

BULLETIN

University of Kentucky



Graduate School

1934-35

JULY, 1934

c



FRA

JESS

RICH

WAL

ESTO

CHA

HEN

MAT

HAR

PAU

GEOR

WILL

LEO

EST

CHA

LEH

G. B

HAR

PHIL

EDW

WIL

WIL

WIL

EZRA

EDW

THOM

CARS

I

T. T.

ABNE

CHAR

GRAN

OTTO

CLAIR

MOSE

ARTH

FRAN

BERT

JOHN

JAME

GRADUATE COUNCIL

FRANK LEROND McVEY,	
B. A., Ph. D., LL. D.....	President of the University
JESSE E. ADAMS, A. M., Ph. D.....	Education
RICHARD S. ALLEN, M. S.....	Anatomy
WALTER SEWELL ANDERSON, M. A.....	Animal Industry
ESTON JACKSON ASHER, M. A.....	Psychology
CHARLES BARKENBUS, B. S., Ph. D.....	Chemistry
HENRY BEAUMONT, Ph. D.....	Psychology
MATTHEW HUME BEDFORD, A. B., Ph. D.....	Chemistry
HARRY BEST, A. B., LL. B., Ph. D.....	Sociology
PAUL PRENTICE BOYD, A. B., M. A., Ph. D.....	Mathematics
GEORGE KEYPORTS BRADY, A. B., Ph. D.....	English
WILLIAM JOSEPH CARREL, C. E.....	Civil Engineering
LEO MARTIN CHAMBERLAIN, A. M., Ph. D.....	Education
ESTHER COLE, Ph. D.....	Political Science
CHARLES STEVENS CROUSE, E. M.....	Metallurgy
LEHRE LIVINGSTON DANTZLER, M. A.....	English
G. B. DIMMICK, Ph. D.....	Psychology
HAROLD H. DOWNING, B. C. E., S. M., Ph. D.....	Mathematics
PHILLIP CASSIDY EMRATH, E. M.....	Mining
EDWARD FRANKLIN FARQUHAR, M. A.....	English
WILLIAM EDWIN FREEMAN, A. B., E. E.....	Electrical Engineering
WILLIAM D. FUNKHOUSER,	
A. B., M. A., Ph. D., Sc. D.....	Zoology
WILLIAM FRANCIS GALLAWAY, M. A., Ph. D.....	English
EZRA L. GILLIS, A. B.....	Registrar
EDWIN STANTON GOOD, M. S.....	Animal Husbandry
THOMAS MARSHALL HAHN, M. S.....	Physics
CARSLIE HAMMONDS,	
B. S. in Agri., M. A., Ph. D.....	Education
T. T. JONES, M. A., Ph. D.....	Ancient Languages
ABNER WELLINGTON KELLY, M. A., Ph. D.....	English
CHARLES M. KNAPP, A. B., Ph. D.....	History
GRANT C. KNIGHT, A. M.....	English
OTTO TOWNSEND KOPPIUS, B. S., Ph. D.....	Physics
CLAIBORNE G. LATIMER, B. S., Ph. D.....	Mathematics
MOSES EDWARD LIGON, A. M.....	Education
ARTHUR CRANE MCFARLAN, A. B., Ph. D.....	Geology
FRANK T. MCFARLAND, Ph. D.....	Botany
BERTHUS BOSTON MCINTEER, B. S., M. S.....	Botany
JOHN W. MANNING, A. B., A. M., Ph. D.....	Political Science
JAMES W. MARTIN, A. B., A. M.....	Commerce

RALPH NELSON MAXON, B. S., Ph. D.....	Chemistry
JAMES BURT MINER, B. S., LL. B., Ph. D.....	Psychology
JAMES THOMAS COTTON NOE, A. M., Litt. D.....	Education
LESTER S. O'BANNON, B. M. E.....	Mechanical Engineering
L. A. PARDUE, A. B., M. S., Ph. D.....	Physics
MERWIN ELWOOD POTTER, B. S., M. A.....	Physical Education
H. BRUCE PRICE, Ph. D.....	Markets and Rural Finance
WALTER ALLEN PRICE, B. S. in Agri., M. S.....	Agricultural Entomology
FRANK HALL RANDALL, A. B., LL. B.....	Law
ELIJAH LAYTHAM REES, C. E., A. M.....	Mathematics
LEWIS CASS ROBINSON, M. S.....	Geology
CLAY CAMPBELL ROSS, A. B., Ph. D.....	Education
MORRIS SCHERAGO, B. S., D. V. M.....	Bacteriology
WILLIAM SEPTIMUS TAYLOR, B. S., Ph. D.....	Education
DANIEL VOIERS TERRELL, C. E.....	Civil Engineering
ERNEST G. TRIMBLE, A. B., Ph. D.....	Political Science
EDWARD TUTHILL, A. B., Ph. D.....	History
FRANKLIN ELLIOTT TUTTLE, M. A., Ph. D.....	Chemistry
AMRY VANDENBOSCH, Ph. D.....	Political Science
RALPH HOLDER WEAVER, B. S., Ph. D.....	Bacteriology
WILLIAM SNYDER WEBB, M. S.....	Physics
MARTIN M. WHITE, M. A., Ph. D.....	Psychology
EDWARD WIEST, A. M., Ph. D.....	Commerce
RALPH H. WOODS, M. A., Ph. D.....	Education

THE GRADUATE SCHOOL

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

INTRODUCTORY STATEMENT

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

The following advanced degrees are conferred by the University: Master of Arts, Master of Science, Master of Science in Agriculture, Master of Science in Home Economics, Civil Engineer, Mechanical Engineer, Electrical Engineer, Metallurgical Engineer, Mining Engineer.

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

ADMISSION TO GRADUATE STANDING

Graduates of institutions accredited by the University may be admitted to the Graduate School upon the presentation of a certificate of graduation and an official transcript of undergraduate courses taken. The status of the institution is to be ascertained from the Registrar of the University. Graduates from non-accredited institutions are encouraged to secure a bachelor's degree from an accredited institution. In particular cases they may be admitted to the Graduate School on the basis of doing additional work before being admitted to full graduate status.

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

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

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 at this institution.

REGISTRATION

Graduate students should register in the Graduate School on special cards prepared for this purpose.

Applicants from institutions other than this University are also required to file an official transcript showing (a) all undergraduate work covered, (b) graduate work taken, if any, and (c) degrees received.

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

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

All courses listed in this bulletin, and all courses which may appear later in the regular University catalog, which have numbers above 100, may be counted as credit towards a graduate degree. A grade of D in a course will not be given graduate credit or residence.

FEES

Registration and laboratory fees are the same as for undergraduate students in the college in which the major work is done, that is, \$47.00 for residents of Kentucky; \$60.00 for non-residents. This does not include laboratory fees.

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

APPLICATION FOR DEGREE

All candidates for degrees are required to make formal application for the degree at the office of the Registrar, on special cards provided for that purpose, at least one month before the date on which the degree is to be conferred.

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

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

Two plans are provided for satisfying the requirements for a master's degree, as follows:

1. Twenty-four credits in graduate courses exclusive of the thesis, one academic year (36 weeks) in residence, and an acceptable thesis.
2. At the option of a department (not of the student) the master's degree may be granted for the completion of forty-five credits in graduate courses with an average standing of B or better, three semesters (54 weeks) in residence, and no requirement of a thesis.

CREDITS

The credits (semester hours) may not include credits received in a thesis course. All of the work may be done in one field but it should preferably be done in a major subject and one or two minors. At least half of the work must be taken in major courses.

RESIDENCE

The residence requirements may be fulfilled by any combination of regular semester or summer school sessions which total the required number of weeks. This does not mean that the work prescribed for each individual student can always be completed in the minimum length of time. Inadequate preparation or assistance in departments very frequently makes a longer period necessary. Graduate students who carry less than nine credit hours of work in any regular semester or less than four credits in any one term of a summer session shall be considered as "part time" students. The residence allowed part time students shall be credited on the basis of $1\frac{1}{2}$ weeks for each credit completed.

The transfer of acceptable graduate credits from other institutions or of other work done *in absentia*, such as writing a thesis under the direction of the major professor, cannot reduce the standard residence requirements.

THESIS

If a thesis is submitted, two typewritten copies of the completed thesis must be presented not later than three weeks before the time set for the oral examination. One copy is presented to the Dean of the Graduate School to be bound and placed in the University Library and the other to the major professor to be retained by the department concerned.

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

MASTER OF SCIENCE IN AGRICULTURE OR 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 same requirements as those designated for the M. A. and M. S. degrees. The work is prescribed by the major professor with the approval of the Dean.

REQUIREMENTS FOR ADVANCED DEGREES IN ENGINEERING C. E., CIVIL ENGINEER; E. E., ELECTRICAL ENGINEER; M. E., MECHANICAL ENGINEER; MET. E., METALLURGICAL ENGINEER; E. M., MINING ENGINEER

Any of these advanced engineering degrees may be obtained in residence by satisfying the same requirements as those outlined for the M. A. and M. S. degrees, provided the student holds a corresponding bachelor's degree from an engineering college of recognized standing. The course of study should be arranged in consultation with the head of the department in which the student expects to do his major work and must have the approval of the Dean of the College of Engineering and of the Dean of the Graduate School.

Each of these degrees may also be obtained by graduates of the University of Kentucky for work done *in absentia* three or more years after receiving the degree of Bachelor of Science in the same branch of engineering, providing this time has been spent in practical engineering work and an acceptable thesis is presented. At least one year's notice must be given the Dean of the Graduate School that graduate work is being done, and such work must have his approval and that of the major professor under whose supervision the thesis is prepared.

Those holding the degree, Bachelor of Science in Mechanical Engineering, may apply for either of the degrees, Mechanical Engineer or Electrical Engineer.

The fees for the degree obtained *in absentia* are \$15.00 registration fee and \$15.00 graduation fee.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

The degrees 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 attainments in his chosen province.

The Doctor's 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 a scholarship should be shown by a thorough acquaintance with present knowledge in his special field of learning and a marked capacity for research.

REQUIREMENTS FOR APPLICANT

ADMISSION

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

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

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

CLASSIFICATION

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

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

COURSES OF STUDY

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

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

The applicant's principal work must be in the major subject. 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 catalogue are considered as of graduate status. The number and extent of such courses is determined by the special committee.

REQUIREMENTS FOR CANDIDATES

RESIDENCE

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

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

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

LANGUAGE REQUIREMENTS

The applicant must give evidence of having a good reading knowledge 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. The German department will examine applicants once each semester and once during the summer session. The dates for such examinations will be on record in the Graduate School office. Ordinarily French and German are expected to be offered, but other languages may be substituted on recommendation of the special committee if it is considered that such languages are of greater importance in the special field of work. The language requirements must be satisfied before the applicant can be admitted to the qualifying examination.

QUALIFYING EXAMINATION

Applicants for the degree of Doctor of Philosophy are required to pass a Qualifying Examination. This examination shall be taken during the second semester of the second year of residence. The exam-

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

DISSERTATION

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

PRINTING OF DISSERTATION

One hundred printed copies of the dissertation must be presented to the University within one year from the time when the degree is conferred. Not later than one week before the conferring of the degree the candidate must deposit with the Business Agent of the University the sum of \$50.00, this amount to be returned if the printed copies are received within the time specified. The University does not obligate itself to publish the thesis but if in the judgment of the Graduate Committee the thesis or an abstract of same should be published, the University reserves the privilege of so doing.—

Or—

The candidate may have the dissertation printed at his own expense, in which case he must present one hundred copies to the University before the degree is granted. If the candidate has the dissertation printed at his own expense, he will be expected to use good substantial paper and slightly 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 require-

ments for the degree of Doctor of Philosophy in the University of Kentucky."

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

APPLICATION

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

FINAL EXAMINATION

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

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

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

RECOMMENDATION

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

FELLOWSHIPS AND SCHOLARSHIPS

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

- Ten University scholarships with a stipend of \$200.00 each.
- Five University fellowships with a stipend of \$400.00 each.
- One Registrar's fellowship with a stipend of \$500.00.

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

Fellowships and scholarships are open to those who already hold, or will receive at the close of the academic year, a bachelor's degree from any college or university of good standing, provided the student

has shown some special aptitude for the line of work he desires to pursue.

The primary object of these appointments is to stimulate research and not to give pecuniary aid. No departmental duties of any kind will be required of fellows and scholars. Candidates for the awards must be graduates of standard colleges or universities and must show evidence of high scholarship and fitness for graduate study. No student should apply for the award who does not cherish a real and earnest desire to do research work. The appointments are made for one year only but may be renewed if it can be satisfactorily shown that the prosecution of research undertaken should continue.

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

GRADUATE STUDENTS NOT CANDIDATES FOR A DEGREE

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

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

Should a graduate student, who has not arranged for his work with a view 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.

