, Mackie Rasdall, D. C. Seaton, J. W. Skiles, Margaret Storey.

Student Loans — C. C. Carpenter, J. S. Calvin, H. H. Downing, Sarah B. Holmes, A. D. Kirwan.

University Press — F. L. McVey, H. W. Beers, L. M. Chamberlain, T. D. Clark, E. F. Farquhar, F. D. Peterson, L. N. Plummer, H. E. Spivey.

Veterans Housing — A. D. Kirwan, S. A. Boles, Jesse DeBoer, E. B. Farris, Sarah B. Holmes, L. L. Martin, F. D. Peterson, B. H. Wall, M. E. Weeks, H. E. Wetzel.

COMMITTEES OF THE UNIVERSITY FACULTY

Elections — F. G. Dickey, L. A. Bradford, W. M. Carter, F. A. Pattie, R. R. Pickett, E. W. Rannells, D. E. South, H. E. Wetzel.

Planning and Policy — Frank Murray, W. R. Allen, C. C. Carpenter, L. J. Horlacher, P. E. Karraker, F. D. Peterson, E. E. Stein, L. S. Thompson.

Rules — Lee Sprowles, L. M. Chamberlain, L. R. Dawson, S. A. Mory, H. E. Spivey, P. K. Whitaker, M. M. White.

Student Organizations — A. D. Kirwan, Betty J. Eilertsen, Jane Haselden, R. D. McIntyre, L. E. Meece, H. A. Romanowitz.

PART VI
STATISTICAL SUMMARY

Table 1. University Enrollment By Sex And By Colleges And Classes For The Year Ending June 30, 1951 Including The Summer Term Of 1950

(All Duplicates Excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Pharmacy		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1591	746	1591	746	2337
Seniors	309	158	264	71	419	1	73	1	131	161	300	30	61	4	....	....	1557	426	1983
Juniors	270	156	186	45	171	1	44	2	80	143	190	32	47	2	....	....	988	381	1369
Sophomores	275	172	144	62	208	3	56	1	18	79	133	43	56	....	....	....	890	360	1250
Freshmen	628	296	149	95	180	3	....	....	22	45	142	61	....	....	....	....	1121	500	1621
Specials	60	63	18	1	6	1	....	....	132	88	27	20	....	....	....	....	243	173	416
Auditors	8	18	2	2	1	....	5	....	....	....	7	5	....	....	7	5	30	30	60
Transients	31	91	12	4	....	....	....	....	4	18	3	....	....	....	....	....	50	113	163
Totals	1581	954	775	280	985	9	178	4	387	534	802	191	164	6	1598	751	6470	2729	9199

Table includes 305 students who were enrolled in the Northern Extension Center. Twenty-one of these attended classes on the campus at some time during the year.

Table 2. University Enrollment For The First And Second Semesters Of 1950-51 By Sex And By Colleges And Classes

(All Duplicates Excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Pharmacy		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	....	....	....	....	....	....	....	....	....	....	....	....	....	....	893	247	893	247	1140
Seniors	251	130	227	61	339	1	66	1	103	111	241	26	61	4	....	....	1288	334	1622
Juniors	254	141	172	42	165	1	43	2	79	111	183	31	47	2	....	....	943	330	1273
Sophomores	264	161	139	61	206	2	55	1	16	68	131	43	56	....	....	....	867	336	1203
Freshmen	610	284	148	95	176	3	....	....	21	43	140	60	....	....	....	....	1095	485	1580
Specials	52	48	14	1	4	1	....	....	37	46	26	17	....	....	....	....	133	113	246
Auditors	4	16	2	2	1	....	....	....	....	....	6	5	....	....	2	2	15	25	40
Transients	4	45	9	2	....	....	....	....	3	10	1	....	....	....	....	....	17	57	74
Totals	1439	825	711	264	891	8	164	4	259	389	728	182	164	6	895	249	5251	1927	7178

Table includes 293 students who were enrolled in the Northern Extension Center.

Table 3. University Enrollment For The First Semester Of 1950-51 By Sex And By Colleges And Classes

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Pharmacy		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	....	....	....	....	....	....	....	....	....	....	....	....	....	....	721	198	721	198	919
Seniors	209	110	183	51	260	1	69	1	82	84	205	21	61	4	....	....	1069	272	1341
Juniors	247	145	156	46	181	1	36	3	62	95	168	29	48	2	....	....	898	321	1219
Sophomores	274	162	159	55	202	2	65	1	27	60	127	32	59	....	....	....	913	312	1225
Freshmen	610	287	152	104	183	1	....	....	21	33	121	52	....	....	....	....	1087	477	1564
Specials	45	36	12	1	3	1	....	....	30	35	20	13	....	....	....	....	110	86	196
Auditors	1	12	....	2	1	....	....	....	....	....	4	5	....	....	1	1	7	20	27
Transients	2	44	2	....	....	....	....	....	2	7	....	....	....	....	....	....	6	51	57
Totals	1388	796	664	259	830	6	170	5	224	314	645	152	168	6	722	199	4811	1737	6548

Table includes 249 students who were enrolled in the Northern Extension Center.