THE GRADUATE CLUB

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

GRADUATE COURSES OF STUDY

The courses offered for graduate work are listed under the following groups:

I. LANGUAGES AND LITERATURES

- Ancient Languages
- English
- German
- Journalism
- Library Science
- Romance Languages

II. SOCIAL SCIENCES

- Archaeology (See Biological Sciences)
- Commerce
- Commercial Education (See Education)
- Economics
- Educational Psychology (See Education)
- Farm Economics (See Agriculture)
- History
- History of Education (See Education)
- Law (See Law)
- Markets and Rural Finance (See Agriculture)
- Philosophy
- Philosophy of Education (See Education)
- Political Science
- Psychology
- Sociology

III. BIOLOGICAL SCIENCES

- Agronomy (See Agriculture)
- Anatomy and Physiology
- Animal Industry (See Agriculture)
- Animal Pathology (See Agriculture)
- Anthropology and Archaeology
- Bacteriology
- Botany
- Entomology (See Agriculture)
- Horticulture (See Agriculture)
- Hygiene
- Psychology (See Social Sciences)
- Zoology

IV. PHYSICAL SCIENCES

Chemistry
Engineering (See Engineering)
Geology
Mathematics and Astronomy
Physics

V. AGRICULTURE

Agricultural Education (See Education)
Agronomy
Animal Industry
Animal Pathology
Entomology
Farm Economics
Home Economics
Home Economics Education (See Education)
Horticulture
Markets and Rural Finance

VI. EDUCATION

Administration
Agricultural Education
Commercial Education
Educational Psychology
Elementary Education
History of Education
Home Economics Education
Philosophy of Education
Physical Education
Secondary Education

VII. ENGINEERING

Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

VIII. FINE ARTS

Art
Music

IX. LAW

I. LANGUAGES AND LITERATURES

ANCIENT LANGUAGES AND LITERATURES

LATIN

109—LATIN LITERATURE (Selections). The authors read will probably be: Juvenal (Selected Satires); Martial (Selected Epigrams). These writers will be read for their literary value, and for the light they throw on the political and social life in Rome at the close of the first century.

Prerequisite: Latin 7 or 8. 3 credits; 1st semester (Jones)

110—LATIN LITERATURE (Selections). The authors read will probably be: Suetonius (Claudius and Nero); Seneca (Selections). The private life of the Caesars is discussed in detail. The principles of the Stoic Philosophy are explained.

Prerequisite: Latin 7 or 8. 3 credits; 2nd semester (Jones)

114a—LATIN COMPOSITION. The course will begin with easy passages in connected discourse and will proceed to more difficult selections.

Prerequisite: Latin 5. 1 credit; 1st semester (Jones)

114b—LATIN COMPOSITION. A continuation of 114a.

Prerequisite: Latin 5. 1 credit; 2nd semester (Jones)

120—GREEK CIVILIZATION (given entirely in English). A brief review of Ancient Greek history; the private and public life of the people; archaeology.

Prerequisite: Junior Standing. 3 credits; 1st semester (Jones)

121—ROMAN CIVILIZATION (given entirely in English). A brief review of Roman history; private and public life of the Romans; Roman archaeology.

Prerequisite: Junior Standing. 3 credits; 2nd semester (Jones)

122a—GREEK LITERATURE IN ENGLISH TRANSLATION. Several of the great authors will be studied, beginning with Homer.

Prerequisite: Junior Standing. 3 credits; 1st semester (Jones)

122b—A continuation of 122a. Prose writers will be studied; historians, orators, philosophers.

Prerequisite: Junior Standing. 3 credits; 2nd semester (Jones)

151a—COURSE IN INDIVIDUAL WORK. The work assigned will depend upon the needs of the student.

Prerequisite: Junior Standing. 3 credits; 1st semester (Jones)

151b—COURSE IN INDIVIDUAL WORK. A continuation of 151a.

Prerequisite: Junior Standing. 3 credits; 2nd semester (Jones)

201a—LATIN PASTORAL POETRY. This course is based mainly on Virgil's Eclogues and Georgics. The development of the author's talent will be noted and his models traced. In addition one or two dramas will be read, or selections from Lucretius.

Prerequisite: Graduate Standing. 3 credits; 1st semester (Jones)

201b—LATIN ELEGIAC POETRY. Selections from Catullus. Tibullus, Propertius, and Ovid will be read. The change in the subject matter of the Elegy will be noted. Scanning. Mythological references studied.

Prerequisite: Graduate Standing. 3 credits; 2nd semester (Jones)

GREEK

149—FREEMAN AND LOWE'S GREEK READER will be read and easy selections from other writers. Exercises in construction and composition.

Prerequisite: Greek 51. 3 credits; 2nd semester (Jones)

152—ANABASIS. Selections from books 2-4 of the Anabasis and from other writers of equal difficulty will be read.

Prerequisite: Greek 149. 3 credits; 1st semester (Jones)

153—HOMER. The Iliad, Books 1-6. The Homeric Question. Life in the Homeric Age. Mycenaean Antiquities. Recent discoveries will receive due attention. Scanning.

Prerequisite: Greek 149. 3 credits; 2nd semester (Jones)

154—PLATO. The Apology and Crito, selections from Phaedo. The relation of Plato to Socrates, Socrates as a moral teacher, his methods of investigation, will be discussed.

Prerequisite: Greek 152. 3 credits; 1st semester (Jones)

155—HERODOTUS. Books 6-7. This course will include a rapid survey of Greek History from the Ionic Revolt to the end of the Persian Wars.

Prerequisite: Greek 152. 3 credits; 2nd semester (Jones)

ENGLISH

The Department of English requires, as a prerequisite for the master's degree, attainment in English equivalent to that required of an undergraduate English major at the University of Kentucky. For the M. A. degree, a minimum of fifteen hours of English must be offered, including seminar throughout the year. A maximum of nine

hours in other subjects is permitted, provided these courses have the approval of the Graduate Committee of the Department of English. All candidates for the master's degree in English will be required to attain a reading knowledge of one foreign language before receiving the degree.

104—THE SEVENTEENTH CENTURY. Cavalier and Puritan Poetry; Milton; Burton, Browne, Bunyan, Walton; Restoration Prose and Poetry.

3 credits; 1st semester (Gallaway)

105—BROWNING. An intensive study of the art and teaching of Browning. Graduate students will be assigned special topics for investigation.

3 credits; 2nd semester (Dantzler)

106—THE ROMANTIC MOVEMENT IN ENGLISH POETRY. A rapid survey of the characteristics of the classical period, and a more careful study of growing signs of Romanticism in the early part of the 18th century. The French Revolution and its influence on the chief poets of the Romantic Movement. Special emphasis on Wordsworth, Byron, Shelley, Keats and other prominent poets of the first quarter of the 19th century.

3 credits; 1st semester (Brady)

107—VICTORIAN POETRY. 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.

3 credits; 2nd semester (Brady)

110a—SHAKESPEARE—COMEDY. Shakespeare's comedies will be studied in detail.

3 credits; 1st semester (Farquhar)

110b—SHAKESPEARE—TRAGEDY. A continuation of 110a.

3 credits; 2nd semester (Farquhar)

111a—THE NOVEL BEFORE SCOTT. The development of fiction from the romance to Jane Austen.

3 credits; 1st semester (Gallaway)

111b—THE ENGLISH NOVEL OF THE NINETEENTH CENTURY. A continuation of 111a, although the latter is not required for admission. It aims to acquaint the student with the development of the novel in English from Walter Scott to and including Stephen Crane.

3 credits; 2nd semester (Knight)

116—THE CONTEMPORARY DRAMA. Development and tenden-

cies in Continental, British, and American Dramatic literature, 1850 to 1918. Selected readings.

3 credits (Farquhar)

117—LITERARY COMPOSITION. Meant to stimulate original writing in any form the student prefers. The class becomes a laboratory for readings, criticisms and discussions. Those taking it should be interested, at least in a speculative way, in becoming writers.

2 credits; 2nd semester (Knight)

123a—AMERICAN LITERATURE BEFORE 1860. A survey course which purposes to introduce the student to influences in American life and thought as well as to its letters.

3 credits; 1st semester (Knight)

123b—AMERICAN LITERATURE AFTER 1860. A continuation of the above, which is not a prerequisite.

3 credits; 2nd semester (Knight)

127a—LITERATURE OF THE BIBLE. A literary study of the Bible by Books. It develops an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling.

2 credits; 1st semester (Farquhar)

127b—LITERATURE OF THE BIBLE. This is a continuation of 127a.

2 credits; 2nd semester (Farquhar)

130a—COMPARATIVE LITERATURE. Extensive reading of literary masterpieces through the ages from Homer to the present day. A study of the great traditions of civilization as reflected in the literary monuments. Lectures, assigned readings, and class discussion. Intended for advanced undergraduates or graduate students. The reading is assigned entirely in translations, but a reading knowledge of at least one foreign language is highly desirable.

3 credits; 1st semester (Brady)

130b—COMPARATIVE LITERATURE. A continuation of English 130a.

3 credits; 2nd semester (Brady)

133—THE DEVELOPMENT OF AMERICAN REALISM. A course which will complete the study of colonial and romantic American literature (English 123a and 123b) by tracing the development of realistic writing through our sectional humorists, the local color school, Mark Twain, the growth of naturalism in fiction, drama, and poetry to the present.

3 credits (Knight)

135—PRE-VICTORIAN PROSE. A careful study of some of the prose monuments of English Literature with special emphasis on the groups of writers surrounding the period of the French Revolution, with consideration of the philosophical and political writing of the age.

3 credits; 2nd semester (Brady)

136—VICTORIAN PROSE. A careful study of Carlyle, Ruskin, Newman, Spencer, Arnold, Huxley, and related writers of the period in the field of prose. Assigned parallel readings, class discussion, and lecture.

3 credits; 1st semester (Brady)

141—RESTORATION—EIGHTEENTH CENTURY DRAMA. A course in the types of drama arising or developing between 1660 and 1774. Special attention given to foreign influences on the English drama and the relations between the drama and the eighteenth century life.

3 credits; 1st semester (Kelley)

142—ENGLISH LITERATURE OF THE RENAISSANCE. A survey of the literature of the Elizabethan and Jacobean periods, exclusive of the drama. Attention will be given to the foreign sources of the English Renaissance. The sonnet will be studied from its origins to its development in Spenser. The pastoral from Theocritus to Spenser, Utopian literature from Plato to Moore, the romance from Aucassin and Nicolette.

3 credits; 1st semester (Dantzler)

145—ELIZABETHAN DRAMA. A study of Elizabethan drama and dramatists, excluding Shakespeare, contributing to the development of English drama. Special study of the influence of foreign drama upon Elizabethan drama.

3 credits; 2nd semester (Kelley)

147—THE AGE OF JOHNSON. Continuation of the survey from the death of Pope to 1798. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, Cowper. The Pre-Romantic Movement.

Prerequisite: English 152a 3 credits; 2nd semester (Gallaway)
or the consent of the instructor.

152—AGE OF POPE. Addison and Steele, Swift, Pope, and Deroe.

3 credits; 1st semester (Gallaway)

153—RESTORATION—EIGHTEENTH CENTURY DRAMA. A study of the dramatic types that arose or developed between the closing of the theaters in 1642 and the death of Sheridan.

3 credits; 1st semester (Kelley)

201a—LITERARY CRITICISM. This course is mainly an application of the philosophic and historical elements of literary criticism to some period of literature or to the works of some author in a period. It is criticism that essays the unity of all literature, its everlasting growth and the importance of inductive observation of literary phenomena.

Prerequisites: English 108a-b. 3 credits; 1st semester (Farquhar)

201b—LITERARY CRITICISM. A continuation of 201a. Special problems assigned to students.

3 credits; 2nd semester (Farquhar)

202a—STUDIES IN CONTEMPORARY DRAMA. This course is an application of the philosophy and history of drama to the modern drama as a whole and to the work of some particular dramatists. It includes a particular study of the work of Ibsen as prerequisite to any other study.

Prerequisite: English 116. 3 credits; 1st semester (Farquhar)

202b—STUDIES IN CONTEMPORARY DRAMA. A continuation of 202a. Special problems assigned to students.

3 credits; 2nd semester (Farquhar)

204a—BEOWULF. A literary and linguistic study of Beowulf. Lecture and recitation. One year of Old English and a reading knowledge of German are desirable.

2 credits; 1st semester (Dantzler)

204b—BEOWULF. A continuation of 204a.

2 credits; 2nd semester (Dantzler)

205—CHAUCER. Chaucer's contribution to English literature. The greater part of his poetry will be read. Lecture and recitation.

3 credits; 1st semester (Dantzler)

207—SPENSER. A study of Spenser and his poetry. Lecture and recitation. A problem will be assigned to each member of the class for study.

3 credits; 2nd semester (Dantzler)

208—CARLYLE. A comprehensive study of Carlyle, his position as a man of letters, and as a critic of literature. His literary essays, political philosophy, various writings on history, including *The French Revolution*. His social ethics and moral philosophy: *Sartor Resartus*, *Chartism*, *Past and Present*.

3 credits (Brady)

GERMAN

101a—NINETEENTH CENTURY LITERATURE. Studies in the

German drama of the 19th century with special emphasis on selected authors.

Prerequisite: German 3b. 3 credits; 1st semester (Bigge)

101b—NINETEENTH CENTURY LITERATURE. Continuation of course 101a.

Prerequisite: German 3b. 3 credits; 2nd semester (Bigge)

102a—GERHARDT HAUPTMANN. Readings, discussions and reports.

Prerequisites: German 3a-b. 3 credits; 1st semester (Bigge)

102b—GERHARDT HAUPTMANN. Continuation of Course 102a.

Prerequisites: German 3a-b. 3 credits; 2nd semester (Bigge)

105a—INDEPENDENT WORK COURSE. This course is designed for students of particular excellence in the department.

3 credits; 1st semester (Bigge)

105b—INDEPENDENT WORK COURSE. Continuation of Course 105a.

3 credits; 2nd semester (Bigge)

JOURNALISM

Note: Prerequisites for the following courses for journalism majors include Journalism 1a, 1b, and either Journalism 11 or 12.

102—COMMUNITY JOURNALISM. A study of the problems in editorial and business branches of the community newspaper and the small city daily.

Prerequisite: Junior standing. 3 credits; 1st semester (Portmann)

103—NEWSPAPER ADMINISTRATION. A study of the business, circulation, and accounting divisions of the newspaper with special emphasis placed upon bookkeeping, cost accounting, and the problems of the community newspaper.

Prerequisite: Junior standing. 3 credits; 2nd semester (Portmann)

104a—COPYREADING, PROOFREADING, TYPOGRAPHY, EDITING. A study of that editorial branch of the newspaper in which all news is selected and prepared for publication. A comprehensive study is also made of modern typography and newspaper makeup.

Prerequisite: Junior standing. 3 credits; 1st semester (Portmann)

104b—COPYREADING, PROOFREADING, TYPOGRAPHY, EDIT-

ING. A continuation of 104a. 104a must be taken first with no credit until 104b has been completed.

Prerequisite: Junior 3 credits; 2nd semester (Portmann)
standing.

105—LAW OF THE PRESS. A study of the special laws of libel, copyright, regulatory provisions, NRA codes, etc., that pertain to the press.

Prerequisite: Junior 3 credits; 1st semester (Portmann)
standing.

106—ETHICS AND PRINCIPLES OF JOURNALISM. A study of the practice and application of the ethics, principles, and standards of modern journalism.

Prerequisite: Senior 3 credits; 1st semester (Portmann)
standing.

107—EDITORIAL WRITING. A study of editorial writings, the editorial page and its contents, aims, and results; and the critical writing affecting the fine arts.

Prerequisite: Senior 3 credits; both semesters (Grehan)
standing.

108—HISTORY OF AMERICAN JOURNALISM. A study of the rise and development of American journalism and newspapers and their significance and effect on modern journalism.

Prerequisite: Senior 3 credits; 2nd semester (Portmann)
standing.

110—SUPERVISION OF HIGH SCHOOL PUBLICATIONS. A study of the problems that confront the adviser of the high school newspaper, magazine, or annual. Open to advisers or prospective advisers with consent of the instructor.

Prerequisite: Senior 3 credits; summer session (Portmann)
standing.

111—VERBAL CRITICISM. A study of words and their synonyms with reference to developing accuracy in use of modern English in journalistic work.

Prerequisite: Junior 3 credits; both semesters (Grehan)
standing.

LIBRARY SCIENCE

126—PLACE, FUNCTION, ADMINISTRATION, AND OPPORTUNITY OF THE HIGH SCHOOL LIBRARY. A study of the place, function, administration and opportunity of the library in the modern school. The librarian's relations to faculty, students, and outside agencies; the fundamentals of library planning and equipment; per-

sonnel problems and their management; business management, including accounts, records and statistics; methods of stimulating reading habits and handling an effective service are major topics discussed. Lectures, problems, assigned readings.

3 credits; 1st semester (King)

128—CHILDREN'S LITERATURE. A brief introduction to the field of children's literature and a comparative study of different classes and types of books with regard to the independent reading of children of different age groups and reading interests, with special emphasis on myth, folk tale and legend, followed by the reading and discussion of all types of books suitable for the junior high school. Special study of story telling; of illustration and physical make-up of books; of editions; of children's magazines and book-reviewing periodicals; and of aids in the selection of books for young people.

2 credits; 2nd semester (Semmons)

129a-b—CATALOGING AND CLASSIFICATION. A study of the principles and form of cataloging by the unit card system with some use of Library of Congress cards; of the assigning of subject headings especially for the high school and elementary school library; and of the principles of classification with their application in the effective administration of the library. Practice work under supervision is required in classifying books by the Dewey Decimal system and in making a shelf list and dictionary catalog. Lectures, problems and assigned readings.

3 credits; 1st semester (Semmons)

2 credits; 2nd semester (Semmons)

131—LIBRARY SERVICE TO CHILDREN. The effective organization and administration of library work with children with emphasis on the direction of children's reading, the equipment of children's rooms, and the assembly of special materials, especially for the elementary school library. Offered to supplement Education 173 and to provide the equivalent of Library Science courses 128 and 132 not offered during the regular academic years 1933-34 and 1934-35.

1 credit; 2nd semester (Semmons)

132—LIBRARY WORK WITH CHILDREN. The effective organization and administration of library work with children, developed through a study of the history of the work; of the economic and social background of the pupil; of the qualifications of the librarian; and of the equipment of rooms and the assembly of materials. Special emphasis on methods of directing the child's reading.

2 credits; 2nd semester (Semmons)

133a-b—REFERENCE AND BIBLIOGRAPHY. A study of essential reference works, particularly those most valuable in school libra-

ries, including dictionaries, encyclopedias, atlases, yearbooks, periodical indexes, and reference books on special subjects, with consideration of subject and trade bibliographies, government documents, and vertical file material; and of the standards by which such material is selected. Lectures, problems and assigned readings.

3 credits; 1st semester (Semmons)

2 credits; 2nd semester (Semmons)

138—METHODS OF TEACHING THE USE OF THE LIBRARY.

The course emphasizes the function of the library in the modern school and community; the value of developing in students a love of reading and research and of teaching them the effective use of library facilities. It includes the reading of articles on library lessons in school; a study of methods of teaching the use of the library with adaptation to grade taught; of plans for presenting the various types of materials; and the organization by the class members of a definite course of lessons correlated with the subject curricula of the school.

Prerequisite: 133a.

2 credits; 2nd semester (Gragg)

139—FIELD WORK. Comparable to practice teaching. Supervised practical work in all departments of the University High School and other school libraries two periods a week of two consecutive hours, supplemented by seminar discussions.

Prerequisites: 129a, 133a, 150a.

2 credits; 2nd semester

(Gragg)

144—LIBRARY RECORDS AND METHODS. A course planned to emphasize the essentials of library organizations and the importance of routine processes in the library, as related to effective library service. The various procedures necessary to the acquisition, accessioning, circulation and care of books and minor materials, and purchase of supplies are studied by means of assigned readings, problems, class discussions and occasional lectures.

2 credits; 1st semester (Semmons)

150a-b—BOOK SELECTION. A study of principles and standards in the choice of books and periodicals for junior and senior high schools. Practical problems in book selection and acquisition; a study of American publishers, inexpensive editions, of book reviewing periodicals and aids to book selections; the writing of book-notes; the reading and discussion of typical books in the fields of biography, travel, essays, drama, poetry, fiction, history, sociology, art, and science.

3 credits; 1st semester (Semmons)

2 credits; 2nd semester (King)

154—SEMINAR. A survey of the field of library science through a brief study of the history and personnel of the modern library move-

ment and the various agencies that have developed—library associations, schools, commissions, periodicals, etc.; of standards for professional training and certification; of the present library situation in the South and future needs; of current problems of special interest to the librarian. General discussion of problems, special reports on assigned topics.

Prerequisites: 133a, 126, 129a
desirable.

2 credits; 2nd semester
(Semmons)

ROMANCE LANGUAGES AND LITERATURES

FRENCH

109a—FRENCH LITERATURE OF THE NINETEENTH CENTURY. The works of the writers of nineteenth century are studied, i. e., Victor Hugo, Theophile Gautier, DeMusset, and Daudet.

3 credits; 1st semester (Zembrod)

109b—FRENCH LITERATURE OF THE NINETEENTH CENTURY. A continuation of 109a.

2 credits; 2nd semester (Zembrod)

110a—FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. The classics of Corneille, Racine, and Moliere are studied. Students are to familiarize themselves with the history of French society and civilization. Reports written in French are to be handed in at regular intervals. Advanced lessons in syntax and composition once a week.

3 credits; 1st semester (Zembrod)

110b—FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. A continuation of 110a.

3 credits; 2nd semester (Zembrod, Horsfield)

113a—ROMANCE LANGUAGES. This course is for graduate students who are majoring in one of the romance languages. No definite work is put down. Work is assigned to suit the needs of the students. A good reading knowledge of German is desirable.

3 credits (Zembrod)

113b—ROMANCE LANGUAGES. A continuation of 113a.

3 credits (Zembrod)

SPANISH

104a—SPANISH LITERATURE. Spanish novel and drama of the sixteenth and seventeenth centuries; syntax and composition. This course enables the student to become familiar with some of the works

of the greatest novelists and dramatists of the golden age of Spain's literary history.

3 credits; 1st semester (Server)

104b—SPANISH LITERATURE. A continuation of 104a.

3 credits; 2nd semester (Server)

112a—SPANISH LITERATURE. Spanish novel and drama of the nineteenth century; syntax and composition.

3 credits; 1st semester (Server)

112b—SPANISH LITERATURE. A continuation of 112a.

3 credits; 2nd semester (Server)

II. SOCIAL SCIENCES

ARCHAEOLOGY (See Biological Sciences)

COMMERCE (See Economics and Commerce)

COMMERCIAL EDUCATION (See Education)

ECONOMICS AND COMMERCE

102—LABOR PROBLEMS. A study of the labor market in its industrial setting, including such directly related topics as immigration, unemployment, and labor organizations.

Prerequisite: Course 1. 3 credits; 1st semester (Carter)

103—TRANSPORTATION. Railways, waterways, highways, airways. Rates, service, management, regulation.

Prerequisite: Course 1. 3 credits; 2nd semester (Sullivan)

104—GOVERNMENT FINANCE. A study of public receipts; public expenditures; the principles of taxation with special reference to their application to the tax systems, federal and state.

Prerequisite: Course 1. 3 credits; 1st semester (Martin and Sullivan)

105—MONEY AND BANKING. Nature and functions of money; the importance of credit; relation of money and credit to prices; bank deposits and loans; complete study of our national banking system.

Prerequisite: Course 1. 3 credits; 1st semester (Wiest and Sullivan)

106a—ADVANCED ACCOUNTING. Principles of valuation and income determination. Statement arrangement. Corporation accounting. Manufacturing accounts. Advanced partnership accounting.

Prerequisites: Courses 7a and 7b. 3 credits; 1st semester (Haun)

106b—ADVANCED ACCOUNTING. Continuation of 106a. Accounting for installment sales, agencies and branches, ventures, and consignments. Accounting features of insolvent concerns and of consolidations and mergers. Estate accounting. Analysis of financial statements.

3 credits; 2nd semester (Haun)

107—STATISTICAL METHOD. Training in the process of treating multiple phenomena with mathematical exactitude. The methods are illustrated with material from the fields of psychology, education, economics and sociology. Recitation, one hour, laboratory, four hours.

3 credits; 1st semester (Palmer)

109a—BUSINESS LAW. A survey of the principles of contracts, sales, bills and notes, and that portion of the law of torts applicable to business practices.

3 credits; 1st semester (Murray)

109b—BUSINESS LAW. Continuation of 109a.

3 credits; 2nd semester (Murray)

110—BUSINESS CYCLES. The nature and characteristics of the economic factors which underlie the cyclical fluctuations in business conditions; the methods of business and investment forecasting.

Prerequisites: Courses 1 and 107.

3 credits; 2nd semester

(Palmer)

112a—INDIVIDUAL WORK IN ECONOMICS. In this course a selected group of advanced students who have at least a standing of 2 are given special problems for intensive investigation. The students are expected to do more work than the usual amount required per credit hour.

Prerequisite: Course 1.

2 credits; 1st semester

(Martin, Palmer and others)

112b—INDIVIDUAL WORK IN ECONOMICS. Continuation of 112a.

2 credits; 2nd semester

(Martin, Palmer and others)

113—AUDITING. The theory of auditing, the valuation of assets, analysis of accounting procedure, and the presentation of statements. Special problems applicable to particular businesses will also be presented.

Prerequisites: Courses 7a and 7b. 3 credits; 2nd semester (Haun)

117—CORPORATION FINANCE. Stocks and bonds, sound fiscal principles concerning the issue of securities, the management of the corporate income, the disbursement of dividends, the creation of sinking funds, and reorganization procedure.

Prerequisites: 1, 7a, 7b and 9.

3 credits; 2nd semester

(Lawrence and Averett)

118—COST ACCOUNTING. The place of cost accounting in the general field of accounting, special records and cost statistics, application to particular businesses.

Prerequisites: Courses 7a, 7b.

3 credits; 1st semester

(Haun)

119—RETAIL MERCHANDISING. Selecting a business location, internal layout, departmentalization, merchandising control, store

policies toward the public, training and management of personnel, and related subjects.

Prerequisites: Courses 1, 10. 2 credits; 2nd semester
(McIntyre)

120—ORGANIZATION OF ECONOMIC GROUPS. A survey of economic groups and their economic and social relationships; the business organization aspects of farmers' organizations, chambers of commerce, trade and industrial associations.

Prerequisite: Course 1. 3 credits; 1st semester (Sullivan)

124—STATE AND LOCAL TAXATION. Classified property taxes; separation of sources of revenue, taxation of banks, forests, public utilities, mines, and rural and urban real estate; income, inheritance and sales taxes.

Prerequisite: Course 1. 3 credits; 2nd semester (Martin)

125—ADVANCED ECONOMIC HISTORY OF EUROPE. An advanced study of population, immigration, labor, agriculture, industry, and finance and the effects of the various lines of development upon national life.