Table 4. University Enrollment For The Second Semester Of 1950-51 By Sex And By Colleges And Classes

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Pharmacy		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	....	....	....	....	....	....	....	....	....	....	....	....	....	....	638	157	638	157	795
Seniors	208	108	177	53	243	1	51	1	77	91	155	22	57	4	....	....	968	280	1248
Juniors	214	126	155	36	150	1	38	2	73	99	164	26	46	2	....	....	840	292	1132
Sophomores	211	143	121	56	185	2	41	1	13	62	103	42	51	....	....	....	725	306	1031
Freshmen	444	239	122	86	145	3	....	....	14	37	109	51	....	....	....	....	834	416	1250
Specials	32	23	12	....	3	1	....	....	10	28	18	8	....	....	....	....	75	60	135
Auditors	4	6	2	1	....	....	....	....	....	....	3	1	....	....	2	1	11	9	20
Transients	2	36	7	2	....	....	....	....	2	8	1	....	....	....	....	....	12	46	58
Totals	1115	681	596	234	726	8	130	4	189	325	553	150	154	6	640	158	4103	1566	5669

Table includes 177 students who were enrolled in the Northern Extension Center.

Table 5. University Enrollment For The Summer Term Of 1950 By Sex And By Colleges And Classes

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Pharmacy		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1046	580	1046	580	1626
Seniors	147	61	129	37	229	....	27	....	59	83	139	10	....	....	....	....	730	191	921
Juniors	92	42	74	12	84	....	31	....	21	47	44	6	....	....	....	....	346	107	453
Sophomores	78	37	29	7	63	2	14	....	15	16	22	....	....	....	....	....	221	62	283
Freshmen	76	30	17	4	25	1	....	....	2	5	7	2	....	....	....	....	127	42	169
Specials	17	20	11	....	2	....	....	....	95	43	2	3	....	....	....	....	127	66	193
Auditors	5	2	....	....	....	....	5	....	....	....	2	....	....	....	10	3	22	5	27
Transients	33	48	3	2	....	....	....	....	1	9	3	1	....	....	....	....	40	60	100
Totals	448	240	263	62	403	3	77	....	193	203	219	22	....	....	1056	583	2659	1113	3772

INDEX

Page

Absences 30
Auditors 15, 19
Academic and Administrative Staff 295
Administrative and Service Organizations 35
Administrative Organization 2
Admission 14
  Advanced Standing 15
  Auditor 15
  Colleges and Schools 16
  Freshman Class 14
  Special Student 15
Agricultural Economics 87
Agricultural Entomology 85, 230
Agricultural Experiment Station .. 289
Agricultural Extension 85, 230
Agriculture and Home Economics, College of 81
  Pre-Agricultural Engineering ... 91
  Pre-Forestry Work 91
  Pre-Theological 91
  Pre-Veterinary 92
  Requirements for Graduation . 82
Agronomy 85, 230
Alumni Association 37
Anatomy and Physiology 56, 149
Ancient Languages 57, 150
Animal Industry 88, 232
Animal Nutrition 236
Animal Pathology 237
Anthropology 67, 153
Applied Mechanics 253
Application for Degree 32
Architectural Engineering 100, 274
Art 155
  Design 156
  Drawing 155
  Education 157
  History 156
  Painting 155
Arts and Sciences, College of 47
  Admission 47
  Advisers 47
  Aim 47
  Courses 48
  Degrees 48
  Group Requirements 49
  Organization 47
Astronomy 193
Bacteriology 58, 157
Botany 59, 160
Bureau of Audio-Visual Materials. 290
Bureau of Business Research .. 120, 290
Bureau of Correspondence and Class Study 142
Bureau of Club and Community Service 142, 290
Bureau of Community Service ... 290
Bureau of Government Research.. 291
Bureau of School Relations 142
Bureau of School Service 291
Bureau of Source Materials 291
Calendar, University 7
Calendar, Year 6
Changes in Status Affecting Members of the University Staff .. 337