Not open to freshmen and sophomores nor to students who have had course 2 except when doing graduate work. 3 credits; 1st semester
(Jennings)

126—ECONOMICS OF PUBLIC UTILITIES. No credit for this course can be given if the student has credit for Political Science 158. Growth and development of public utilities; valuation; rate-making; financing; the holding company; regulation; current problems; accounting.

Prerequisite: Course 1. 3 credits; 1st semester (Carter)

127—INTERNATIONAL ECONOMIC POLICIES. Modern fallacies respecting foreign trade; free trade; protectionism; preferential tariffs; colonial tariff policies; dumping, commercial treaties; control of raw materials; encouragement of shipping; international investments and the movement of capital; international debts; reparations.

Prerequisite: Course 1. 3 credits; 2nd semester (Sullivan)

128—FOREIGN EXCHANGE. The theory and practice of foreign exchange; types of foreign bills; the rate of exchange; international gold movements; investment and speculation in exchange.

Prerequisite: Course 1. 2 credits; 1st semester (Palmer)

129—CREDITS AND COLLECTIONS. The theory of credits; forms of credits; classes of credit and credit machinery; duties and qualifications of a credit man; elements determining the credit risk;

sources of credit information; analysis of the financial statement; collections; legal remedies of the creditor and credit safeguards.

Prerequisites: Courses 1, 10. 2 credits; 1st semester (Averett)

130—LABOR LEGISLATION. The status of labor law, mediation, conciliation, arbitration, the minimum wage, the eight-hour day, unemployment relief, safety and health legislation, and social insurance.

Prerequisite: Course 1. 3 credits; 2nd semester (Carter)

131—INVESTMENTS. The general field of investments. Emphasis is placed upon problems which face the investor rather than the seller of securities. Analysis of corporation statements for investment purposes; the security market; market influences on security prices; effect of interest changes on security prices; analysis of specific types of investments; and the development of investment programs.

Prerequisites: Courses 1, and 9. 2 credits; 2nd semester (Palmer)

132a—C. P. A. PROBLEMS. This course is designed to prepare students for C. P. A. examinations. Advanced accounting theory is stressed through the study of a wide range of problems.

Prerequisites: Courses 106a and 106b. 3 credits; 1st semester (Haun)

132b—C. P. A. PROBLEMS. Continuation of 132a.

3 credits; 2nd semester (Haun)

133—INCOME TAX PROCEDURE. The preparation of income tax returns for individuals and corporations of all classes and a practical application of principles of accounting.

Prerequisites: Courses 106a, 106b. 3 credits; 1st semester (Haun)

134—ADVANCED ECONOMIC HISTORY OF THE UNITED STATES. An advanced study of English colonial policy, population growth, immigration, territorial expansion, agriculture, manufactures, tariff, labor, industrial combinations, commerce, transportation facilities, money and banking, and conservation.

Not open to freshmen and sopho-

mores nor to students who

have had course 3 except

when doing graduate work.

3 credits; 2nd semester

(Jennings)

135—ADVANCED MARKETING. The literature and problems in the retail distribution of consumers' goods; wholesale distribution of consumers' goods; industrial goods; sales organization; sales promotion and advertising and price policies.

Prerequisite: Course 10. 3 credits; 1st semester (McIntyre)

136—SALES MANAGEMENT. The case method will be used supplemented with outside reading and written reports.

Prerequisites: Course 11 or 3 credits; 2nd semester (McIntyre)
the consent of the
instructor.

137—PROBLEMS IN MANAGEMENT. Emphasis is placed upon factory management, but an attempt is made to coordinate managerial aspects of business in its entirety. Approximately half of the semester is devoted to the consideration and criticism of business reports dealing with various managerial problems and prepared by members of the class.

Open only to seniors of the
College of Commerce who are 3 credits; 2nd semester
required to take either this (Carter)
course or 138, and to grad-
uate students who have had
the necessary prerequisite
training.

138—INVESTIGATION OF BUSINESS PROBLEMS. The method of surveying, analyzing and actual investigation of problems of business management. It is intended for mature students who have had a thorough training in commerce and who are capable of doing research work under the guidance of the instructor. The work will involve the statistical analysis of data secured through interviews, questionnaires and otherwise, and the use of the results in determining a satisfactory solution.

Open only to seniors of the Col-
lege of Commerce who are 3 credits; 2nd semester
required to take either this (Palmer)
course or 137, and to grad-
uate students who have had
the necessary prerequisite
training.

140—ADVERTISING CAMPAIGNS. The procedure necessary for developing an advertising campaign; a study of successful advertising campaigns as used by leading business houses throughout the country; and the planning and execution of an advertising campaign in conjunction with some local business house. The advertising campaign worked out by the student will be checked and tested for its effectiveness.

Prerequisites: Course 11, 3 credits; 2nd semester
Psychology 5, or the con- (McIntyre)
sent of the instructor.

141—MANAGERIAL STATISTICS. An advanced practical course

in the use of charts and graphs by the business manager; logarithmic, double logarithmic and other rulings, pin maps, organization charts, work schedule graphs, computation graphs and nomographs, plotting the error area of trends, construction of three-dimensioned surfaces, etc. Data will be drawn from the fields of accounting, advertising, personnel work, credit granting, purchasing, scheduling and the like.

Prerequisite: An Elementary course in statistics. 3 credits; 1st semester (Palmer)

142—INDEX NUMBERS. The problems of sampling, selection of formula, and weighting in the construction of index numbers; a study of the construction and use of the common index numbers of prices and production.

Prerequisite: An Elementary course in statistics. 2 credits; 2nd semester (Palmer)

143—LIFE INSURANCE. Economics of life insurance; organization and control; special forms of life insurance; fundamental principles of rate-making.

Prerequisite: Course 1. 3 credits; 1st semester (Averett)

144—PROPERTY AND CASUALTY INSURANCE. Public control; nature of contracts; analysis of reserve functions and rate-making processes.

Prerequisite: Course 1. 3 credits; 2nd semester (Averett)

145—PROBLEMS IN OFFICE MANAGEMENT. The theories and principles underlying office management and control. The course is designed for superintendents of schools, high school principals, registrars, office workers, and others.

3 credits; summer session (Lawrence)

202a—SEMINAR. An extended original investigation of some specific topic with a view to giving training in methods of research and studying intensively a particular subject in the field of economics.

3 credits; 1st semester (Martin and others)

202b—SEMINAR. Continuation of 202a.

3 credits; 2nd semester (Martin and others)

203—HISTORY OF ECONOMIC THOUGHT. A survey of the history of economic thought from the ancient period to about the end of the Classical School.

Prerequisite: Course 1. 3 credits; 1st semester (Wiest)

204—ECONOMIC HISTORY OF THE UNITED STATES PRIOR

TO 1860. An examination of original sources and class reports; intensive investigation of all the subjects in detail prior to 1860.

Not open to students who 2 credits; 1st semester
have taken Course 134 for (Jennings)
graduate credit.

205—ECONOMIC HISTORY OF THE UNITED STATES SINCE 1860. A continuation of course 204, but may be taken independently.

Not open to students who 2 credits; 2nd semester
have taken Course 134 for (Jennings)
graduate credit.

206—MUNICIPAL FINANCE. The budget problems of municipalities are analyzed; the debt policies critically examined; and the auditing and reporting plans compared and evaluated. Problems of taxation are dealt with incidentally. Each individual conducts one or more independent investigations.

3 credits; 1st semester (Martin)

207—LITERATURE OF PUBLIC FINANCE. Several of the great masterpieces of government finance are read critically. Each student makes a careful study of one system or of the development of one idea. A reading knowledge of French or German is desirable, but not necessary.

3 credits; 1st semester (Martin)

208—ADVANCED ECONOMIC THEORY. A critical, comparative analysis of "orthodox" economic theory in the light of recent criticism is attempted. The course is built around a comprehensive system of economic theory.

3 credits; 2nd semester (Martin)

209—COMPARATIVE BANKING AND MONETARY SYSTEMS. A comparative study of banking system and monetary policies in the principal countries of the world; emphasis is placed upon present-day organization; the commercial bank with its monetary functions is the main theme of the course, but brief surveys of investment banking systems are also attempted.

3 credits; 2nd semester (Wiest)

210—RESEARCH STATISTICS. For those who wish to become connected with government, state and industrial research bureaus; particularly devoted to the study of the practical applications of probable error formulae, in estimating the most profitable size of samples. Applications will be made in the fields of frequency series, correlation problems, and time series.

Prerequisites: An elementary 3 credits; 2nd semester
course in statistics and (Palmer)
consent of instructor.

211—ADVANCED MONEY AND BANKING. A general survey of the subject is attempted with the emphasis upon its historical and theoretical aspects.

3 credits; 2nd semester (Wiest)

215—CONTEMPORARY ECONOMIC THOUGHT. A survey of current literature of theoretical economics. Special emphasis is placed on analysis of fundamental institutions.

Prerequisite: Course 1.

3 credits; 1st semester (Martin)

EDUCATIONAL PSYCHOLOGY (See Education)

FARM ECONOMICS (See Agriculture)

HISTORY

To become a candidate for the Master's degree in History, the applicant must present twenty semester hours of college history—being the equivalent of the A. B. degree with History as a major in the University of Kentucky.

Applicants for the degree of Doctor of Philosophy who select History as the major field of study will adopt a program in line with the following requirements and suggestions, always subject to the approval of the Department:

EXAMINATION FOR ADMITTANCE TO CANDIDACY

Early in the second year of graduate study the applicant will be required to take an examination for admittance to candidacy. This examination will be both written and oral and will cover the course work in both the major and minor fields. In addition, the History Department may require the applicant to present specific fundamental fields even if these have not been covered in course work. The duration of the written examination will be 8 hours in the case of a major and 2 to 3 hours in the minor. There will be an oral examination of not less than 2 hours. Meeting successfully this examination admits the applicant to candidacy following approval by the Dean of the Graduate School.

COMPREHENSIVE ORAL EXAMINATION

Later in his work the candidate will be required to pass a comprehensive written and oral examination in not less than five specified fields of history which have been previously selected with the approval of the Department. The candidate will be expected to show that his knowledge in these fields is of a definitive character. For the purposes of this examination the subject is organized into the following divisions and special fields:

DIVISION I

1. The Ancient Orient and Greece.
2. Roman History.

3. Political and Institutional History of the Middle Ages.
4. History of Continental Europe, 1300-1648.
5. English History to 1485.

DIVISION II

1. English History since 1485.
2. History of Continental Europe, 1648-1871.
3. History of Continental Europe since 1871.
4. History of North America and U. S. to 1789.
5. History of the United States, 1789-1876.
6. History of the United States since 1876.

DIVISION III

1. The Expansion of Europe.
2. The Far East.
3. The Near East.
4. Latin-America.
5. Canada.

In order that the candidate may have a reasonable distribution of the fields for intensive study which will be tested in this examination he must select:

- at least 1 field from division I,
- at least 2 fields from division II,
- and may select 1 field from division III.

In addition to the specific detailed examination on these selected fields the candidate should understand that he will be expected to have general familiarity with the broader fields of European and American history.

FINAL EXAMINATION

After the acceptance of the dissertation by the special committee appointed for this purpose and by the Dean of the Graduate School the candidate shall be given a final oral examination. In this examination the candidate shall be required to defend his thesis and also to present for examination the special field in which the thesis subject lies.

The following courses are offered by the Department:

100a—THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES TO 1860. A survey designed to acquaint the student with the principles of American foreign policy and their historical evolution in practice.

Prerequisite: Course 10a, or equivalent. 3 credits; 1st semester (Clyde)

100b—THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES SINCE 1860. A continuation of course 100a.
Prerequisite: Course 10b, 3 credits; 2nd semester (Clyde)
or equivalent.

105—COLONIAL AMERICA. A study of the beginnings of the English colonies, the colonial background, political, social and economic development, extension of their frontiers, inter-colonial wars, and external relations with the Dutch, French and Spanish. Emphasis on imperial policies and imperial control and the controversies arising therefrom.

Prerequisite: One year of 3 credits; 2nd semester (Knapp)
American or English
history in College.

106a—COLONIAL LATIN AMERICA. A survey of the founding and development of the Latin American Colonies and their struggle for independence.

2 credits; 1st semester (Knapp)

106b—LATIN AMERICAN REPUBLICS. This course will include a study of the political, economic, and social institutions, and problems of the Latin American Republics from the attainment of independence to the present.

2 credits; 2nd semester (Knapp)

110a—HISTORY OF THE AMERICAS. A survey of the founding and development of the colonial empires of Spain, England, Portugal, France and The Netherlands, movements for independence, the development of the greater Latin-American Republics, and the rise of the Americas in world politics.

3 credits (Knapp)

110b—HISTORY OF THE AMERICAS. A continuation of Course 110a.

3 credits (Knapp)

114—THE RENAISSANCE. A study of the Italian Renaissance from 1300 to 1500. The states and cities of Italy and their scholars; general movements, political and other; rise of the modern spirit along the several lines of art and science, education, philosophy, commerce and exploration. Text, lectures, reports.

3 credits; 1st semester (Tuthill)

115—THE RENAISSANCE IN THE NORTH. This course will properly follow Course 114 in tracing the awakening of the new spirit in France, England, and Germany, and in sketching the background of the Reformation period.

Prerequisites: History 4a-b.

3 credits (Tuthill)

119a—THE FRENCH REVOLUTION AND NAPOLEON. A study of the period 1789-1815 in Europe, treating of the appearance and manifestation of the spirit of revolt. Conditions in France and adjoining nations, the evolution of France from 1778 to 1795 and subsequent changes under Napoleon. Open to juniors, seniors and graduate students, with supplementary reading for the latter.

3 credits; 1st semester (Tuthill)

119b—THE NINETEENTH CENTURY. Starting with the fall of Napoleon, this course treats the successive political changes in 1823, 1830, 1848 and 1871, together with the outstanding commercial, cultural and scientific features of European life after 1815; the expansion of Europe in Africa and Asia, and the reactions upon the great states of the world.

3 credits; 2nd semester

120—THE TWENTIETH CENTURY. A study of recent and contemporary movements, chiefly in Europe. The rise and conflict of the chief colonial empires; European interference and control in Asia and Africa; forces and elements leading up to the great war; general features of the past twenty-five years, including socialism, public education, invention and discoveries. Reports on current literature and assigned reading on a liberal scale.

3 credits; 2nd semester (Tuthill)

131a—ENGLISH CONSTITUTIONAL HISTORY TO 1603.

2 credits; 1st semester (Hall)

131b—ENGLISH CONSTITUTIONAL HISTORY SINCE 1603.

2 credits; 2nd semester (Hall)

135a—THE BRITISH EMPIRE TO 1860. Review of the various elements affecting Great Britain and her Empire between 1783 and 1860: The Industrial Revolution; The French Revolution; Development of British Sea Power. The early growth and development of Canada, Australia, New Zealand, South Africa, and India. Lectures, class discussions, readings, reports. Three hours a week.

3 credits (Hall)

135b—THE BRITISH EMPIRE SINCE 1860. A continuation of 135a. Great Britain and the growth of the Dominions and the Commonwealth since 1860. Particular attention given to the history of the Canadian Dominion and the extension of the idea to other portions of the Commonwealth; their relations with the rest of the World. Three hours a week.

3 credits (Hall)

140a, b, c, d—INDIVIDUAL WORK. Under special conditions

selected students may investigate special problems, making weekly reports to the instructor.

2 credits (Staff)

147—RECENT HISTORY OF THE UNITED STATES. An intensive study of the principal movements and episodes in the history of the people of the United States from the Spanish-American War to the present.

Prerequisite: One year of American history. 3 credits; 2nd semester (Knapp)

160—THE CIVIL WAR PERIOD IN KENTUCKY. A close study of neutrality, war and readjustment with emphasis on political, economic, and social developments in Kentucky from 1860 to 1870.

2 credits

166a—DIVISION AND REUNION, 1850-1877. An intensive study of sectionalism in the United States from 1850 to 1860. The political, military, economic, industrial and educational aspects of the period of the Civil War, and Reconstruction. Emphasis on the problems of the Border States.

3 credits (Knapp)

166b—DIVISION AND REUNION, 1850-1877. A continuation of Course 166a.

3 credits (Knapp)

170—THE ERA OF LOUIS XIV. A study of the general conditions of Western Europe from 1648 to 1715, and particularly of the institutions and power of France under the leadership of Louis XIV, as reflected in the life and culture of Europe and her colonies.

Prerequisite: One year of European history. 3 credits (Tuthill)

184—THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. A study of the relationship of geography to history and the influence of physiography upon the settlement and growth of various regions of the Americas.

Prerequisites: Ten semester hours of American history. 1 credit (Knapp)

190a—THE FAR EAST TO 1900. The contacts of Europe and America with the Far East (China, Korea, Japan, eastern Siberia and the Philippines) to the close of the 19th century.

Prerequisite: Course 4a or equivalent. 3 credits (Clyde)

190b—THE FAR EAST SINCE 1900. A continuation of Course 190a.

Prerequisite: Course 4b. 3 credits (Clyde)

COURSES IN THE "200" GROUP

These courses are for graduate students only. They are content courses presented by the lecture and discussion method, and as such are distinct in character from the "300" group of courses which are concerned with problems and practice of research.

200a, b, c, d—GRADUATE SEMINAR IN AMERICAN DIPLOMATIC HISTORY. A specific topic for investigation will be assigned by the instructor.

3 credits; each semester (Clyde)

202—THE AMERICAN REVOLUTION.

3 credits (Knapp)

203—THE FEDERAL CONVENTION OF 1787.

2 credits

206—AMERICAN CONFEDERATION.

3 credits (Knapp)

226—THE OLD SOUTH.

3 credits (Knapp)

230—DEVELOPMENT OF THE POPULIST MOVEMENT. A close study of the origin and development of the Populist movement through the last quarter of the 19th century.

3 credits (Knapp)

231—THE BRITISH EMPIRE SINCE 1815. The rise of the modern British Empire. Stressing the development of responsible government and the Dominions. Especial emphasis will be placed upon Canadian history as a type. Modern Imperialism and the World War. Developments in Empire History since the war. Lectures, discussions, and reports. Three hours a week for one semester.

236—HISTORY OF THE WEST.

3 credits (Knapp)

265—THE AMERICAN CIVIL WAR.

2 credits (Knapp)

280—EUROPEAN HISTORIOGRAPHY. A study of the principal collections of material bearing on European history together with guides to books and periodicals in various fields. Periods will be chosen according to the needs of students. Lectures, discussions, problems.

2 credits; 1st semester (Tuthill)

281—AMERICAN HISTORIOGRAPHY. A study of the principal historians of United States and their works; periodical and mono-

graphic literature; public documents and collections of source materials; guides to and methods of historical investigations. Lectures, discussions, problems.

2 credits; 2nd semester (Knapp)

282—HISTORICAL CRITICISM. A study of the process of collecting, assembling, criticising and presenting material relating to thesis and seminar courses. A standard treatise will be used.

2 credits (Tuthill)

COURSES IN THE "300" GROUP

SEMINARS—basically research in character. These are not content courses. They provide laboratory training in historical research (collection and critical analysis of bibliography, note-taking and organization of materials, and the presentation of a properly documented thesis). It is desirable that the student take the Senior Seminar before enrolling in "300" courses. 3 hours credit. 2 class hours. 1 conference hour.

300a, b, c, d—SEMINAR IN AMERICAN DIPLOMACY.

3 credits (Clyde)

315a, b, c, d—HENRY CLAY.

3 credits (Knapp)

320a, b, c, d—ORIGINS OF THE GREAT WAR.

3 credits (Tuthill)

331—SEMINAR IN MODERN BRITISH HISTORY.

3 credits (Hall)

340a, b, c, d—SEMINAR IN AMERICAN DIPLOMACY IN THE PACIFIC AREA.

3 credits (Clyde)

365—THE AMERICAN CIVIL WAR.

3 credits (Knapp)

366—RECONSTRUCTION.

3 credits (Knapp)

HISTORY OF EDUCATION (See Education)
MARKETS AND RURAL FINANCE (See Agriculture)

LAW (See Law)

PHILOSOPHY

101a—HISTORY OF PHILOSOPHY. A critical survey of Greek Philosophy and the Philosophy of the Middle Ages.

[OFFERED 1934-35]

3 credits; 1st semester (Kuiper)

101b—HISTORY OF PHILOSOPHY. A critical survey of modern Philosophy from the Renaissance to contemporary times.
[OFFERED 1934-35]

3 credits; 2nd semester (Kuiper)

110—THE MAKING OF THE MODERN MIND. A survey of the intellectual background of the present age.
[NOT GIVEN 1934-35]

111a—CONTEMPORARY PHILOSOPHY. A study of contemporary realism, idealism, pragmatism, etc., with special reference to the writings of Bertrand Russell, S. Alexander, F. H. Bradley, B. Bosanquet, Wm. James, John Dewey, Henri Bergson, and G. Santayana.
Prerequisites: Philosophy 3 credits; 1st semester (Kuiper)

101a, b.

[NOT GIVEN 1934-35]

111b—CONTEMPORARY PHILOSOPHY. Continuation of 111a.
Prerequisites: Philosophy 3 credits; 2nd semester (Kuiper)

101a, b.

[NOT GIVEN 1934-35]

115—INTERMEDIATE LOGIC. A second course in logic, including an introduction to symbolic logic and its relation to traditional logic.

Prerequisite: Philosophy 31. 3 credits; 1st semester (Kuiper)

118—PLATO AND ARISTOTLE. A study in English of the chief dialogues of Plato, and of Aristotle's *Ethics, Politics, and Metaphysics*.
3 credits; 2nd semester (Kuiper)

201a—SEMINAR IN PHILOSOPHY. One two-hour meeting a week for discussion of current developments in Philosophy as found in recent books as well as in periodicals.

1 credit; 1st semester (Kuiper)

201b—SEMINAR IN PHILOSOPHY. Continuation of 201a.

1 credit; 2nd semester (Kuiper)

210a—TYPES OF LOGICAL THEORY. An intensive study of some of the outstanding contributions to logical theory, such as those of W. E. Johnson, Whitehead and Russell, or F. H. Bradley.

3 credits; 1st semester (Kuiper)

210b—TYPES OF LOGICAL THEORY. Continuation of 210a.

3 credits; 2nd semester (Kuiper)

Note: Other courses such as Epistemology, Aesthetics, Philosophy

of Religion, and special periods in the History of Philosophy will be given from time to time.

PHILOSOPHY OF EDUCATION (See Education)

POLITICAL SCIENCE

The Political Science Department offers courses leading to M. A. and Ph. D. degrees.

The student who holds a baccalaureate degree from a standard college is eligible to enter the department as a candidate for an advanced degree. An A. B. or B. S. degree is the only definite prerequisite for entering graduate study in the field of political science. However, students who are deficient in their social science background must make up such deficiencies before they will be recommended for a degree by the department. Students entering with these deficiencies will find the work more difficult, and the period required for the completion of the degree longer than if there were no deficiencies in the social science background. The applicant may remove such deficiencies by private study or by taking undergraduate courses. Each individual case is handled on its own merits.

101—LATIN AMERICAN RELATIONS.

3 credits (Trimble)

150—INTERNATIONAL LAW.

3 credits (McVey or Vandembosch)

154—COUNTY GOVERNMENT.

3 credits (Manning)

155a—COMPARATIVE GOVERNMENT.

3 credits (Trimble)

155b—COMPARATIVE GOVERNMENT. Continuation of 155a.

3 credits (Trimble)

156—COLONIAL GOVERNMENT.

3 credits (Vandembosch)

157—CITY ADMINISTRATION.

3 credits (Manning)

158—PUBLIC UTILITIES.

3 credits (Manning)

159a—DEVELOPMENT AND EXPANSION OF THE CONSTITUTION. A study based on historical data and judicial decisions.

3 credits; 1st semester (Cole)

159b—DEVELOPMENT AND EXPANSION OF THE CONSTITUTION. A continuation of 159a.

3 credits; 2nd semester (Cole)

164—AMERICAN FOREIGN SERVICE AND INTERNATIONAL ORGANIZATION.

3 credits (Vandenbosch)

165—WORLD POLITICS.

3 credits (Blanding)

171—POLITICAL THEORY.

3 credits (Trimble)

201a—SEMINAR.

2 credits

201b—SEMINAR.

2 credits

202—SCOPE AND METHOD IN POLITICAL SCIENCE.

3 credits (Cole)

203—PUBLIC ADMINISTRATION.

3 credits (Manning)

(Given 1934-35 and alternate years.)

205—FREEDOM OF THE SEAS.

3 credits (Vandenbosch)

207—IMPERIALISM AND NATIONALISM.

3 credits (Blanding)

(Given 1934-35 and alternate years.)

210—SUPREME COURT AND POLITICS.

3 credits (Cole)

211—INTERNATIONAL ADMINISTRATIVE BODIES.

3 credits (Vandenbosch)

(Given 1933-34 and alternate years.)

212—MUNICIPAL FRANCHISES.

3 credits (Manning)

(Given 1933-34 and alternate years.)

213—FEDERAL CENTRALIZATION.

3 credits (Trimble)

(Given 1934-35 and alternate years.)

215—ADMINISTRATION OF JUSTICE.

3 credits (Manning)

216—TYPES OF POLITICAL ORGANIZATIONS.

3 credits (Cole)

255—COMPARATIVE GOVERNMENT.

3 credits (Trimble)

PSYCHOLOGY

The department has accumulated for a number of years a mass of test records of the intelligence, special abilities and achievements of students in all the colleges of the University. It also has estimates of personal traits and the histories of many students. Taken together, these afford a rare opportunity for graduate work in student personnel problems. The director and executive secretary of the University Personnel Bureau are also affiliated with the department.

Another field in which special facilities are provided is that of the psychological clinic. The department has maintained such a clinic for years. It has established close contacts with the public schools, the welfare agencies, the Eastern State Hospital for the Insane, the reformatory institutions, and the State Institution for the Feeble-Minded, all of which are located at or near Lexington.

The department undertakes special research in business and industrial personnel problems and in the development and training of normal children. It is well equipped for experimental and statistical studies in these fields. Connected with the department is a Kentucky Station of the Psychological Corporation, a national organization for conducting authoritative work in applied psychology.

The experimental laboratory is especially equipped for the objective determination of emotions, their relation to perceptual acts, sets, drives, conditioning, etc. Research may be attacked also on lower animals with facilities provided in the animal house.

Apparatus, test equipment, and library facilities are available for advanced work in the following list of courses which assume fundamental training in general psychology, and biological or social sciences for majors in the department.