Page

Chemistry 59, 162
Child Development 94, 241
Child Guidance Service 291
Civil and Architectural Engineering 99, 247
Classification 29
Classification in Foreign Languages 53
Clubs and Societies 36
Clothing, Textiles, Costume Design, and Interior Decoration 94, 239
Combined Courses (Arts-Law, Arts-Medicine, etc.) 53
Commencement Honors 32
Commerce, College of 120
  Accounting 124
  Banking and Finance 122
  Business Management 125
  Commerce Courses 277
  Commerce-Law 126
  General Business 121
  Industrial Administration 125
  Marketing, Merchandizing, Advertising 123
  Personnel Management 123
  Public Service 128
  Requirements for Graduation .. 121
  Secretarial Training 127
  Specialization in Statistics 128
Courses, Statement of 143
Credit for Beginning Foreign Language 52
Credits, Definition of 32
Credit for Training While in Military Service 26
Crops 230
Dairying 234
Dean of Men 23
Dean of Women 23
Definition of Semester Hour 32
Degrees 44
Department of Public Relations .. 291
Department Honors 52
Doctor of Education, Requirements for 139
Doctor of Philosophy, Requirements for 137
Dramatic Arts 171
Economics 60, 165, 277
Education 266
  Administration 266
  Agricultural 273
  Business 269
  Curriculum 270
  Distributive 274
  Elementary 271
  Foundations 267
  Home Economics 274
  Industrial 275
  Music 272
  Secondary 272
  Vocational 276
Education, College of 111
  Admission 111
  Certificates 111
  Requirements for Graduation .. 112
Educational Conference 292

INDEX — Continued

	Page
Engineer, The Kentucky	292
Engineering, College of	97
Administration	253
Admission	97
Aeronautical	104
Applied Mechanics	253
Architectural	100, 247
Civil	99, 247
Communications and Electronics	102
Courses of Study	98
Degrees	98
Drawing	253
Electrical	101, 250
Mechanical	103, 255
Metallurgical	104, 258
Mining	105, 260
Power	102
Engineering Experiment Station	292
English	166
Entrance Requirements	14
Examinations, Entrance	30
Examinations, Special	30, 53
Expenses	17
Extension, Department of	142
Extension Work, Rules Governing	30
Faculty Committees	343
Family Life Institute	293
Farm Economics	237
Farm Engineering	232
Fire Protection and Safety Engineering	254
Foods and Nutrition	238
Forestry	244
French	220
Fees	17
Geography	61, 172
Genetics	236
Geology	62, 174
German	177
Graduate School	132
Admission	132
Degrees	132
Dissertation	138
Fees	133
Fellowships and Scholarships	140
Language Requirements	138
Residence	138
Requirements for Degrees	133
Thesis	134
Graduation, Requirements for	32
Greek	152
Health Service	24
History	63, 174
Home Economics	92, 239
Home Economics Education	274
Home Economics Extension	95
Home Management	242
Honor Societies	35
Honors, Commencement	32
Honors, Department	52
Horticulture	89, 243
Humanities	183
Hygiene	63, 184
Industrial Chemistry	60
Industrial-Psychological Service	293
Institution Management	241
Italian	222
Journalism	63, 185
Kentucky Engineer, The	292
Latin	151
Law, College of	107
Admission	108
Combined Courses	110
Kentucky Law Journal	109
List of Courses	262
Leadership Societies	35
Library Science	66, 187
Living Expenses	21
Markets and Rural Finance	244
Marking System	31
Married Students' Housing	22
Mathematics	67, 189
Mechanical Engineering	103
Medical Technology	58
Military Science	68, 193
Mining Engineering	105, 260
Music	69, 196
Northern Kentucky Extension Center	30
Nurses, Courses for	79
Office Organization and Personnel	323
Opportunities for Financial Help	223
Organizations, Student	35
Ornamental Horticulture	89
Painting	155
Personnel Services	24
Pharmacy, College of	129, 283
Philosophy	201
Physical Education	75, 202
Physics	76, 208
Physiology	149
Placement Bureau, Teachers	292
Plant Pathology	231
Plant of the University, The	37
Political Science	77, 213
Poultry	235
Pre-Dental Course	56
Pre-Forestry	91
Pre-Law	66
Pre-Medical	54
Pre-Pharmacy	74
Pre-Theological	91
Pre-Veterinary	92
Probation	29
Professional Degrees — Engineering	136
Professional Societies	35
Psychology	78, 215
Public Service Institutes	293
Public Relations, Department of	291
Radio Arts	78, 218
Recognition Societies	35
Refund of Fees	21
Registration Schedules	9
Religious Life	34
Repeated Failures	29
Requirements for Graduation	32
Residence	17, 53
Residence Halls	21
Romance Languages	219
R.O.T.C.	68
Rules Affecting Students	28

INDEX — Continued

	Page
Rural Sociology	245
Russian	222
School Activities Program	293
Secondary Educatio	113
Second Bachelors or Master Degree	33
Self Help	23
Social Work	79, 222
Sociology	79, 224
Soils	230
Spanish	221
Speech	170
Speech Correction Clinic	294
Special Examinations	30, 53
Special Fees	18
Special Services	23, 289
Statistical Summary	345
Student Activities	35
Student Load	28
Student Organizations	35
Teacher Placement Bureau	292
University Extension	
Regulations Governing	30
Department of	142
University Health Service	24
University Personnel Services	24
University of Kentucky Press	294
University of Kentucky — Location, Accreditation, History of	13
University Libraries	294
The University and the Veteran	25
Vocational Agriculture	90
Zoology	227