102a—GENETIC PSYCHOLOGY. Influence of hereditary factors in the development of human behavior, with a critical survey of the problem and evidence in connection with certain psychological traits such as musical and other special abilities, intelligence, insanity, and interests.

2 credits; 1st semester (Newbury)

104—SOCIAL PSYCHOLOGY. Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. So-called types are characterized in respect

to the social problems they afford. Topics given special consideration: crowds, mob behavior, propaganda, and nationalism.

3 credits; 1st semester (Dimmick)

107—PSYCHOLOGICAL INTERPRETATIONS. Unusual human activities and experiences, including hypnotism, thought transference, spirit communications, psycho-therapy, and other sub-conscious phenomena are considered from the point of view of the scientific evidence. An attempt is made to trace the relation to the creative work in literature and art and to discoveries in science and invention.

3 credits; 2nd semester (Miner)

108a—HUMAN MEASUREMENTS. The history and significance of tests of intelligence, including an analysis and evaluation of individual and group tests of general capacity for intellectual performances.

2 credits; 1st semester (Dimmick)

108b—HUMAN MEASUREMENTS. The history and interpretation of tests of special aptitudes and of special skills and attainments, including a criticism of the available tests for these special abilities.

2 credits; 2nd semester (Dimmick)

109a—DIAGNOSIS OF DEVELOPMENT. Provides for acquisition of technique in the administration of well-known individual tests and scales which furnish criteria of the levels of intellectual and emotional development. Emphasis is placed upon the Standard Revision and the Herring Revision of the Binet-Simon Scale.

Prerequisite: Psychology 108a 2 credits; either semester
or equivalent. (Dimmick)

109b—DIAGNOSIS OF DEVELOPMENT. A continuation of 109a in respect to aims. Training is given in the administration of standardized performance tests and scales and in the interpretation of the data yielded by these.

Prerequisite: Psychology 108a 2 credits; either semester
or equivalent. (Dimmick)

110—EXPERIMENTAL PSYCHOLOGY. Experimental techniques and their application to present psychological problems. The student is encouraged to select his own problems. Examples of such problems are: effect of changed surroundings on learning; peripheral retinal sensitivity; binocular fusion. One hour lecture; four hours laboratory.

3 credits; 2nd semester (White)

112—PERSONNEL ADMINISTRATION. The functions of personnel work in business and industry. The selection and placement of employees, their training, supervision and motivation; the scientific study of work and fatigue. Given in alternate years with 221.

3 credits; 1st semester (Beaumont)

113—PSYCHOLOGY OF LEARNING. An experimental study of the learning process together with an analysis of the types of learning. One hour lecture; four hours laboratory.

3 credits; 1st semester (White)

114—ABNORMAL PSYCHOLOGY. Atypical conduct and thinking are studied from both the theoretical and the practical points of view. The major psychoses and neuroses are given special consideration. Some opportunity for clinical observation is provided.

3 credits; 2nd semester (Dimmick)

116—COMPARATIVE PSYCHOLOGY. Two hours of lectures, two hours of laboratory a week. A survey of the field of animal behavior with special reference to experimental technique. Opportunity for research experience in an animal laboratory. Topics include problems of heredity and environment, activity, instinct, motivation, learning, sensory discrimination, and personality in sub-human species. Relationships to human problems indicated.

3 credits; 2nd semester (Newbury)

119—CLINICAL PSYCHOLOGY. Two hours lecture and discussion. A survey of clinical work on the diagnosis and adjustment of problem children and adults. The course gives a background for social, mental hygiene, and clinical work.

2 credits; 2nd semester (Dimmick)

120a-d—INDEPENDENT WORK IN PSYCHOLOGY. Designed for advanced students and graduates who undertake minor research problems to be conducted in regular consultation with the instructor. A minimum of six hours time per week is required.

2 credits; both semesters (Miner and others)

121—STUDENT PERSONNEL. The methods of dealing with student personnel problems in college and high school, including the problems of selection, classification, sectioning of classes, grading, personal adjustment, motivation, guidance and vocational placement. The functions of a personal officer. Given in alternate years with 112.

3 credits; 2nd semester (Miner)

Courses open only to Graduate Students

201a—SEMINAR IN PSYCHOLOGY. One two-hour discussion each week of research under way by graduate students and members of the staff.

1 credit; 1st semester (Miner and the staff)

201b, c, etc.—SEMINAR IN PSYCHOLOGY. Continuation of 201a. These numbers are provided for registration in succeeding semesters.
1 credit; either semester (Miner and the staff)

203a—PROBLEMS IN PSYCHOLOGY. Shorter research problems are registered under this number. A minimum of six hours per week is required in consultation with the instructor.

2 credits; 1st semester (Miner and others)

203b, c, etc.—PROBLEMS IN PSYCHOLOGY. Continuation of researches. These numbers are provided for registration in subsequent semesters.

2 credits; either semester (Miner and others)

210a—RESEARCH IN PSYCHOLOGY. Research or thesis work may be registered under this number. A minimum of nine hours per week is required on research conducted in consultation with the instructor.

3 credits; 1st semester (Miner and others)

210b, c, etc.—RESEARCH IN PSYCHOLOGY. Continuation of research. These numbers are provided for registration in succeeding semesters.

3 credits; either semester (Miner and others)

211—MENTAL WORK AND FATIGUE. A laboratory course. Four hours devoted to experiments and one hour discussion. Prerequisites, an advanced course in experimental psychology and elementary statistics or their equivalent.

3 credits; 1st semester (White)

212—THE EMOTIONS. A laboratory course. Four hours devoted to experiments and one hour discussion. Prerequisites, an advanced course in experimental psychology and elementary statistics or their equivalent.

3 credits; 2nd semester (White)

213—THE OBSERVATION PROCESSES. A laboratory course. Four hours devoted to experiments and one hour discussion. Prerequisites, an advanced course in experimental psychology and elementary statistics or their equivalent.

3 credits (White)

215—MEASUREMENTS OF HUMAN RELATIONSHIPS. An advanced course which considers the treatment and interpretation of human measurements. The course deals with the computation and interpretation of simple, partial and multiple correlations, regressions, equations, and reliability of measures.

3 credits; 2nd semester (Asher)

218—SYSTEMATIC PSYCHOLOGY. An historical and critical study of fundamental concepts and current schools of psychology with a view to their evaluation.

3 credits; 1st semester (Miner)

SOCIOLOGY

101—SOCIAL DEPENDENCE. A study of poverty and social dependence, and of measures of relief afforded through philanthropic agencies, or organized charity, together with general or special measures for the prevention, elimination, or reduction of poverty, and for social betterment.

3 credits; 1st semester (Best)

102—SOCIAL PATHOLOGY. A study of mortality rates, of diseases and accidents, and of mental and physical defectiveness, from a sociological point of view, together with a consideration of general social measures for prevention and treatment.

3 credits; 2nd semester (Best)

103—CRIMINOLOGY. A study of general conditions as to crime and delinquency, of measures of punishment and reform of the prisoner, of criminal procedure and its possible reform, and of measures for the prevention of crime.

3 credits; 1st semester (Best)

105—SOCIAL SYSTEMS. A study of social systems that have existed or have been proposed from early times, together with an examination of the theories of representative sociologists.

3 credits; 1st semester (Best)

106—AMERICAN IMMIGRATION. A study of immigrant peoples and races, including the Negro, in the United States, and of their general effects upon American life, together with an examination of a general national policy upon the subject.

3 credits; 2nd semester (Best)

107—COMMUNITY WELFARE WORK. A limited social service course, involving a study, with practical observations, of actual social conditions among local communities, of the work of agencies and organizations dealing with them, and of general measures for their improvement.

3 credits; 1st semester (Montgomery)

108—COMMUNITY SURVEYS. A limited social service course involving a study, with practical observations, of various agencies, organizations, factors, and conditions, as found in different communities.

3 credits; 2nd semester (Montgomery)

109—THE FAMILY. A study of the family, both in its historical aspects and in connection with the problems before it under modern conditions.

3 credits; 1st semester (Montgomery)

112—COMMUNITY ORGANIZATION. A study of the theory and practical results of organization among individuals and among different agencies in the community for the advancement of its life.

3 credits; 2nd semester (Montgomery)

113—SOCIAL CASE WORK. A limited social service course, involving primarily a study of the principles and practices of case work in family welfare societies, relief organizations, and like bodies.

3 credits; both semesters.

201a—SOCIOLOGY SEMINAR. Consideration mainly of theses, methods of research, and current sociological literature.

1 credit; 1st semester (Best)

201b—SOCIOLOGY SEMINAR. Continuation of 201a.

1 credit; 2nd semester (Best)

III. BIOLOGICAL SCIENCES

AGRONOMY (See Agriculture)

ANATOMY AND PHYSIOLOGY

105a—HUMAN OSTEOLOGY. The study begins with the development of the skeleton. This is followed by the process of ossification and the histology of bones. Each bone of the body is studied in detail, drawings being made from the bone. The bones surveyed during this division of the course are: Those of the face and cranium; vertebrae; ribs; sternum; hyoid. The work may be amplified to most any extent and some comparative anatomy included. *Recitation, one hour a week; laboratory, four hours a week.*

3 credits; 1st semester (Sherwood and Assistant)

105b—HUMAN OSTEOLOGY. Continuation of A+P 105a. The bones of the upper and lower extremities (arm and leg) including the pectoral and pelvic girdles are thoroughly studied, detailed drawings of each bone being made from furnished specimens. *Recitation, one hour a week; laboratory, four hours a week.*

3 credits; 2nd semester (Sherwood and Assistant)

106a—ENDOCRINOLOGY. This is the study of the glands of internal secretion or endocrine glands. Each gland is introduced with the consideration of its anatomical location and structure, gross and microscopic. This is followed by a comprehensive study of its functions, including the normal activity, hyperactivity and hypoactivity. The foregoing are demonstrated to the class. Recent scientific articles bearing upon the subject are reviewed and discussed. The glands taken up in this course are the thyroid, parathyroids, thymus and suprarenals. *Lectures, demonstrations and recitations.*

Prerequisites: A+P 1a and 1b 3 credits; 1st semester (Allen)
or 2a and 2b; Zoology 7b;
Chemistry 1a and 1b; and
the consent of the instructor.

106b—ENDOCRINOLOGY. Continuation of 106a. The endocrine glands which are studied are the pituitary, pancreas, organs of reproduction and pineal. *Lectures, demonstrations and recitations.*

Prerequisites: A+P 1a and 1b 3 credits; 2nd semester (Allen)
or 2a and 2b; Zoology 7b;
Chemistry 1a and 1b; and
the consent of the instructor.

107a—ADVANCED ANATOMY (Neurology). An introduction to the anatomy of the nervous system. The aim of this course is to provide an introductory laboratory course on the form, structure and functional arrangements of the nervous system for students of biology, physiology, psychology and those who are planning the study of the medical sciences. The work of this course includes a careful study of the nervous systems of lower vertebrates, namely, fishes, amphibia and reptiles. *Recitations and lectures, one hour a week; laboratory, four hours a week.*

Prerequisites: A+P 1a and 1b 3 credits; 1st semester (Sherwood) or the equivalent.

107b—ADVANCED ANATOMY (Neurology). Continuation of 107a. Special consideration is given to the structure of the mammalian brain in which the conductive systems are most completely organized. *Recitations and lectures, one hour a week; laboratory, four hours a week.*
Prerequisite: A+P 107a. 3 credits; 2nd semester (Sherwood)

108a—ADVANCED PHYSIOLOGY. The course is designed for students who anticipate further advanced study in physiology or in the medical sciences. In the course, graphic records which show the character of contraction of muscle (skeletal and smooth) are made. This is followed by observing the different factors that vary the character of the contraction. Experiments are performed to show that muscle is thermogenic and an electrogenic organ. The nervous system which includes the structures and functions of the spinal cord, the medulla oblongata, the cerebellum, the cerebrum and the autonomic system are taken up in great detail. The course will close with an intensive study of the special sense-organs. Practically half of the semester will be devoted to the nervous system. *Lectures, recitations, three hours a week; laboratory, four hours a week.*

Prerequisites: A+P 1a and 1b 5 credits; 1st semester or the equivalent; Chemistry (Allen, Sherwood and 1a and 1b; Physics 1a and Assistants) 1b; also, the consent of the instructors.

108b—ADVANCED PHYSIOLOGY. This is a continuation of 108a. The course is opened with the study of the circulatory system. Much time is given to the consideration of the mechanics of the heart, its nervous regulation and the functional peculiarities of its tissues. The mechanics of the circulation (hemodynamics) which includes the nervous regulation of the blood vessels are also surveyed. Other subject-material to be covered consists of the respiratory system; the gastro-intestinal tract with its secretory organs; the processes of digestion, absorption, excretion, heat production; voice and the produc-

tion of speech. *Lectures and recitation, three hours a week; laboratory, four hours a week.*

Prerequisite: A+P 108.

5 credits; 2nd semester

(Allen, Sherwood and Assistants)

116c—SEMINAR IN ANATOMY AND PHYSIOLOGY. All students who are majoring in the Department are required to take this course. At each meeting of the Seminar, an assigned scientific article of physiological or anatomical subject-matter will be reviewed thoroughly by a member of the seminar and then discussed in general. In addition to the foregoing, each member of the seminar will be required to follow closely the current publications bearing upon the subjects of the class and present brief reports of such articles which are of interest. *One two-hour discussion period a week.*

Prerequisites: A+P 1a and 1b

1 credit; 1st semester

or the equivalent.

(Allen, Sherwood)

116d—SEMINAR IN ANATOMY AND PHYSIOLOGY. Continuation of 116c. *One two-hour discussion period a week.*

Prerequisites: A+P 1a and 1b

1 credit; 2nd semester

or the equivalent.

(Allen, Sherwood)

201a—RESEARCH IN PHYSIOLOGY. The pursuit of an assigned problem in which the student will have the opportunity to demonstrate originality. *Conference and laboratory, ten hours a week.*

Prerequisites: A+P 1a and 1b

5 credits; 1st semester

or the equivalent; Chemistry

(Allen, Sherwood)

127a and 127b (131a and

131b desirable); Physics, one

year.

201b—RESEARCH IN PHYSIOLOGY. Continuation of 201a. *Conferences and laboratory, ten hours a week.*

Prerequisites: A+P 1a and 1b

5 credits; 2nd semester

or the equivalent; Chemistry

(Allen, Sherwood)

127a and 127b (131a and

131b desirable); Physics, one

year.

ANIMAL INDUSTRY (See Agriculture)

ANIMAL PATHOLOGY (See Agriculture)

ANTHROPOLOGY AND ARCHAEOLOGY

101—PRINCIPLES OF ANTHROPOLOGY. Fundamental principles of anthropology; relationships of physical anthropology, anthropometry, ethnology, ethnography and archaeology; anthropology of the New World; North American prehistory; ancient human occupa-

tion in the Mississippi Valley; outline of man's prehistoric past in Kentucky; anthropological studies of Kentucky materials.

2 credits; 1st semester (Funkhouser)

102—KENTUCKY ARCHAEOLOGY. Review of archaeological research in the United States; prehistoric cultures of the Mississippi Valley; development of ancient crafts; methods of classification of artifacts; significance of neolithic tools, weapons and problematical forms; a study of the artifacts and cultures represented in Kentucky. *Prerequisite: A & A 101.* 2 credits; 2nd semester (Webb)

105—ETHNOLOGY. A study of the present races of mankind. The origins, migrations and present distribution of these races and their subdivisions. Physical and mental characteristics of the proto-morphic, archimorphic and metamorphic groups with discussions of their cultures and religions.

2 credits; 2nd semester and summer session (Funkhouser)

BACTERIOLOGY

102—GENERAL BACTERIOLOGY. Morphology, classification, physiology, observation and cultivation of bacteria and related micro-organisms; their relation to certain fermentations and to the preservation of food; their influence on the plant food in the soil. Micro-organisms in milk, water, air, and soil. Relation of micro-organisms to disease; sources and modes of infection; use of germicidal agents; theories of immunity.

Prerequisite: Chemistry 1b.

4 credits (Scherago)

103—PATHOGENIC BACTERIOLOGY. Cultivation, morphology, means of identification, powers of resistance, pathogenesis, distribution, channels of infection and means of dissemination of pathogenic micro-organisms, especially those related to specific infectious diseases of man and animals. Study of preparation, standardization, and uses of vaccines, toxins, antitoxins, and other biological products related to the diagnosis, prevention and treatment of specific infectious diseases. Application of the various phenomena of immunity in the diagnosis of infectious diseases; agglutination, precipitation, and complement fixation reactions. Anaphylaxis.

*Prerequisites: Bacteriology 52
or 102, or 2b and
Chemistry 1b.*

4 credits; 1st semester
(Scherago)

104—APPLIED BACTERIOLOGY. A course in bacteriological analysis to supplement courses 52 or 102.

*Prerequisites: Bacteriology 2b
and Chemistry 1b or Bac-
teriology 52 or 102.*

2 credits; 2nd semester
(Weaver)

106—BACTERIOLOGY OF FOODS. Microbiology of milk and milk products, eggs, tomato products, meat and meat products; food preservation; bacterial food poisoning.

Prerequisites: Bacteriology 2b 4 credits; 1st semester
and Chemistry 1b or Bacteriology 52 or 102. (Weaver)

107—BACTERIOLOGY OF WATER AND SEWAGE. The microflora of water; importance of the colon-typhoid group of bacteria in water; methods of water analysis and interpretation of results; special media used in isolating and identifying the colon-typhoid group of bacteria; methods of water purification; microflora of sewage; methods of sewage analysis; methods of sewage disposal; bacteriological study of swimming pools; methods of analysis; effect of treatment on bacteriological content; regulations concerning swimming pools. Water purification plants, sewage disposal plants and swimming pools will be visited and studied.

Prerequisites: Bacteriology 2b 4 credits; 2nd semester
and Chemistry 1b or Bacteriology 52 or 102. (Weaver)

110a—LABORATORY DIAGNOSIS. Laboratory methods in the diagnosis of disease. Designed primarily for students taking the course in Medical Technology.

Prerequisite: Bacteriology 103. 3 credits; 2nd semester
(Scherago)

110b—LABORATORY DIAGNOSIS. A continuation of 110a.
3 credits; 2nd semester (Scherago)

111—GENERAL PATHOLOGY. A course in general pathology consisting of lectures and recitations and in the laboratory the demonstration of pathological histology and of fresh and museum specimens showing the effect of disease on the organs and tissues of the human body. Degenerations, infiltrations, regenerations, inflammation, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied.

Prerequisites: Physiology 1a and 4 credits; 1st semester
1b; Zoology 7b and 101b; (Maxwell)
Bacteriology 103.

115—INDIVIDUAL WORK. Students will be assigned special problems in laboratory work and reference reading.

Prerequisite: Any Bacteriology 3 credits (Scherago, Weaver)
course above 102.

125—IMMUNOLOGY AND SEROLOGY. The theories and mechanism of immunity. The production of antitoxin, agglutinins, bacterio-

lysins, opsonins, precipitins, hemolysins, and cytotoxins; their practical applications; the preparation of their homologous antigens. The study of ferments and antiferments; the study of hypersensitivity.

Prerequisite: Bacteriology 103. 5 credits; 2nd semester
(Scherago)

150a and c—SEMINAR.

1 credit; 1st semester (Scherago, Weaver)

150b and d—SEMINAR.

1 credit; 2nd semester (Scherago, Weaver)

201a—RESEARCH IN BACTERIOLOGY.

5 credits; 1st semester (Scherago, Weaver)

201b—RESEARCH IN BACTERIOLOGY. A continuation of course 201a.

5 credits; 2nd semester (Scherago, Weaver)

203a—PUBLIC HEALTH BACTERIOLOGY. This course considers the public health aspects of bacteriology including the etiology, epidemiology, immunology, and laboratory diagnosis of infectious diseases; the bacteriology of air, water and sewage; food poisoning; the production, standardization and practical applications of biological products used in the diagnosis, treatment and prevention of infectious diseases; the standardization of disinfectants.

Prerequisites: Open only to physicians and health officers or those with equivalent training. 3 credits (Scherago)

203b—PUBLIC HEALTH BACTERIOLOGY. Continuation of course 203a.

Prerequisite: Bacteriology 203a. 3 credits (Scherago)

Note: This course is offered in the summer session only.

BOTANY

106a—SPECIAL PROBLEM. The qualified student will be assigned some problems for solution.

3 credits (McFarland, McInteer)

106b—SPECIAL PROBLEM. A continuation of 106a.

3 credits (McFarland, McInteer)

111—CLASSIFICATION OF PARASITIC FUNGI. Entire time will be taken up in studying the fungi that cause diseases of plants, both cultivated and wild.

Prerequisites: Botany 125a, b. 1 credit (McFarland)

125a—MORPHOLOGY OF FUNGI. A detailed study of the different types of fungi from the standpoint of morphology, cytology and physiology.

4 credits (McFarland)

125b—MORPHOLOGY OF FUNGI. A continuation of 125a.

4 credits (McFarland)

126a—MYCOLOGY. A course which employs the entire time of the student in identification of unknowns.

4 credits (McFarland)

126b—MYCOLOGY. A continuation of 126a.

4 credits (McFarland)

150a—ADVANCED SYSTEMATIC BOTANY. A continuation of course 15, but more work and more difficult plants are studied.

3 credits (McFarland, McInteer)

150b—ADVANCED SYSTEMATIC BOTANY. A continuation of 150a.

3 credits (McFarland, McInteer)

206a—RESEARCH IN MORPHOLOGY.

5 credits (McFarland, McInteer)

206b—RESEARCH IN MORPHOLOGY. A continuation of 206a.

5 credits (McFarland, McInteer)

207a—RESEARCH IN MYCOLOGY.

5 credits (McFarland)

207b—RESEARCH IN MYCOLOGY. A continuation of 207a.

5 credits (McFarland)

210a—RESEARCH IN PLANT PHYSIOLOGY.

5 credits (McInteer)

210b—RESEARCH IN PLANT PHYSIOLOGY. A continuation of 210a.

5 credits (McInteer)

213a—RESEARCH IN SYSTEMATIC BOTANY.

5 credits (McFarland, McInteer)

213b—RESEARCH IN SYSTEMATIC BOTANY. A continuation of 213a.

5 credits (McFarland, McInteer)

ENTOMOLOGY (See Agriculture)

HORTICULTURE (See Agriculture)

HYGIENE AND PUBLIC HEALTH

The Department of Hygiene and Public Health does not at this time give advanced work leading to a degree in public health. The courses listed below are available as minors for students who wish to become candidates for graduate degrees in related departments.

100a—PUBLIC HEALTH. Lectures, recitations and problems. A general consideration of different fields of public health.

Prerequisite: Hygiene 1. 3 credits; 1st semester
(Chambers, Heinz)

100b—PUBLIC HEALTH. A continuation of 100a.

Prerequisite: Hygiene 1 and Hygiene 100a. 3 credits; 2nd semester
(Chambers, Heinz)

104—MATERNAL AND CHILD HEALTH. Lectures, discussions and reports. The principles of prenatal, infancy and child health.

Prerequisite: Hygiene 1. 3 credits; 1st semester
(Chambers, Heinz)

110—HEALTH EDUCATION AND HEALTH SUPERVISION OF SCHOOLS. A course dealing with the essentials and principles of health education and the medical inspection of schools.

Prerequisites: Hygiene 1, 105. 3 credits; 2nd semester
(Chambers, Heinz)

122—TUBERCULOSIS FOR NURSES. The control of tuberculosis; for nurses.

1.5 credits; Summer School only (Staff)

124a—PUBLIC HEALTH NURSING. A general course covering the principles and practice of public health nursing.

1.5 credits; Summer School only (Staff)

124b—PUBLIC HEALTH NURSING. A continuation of 124a.

1.5 credits; Summer School only (Staff)

200a—EPIDEMIOLOGY. The control of communicable diseases. For health officers only.

1.5 credits; Summer School only (Staff)

200b—EPIDEMIOLOGY. A continuation of 200a.

1.5 credits; Summer School only (Staff)

212a—PUBLIC HEALTH ADMINISTRATION. The organization and administration of public health. For health officers only.

1.5 credits; Summer School only (Staff)

212b—PUBLIC HEALTH ADMINISTRATION. A continuation of 212a.

1.5 credits; Summer School only (Staff)

218a—VITAL STATISTICS. Statistics of populations, births, deaths, marriages, morbidity. For health officers only.

1.5 credits; Summer School only (Staff)

218b—VITAL STATISTICS. A continuation of 218a.

1.5 credits; Summer School only (Staff)

222—TUBERCULOSIS. The control of tuberculosis. For health officers only.

1.5 credits; Summer School only (Staff)

PSYCHOLOGY (See Social Sciences)

ZOOLOGY

101a—HISTOLOGY. Histology of the tissues. Lectures and laboratory work on the preparation of material for microscopic study. The latter part of the course is designed to acquaint the student with microscopic manipulation and at the same time familiarize him with the tissues of the animal body.

Prerequisites: Zoology 1a-b. 3 credits; 1st semester (Brauer)

101b—HISTOLOGY. Histology of the organs. A continuation of course 101a. Lectures and laboratory work on the microscopic anatomy of the animal body.

Prerequisite: Zoology 101a. 3 credits; 2nd semester (Brauer)

102—ORNITHOLOGY. A study of the life histories, anatomy and physiology and taxonomy of birds with particular reference to the habits, songs, eggs, nests, migration and economic importance of our native birds.

3 credits (Funkhouser, Allen)

105—MEDICAL ENTOMOLOGY. Insects (and briefly other animals) affecting the health and comfort of man. Identification, life histories and etiology of many important species. Methods of study and methods of control. For pre-medical students.

3 credits; 1st semester (Allen)

106—EMBRYOLOGY. Vertebrate development. Lectures on maturation, fertilization, cleavage, axiation, organogenesis, and anomalies of development. The laboratory work consists of a study of the germ cells, maturation, cleavage and development of the chick and of the pig.

4 credits; 2nd semester (Brauer)

108a—PRINCIPLES OF ZOOLOGY. An advanced lecture course open only to juniors, seniors and graduate students on the fundamental principles of biology. The first semester is devoted primarily to the study of organic evolution.

2 credits; 1st semester (Funkhouser)

108b—PRINCIPLES OF ZOOLOGY. A continuation of 108a. The second semester is devoted to the study of heredity, eugenics and animal instincts.

2 credits; 2nd semester (Funkhouser)

110a—INDIVIDUAL WORK. Special problems for individual students who are capable of pursuing independent investigations.

3 credits (Funkhouser, Allen, Brauer)

110b—INDIVIDUAL WORK. A continuation of 110a.

3 credits (Funkhouser, Allen, Brauer)

112—ICHTHYOLOGY. (1) Taxonomy of the fishes. Use of keys and literature. Drawing types of families. (2) Life histories and biology of many type species, illustrated by photographs. (3) Fish structure and physiology. (4) Fish culture and economic ichthyology; care of fishes, aquaria, etc. (5) Special studies, such as blind fishes, deep sea fishes, etc.

3 credits; 1st semester (Allen)

114a—ZOOLOGICAL SEMINAR. (1) Occasional presentation of the results of research by members. (2) Reports on papers of technical or semi-technical nature in the current literature. (3) Occasional book reviews. (4) Discussion of biological principles and phenomena. (5) Correlation of zoological fields.

1 credit (Funkhouser, Allen, Brauer)

114b—ZOOLOGICAL SEMINAR. A continuation of 114a.

1 credit (Funkhouser, Allen, Brauer)

157a—INVERTEBRATE ANATOMY. Invertebrates. (1) Systematic consideration of all important phyla, classes, orders, and a few families. (2) Dissection of a few types not previously studied. (3) Identification and drawings of external aspects of many genera. (4) Life histories. (5) Comparative organology and physiology of higher phyla.

4 credits; 1st semester (Allen)

157b—VERTEBRATE ANATOMY. Vertebrates. (1) Systematic consideration of classes, orders, and some families of Vertebrata. (2) Detailed dissection of types not previously studied. (3) Comparative organology and (briefly) physiology of the several classes. (4) Preparation of charts and diagrams of nervous systems, urino-

genital systems, and vascular systems. (5) Complete demonstration of the Mammalian anatomy.

4 credits; 2nd semester (Allen)

160—ONTOGENY. Theories and philosophies of development with a consideration of experimental data bearing thereon. Lectures and literature reports.

2 credits; 1st semester (Brauer)

201a—HERPETOLOGY. Systematic and taxonomic studies of the Reptilia. For graduate students only.

3 credits; 1st semester (Funkhouser)

201b—HERPETOLOGY. A continuation of 201a.

3 credits; 2nd semester (Funkhouser)

202a—SYSTEMATIC ENTOMOLOGY. Research work on special groups of insects requiring advanced study in the literature of the subject and designed for students who desire to specialize in entomology. For graduate students only.

4 credits; 1st semester (Funkhouser)

202b—SYSTEMATIC ENTOMOLOGY. A continuation of 202a. In the second semester special attention is paid to entomotaxy and the bibliography of the group studied.

4 credits; 2nd semester (Funkhouser)

IV. PHYSICAL SCIENCES

CHEMISTRY

101—PHYSICAL CHEMISTRY. For students in Agriculture and the biological sciences.

Prerequisites: Chemistry 7 and 8, 5 credits; either semester Physics 1b, Mathematics 3 or 4. (Bedford)

102—ELECTRO CHEMISTRY. Elementary, electro-analysis, electroplating and preparation of some inorganic and organic substances by electrolysis.

Prerequisites: Chemistry 101 5 credits; either semester or 131b, 109, 127b. (Bedford)

104—SYNTHETIC INORGANIC CHEMISTRY. An intermediate course planned to aid the student in gaining a more adequate knowledge of practical inorganic chemistry. Elective.

5 credits; 2nd semester (Maxson)

106—ADVANCED ORGANIC CHEMISTRY. A laboratory course which includes the preparation of compounds of theoretical, biological and industrial importance together with references to the original literature, conferences and reports.

Prerequisite: Chemistry 127b. 5 credits (Barkenbus)

107—SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. *Prerequisite: Chemistry 114. 5 credits; 2nd semester (Stewart)*

108—COLLOID CHEMISTRY. A course involving the preparation of colloids and study of the physical and chemical properties of matter in the colloidal state.

5 credits; either semester (Maxson)

109—QUANTITATIVE ANALYSIS. A lecture and laboratory course devoted to the analysis of ores, alloys, etc.

Prerequisite: Chemistry 8. 5 credits; either semester (Stewart)

110—PHYSICAL CHEMISTRY. Intermediate course.

Prerequisites: Chemistry 131b 3 credits; either semester and Calculus. (Bedford)

111—PHYSICAL CHEMISTRY. Intermediate course.

Prerequisite or concurrent: Chemistry 110. 2 credits; either semester (Bedford)

112—ADVANCED AGRICULTURAL ANALYSIS. A laboratory

course having for its object the complete analysis of fertilizers, feeds, soils and agricultural products.

Prerequisite: Chemistry 8. 4 credits; 2nd semester (Stewart)

114—ADVANCED QUANTITATIVE ANALYSIS. The analysis of iron and steel, slags and rocks.

5 credits; either semester (Stewart)

118—WATER ANALYSIS. In this course waters are examined to determine their fitness for domestic and other purposes.

2 credits; 1st semester (Stewart)

119a—INDUSTRIAL CHEMISTRY. A survey course on modern industrial chemistry using text as a basis for discussion.

2 credits; 1st semester (Maxson)

119b—INDUSTRIAL CHEMISTRY. A continuation of 119a.

2 credits; 2nd semester (Maxson)

122a—JOURNAL CLUB. Conferences and reports on chemical literature and training in the use of literature for research purposes.

1 credit; 1st semester (Maxon)

122b—JOURNAL CLUB. A continuation of 122a.

1 credit; 2nd semester (Maxson)

127a—ORGANIC CHEMISTRY. Recitations and lectures in the aliphatic series together with laboratory work on the preparation and study of such compounds as will emphasize basic principles and important synthetic methods.

Prerequisite: Chemistry 1b. 5 credits; 1st semester

(Barkenbus)

127b—ORGANIC CHEMISTRY. A continuation of Chemistry 127a. Cyclic series.

Prerequisite: Chemistry 113a. 5 credits; 2nd semester

(Barkenbus)

129—FOOD CHEMISTRY AND ANALYSIS. The composition, adulteration and preservation of food. Laboratory practice on the analysis of milk, sugar, baking powder, vinegar, alcoholic beverages, fats, etc.

Prerequisites: Chemistry 7 5 credits; 1st semester (Stewart)
or 127a and 8.

130a—PHYSIOLOGICAL CHEMISTRY. The chemistry and metabolism of carbohydrates, proteins and fats. A study of the tissues, the secretions and excretions. The nature and action of enzymes.

Nutrition, food values and requirements. The effects of a diet of selected food principles on the quantity of metabolic products.

Prerequisite: Chemistry 5 credits; 1st semester
7 or 127a. (Barkenbus)

130b—PHYSIOLOGICAL CHEMISTRY. A continuation of 130a.
5 credits; 2nd semester (Barkenbus)

131a—INTRODUCTORY COURSE IN PHYSICAL CHEMISTRY.
Based upon the fundamental laws of chemistry. Determination of atomic and molecular weights; gaseous, liquid and solid states of matter, solution, ideal and ionized; Thermo-chemistry.

4 credits; 1st semester (Bedford)

131b—INTRODUCTORY COURSE IN PHYSICAL CHEMISTRY.
A continuation of 131a. Homogeneous and Hetrogeneous Equilibria; Chemical Kinetics; Structure of Matter; Periodic Law; Radio-Chemistry; Colloids; Electro-Chemistry.

Prerequisite: Chemistry 131a. 4 credits; 2nd semester (Bedford)

150—ADVANCED INORGANIC CHEMISTRY. A survey course covering the less common side of inorganic chemistry including laboratory work in synthesis.

Prerequisite: Chemistry 131b. 4 credits; 2nd semester (Maxson)

201—SYNTHETIC INORGANIC CHEMISTRY. Practice and research in inorganic synthesis, with use of original literature.

5 credits; either semester (Maxson)

202—QUANTITATIVE ANALYSIS. A critical study of known procedures and research in analytical chemistry.

5 credits; either semester (Stewart)

204a—ORGANIC CHEMISTRY. A laboratory course with conferences on special problems in organic chemistry.

Prerequisite: Chemistry 106. 5 credits; either semester
(Barkenbus)

204b—ORGANIC CHEMISTRY.

Prerequisite: Chemistry 204a. 5 credits; either semester
(Barkenbus)

205a—ADVANCED PHYSICAL CHEMISTRY. Lectures on selected topics.

Prerequisite: Chemistry 131b 2 credits; either semester
and Calculus. (Bedford)

205b—ADVANCED PHYSICAL CHEMISTRY. (Continuation of 205a.) Lectures on selected topics.

2 credits; either semester (Bedford)

206a—ADVANCED PHYSICAL CHEMISTRY. Laboratory course on selected topics in Advanced Physical or Electro-Chemistry.

Prerequisite or concurrent: 3 or more credits; either Chemistry 205a. semester (Bedford)

206b—ADVANCED PHYSICAL CHEMISTRY. Continuation of 206a.

Prerequisite or concurrent: 3 or more credits; either Chemistry 205b. semester (Bedford)

207a—SYSTEMATIC INORGANIC CHEMISTRY. Lectures and conferences, two hours a week.

Prerequisite: Chemistry 131b or 2 credits; either semester its equivalent. (Maxson)

207b—SYSTEMATIC INORGANIC CHEMISTRY. Continuation of Chemistry 207a. Lectures and conferences, two hours a week.

2 credits; either semester (Maxson)

208—THEORETICAL CHEMISTRY. A historical survey of atomic theories and their influence upon the development of chemistry. Two lectures and assigned reading a week.

2 credits; either semester (Stewart)

210a, b, c, d—SEMINAR. Reports and discussions of recent research and current literature. 2 hours.

1 credit; both semesters (Staff)

ENGINEERING (See Engineering)

GEOLOGY

101a—PALEONTOLOGY. A systematic study of the important phyla of fossil invertebrates; their classification, identification, and geological distribution.

Prerequisites: Geology 15a-b; 3 credits; 1st semester Zoology 1a-b. (McFarlan)

101b—PALEONTOLOGY. The stratigraphic use of fossils in the determination of the geologic age of strata. Collections are assigned, the fossils identified, and the age of the fauna determined.

Prerequisite: Geology 101a. 3 credits; 2nd semester (McFarlan)

104a, b, c, etc.—ADVANCED FIELD GEOLOGY. The preparation of a geologic map, structure, and stratigraphic sections of assigned areas.

Prerequisites: Geology 9b, 15a-b. 2 credits (McFarlan)

105a, b, c, etc.—INDEPENDENT WORK IN GEOLOGY. May be

elected in any field. Registration only after consultation with instructor in charge.

3 credits

106a—ECONOMIC GEOLOGY. Non-metallic mineral deposits (excepting petroleum, natural gas and asphalt). A study of origin, mode of occurrence, distribution and uses.

Prerequisite: Geology 15a-b.

3 credits

106b—ECONOMIC GEOLOGY. Metallic mineral deposits.

3 credits

109a—MINERALOGY. Crystallography and physical mineralogy, with emphasis on their use in mineral identification.

Prerequisite: Chemistry 1a-b.

2 credits; 2nd semester

(Robinson)

109b—MINERALOGY. Chemical, descriptive and determinative mineralogy. The origin, occurrence, associations and alteration products of minerals.

2 credits; 1st semester (Robinson)

116—OIL GEOLOGY. The origin, accumulation, and production of petroleum. A study of the geological features of the producing regions of the United States. Problems of geological exploration.

Prerequisite: Geology 15a-b.

2 credits; 2nd semester

(Robinson)

117a, b, c, etc.—SEMINAR. A consideration of the literature dealing with current research. Required of seniors.

1 credit; both semesters

118a, b, c—FIELD WORK IN REGIONAL GEOLOGY. Two weeks in the field in the Appalachians. A study of regional geological features involving the various aspects of the science. The course is offered as a part of the first summer session coming early in June before the regular opening of the term. Required of major students at the end of their Junior year. Three distinct trips, offered in successive years, offer the opportunity for extended work of this type.

Prerequisite: Geology 15a-b.

2 credits (McFarlan and Young)

120a—GEOLOGY OF KENTUCKY. A study of the geological features of the state other than mineral resources. This includes the major events in its geological history, the fossil record of ancient life, the development of regional characters, and an explanation of its scenic and natural wonders.

3 credits (McFarlan)

120b—GEOLOGY OF KENTUCKY. The mineral resources of the state, their recognition, distribution, origin and uses.

3 credits (McFarlan)

202a-b—RESEARCH IN GEOLOGY. Consult instructor before registering.

5 credits

207a—PETROLOGY. Optical mineralogy. The use of optical properties in the determination of minerals in thin sections. A study of the minerals, their associations, and alteration products.

Prerequisites: Geology 109a-b;

3 credits (Robinson)

Physics 1a-b.

207b—PETROLOGY. A study of igneous rocks, their classification, origin, metamorphism and decay.

Prerequisite: Geology 107a.

3 credits (Robinson)

208—STRUCTURAL GEOLOGY. A study of rock structures, rock deformation and diastrophism.

Prerequisites: Geology 15a-b; 109a-b; Physics 1a-b. (Robinson)

210—STRATIGRAPHIC PALEONTOLOGY. A study of the more important index fossils and fossil associations used in stratigraphic work.

Prerequisite: Geology 101a-b.

3 credits (McFarlan)

211—PRINCIPLES OF SEDIMENTATION. A study of the origin and distribution of sediment in the forming of sedimentary rock, particularly the effect of various types of environment. A study of the sedimentary rock as a means of determining ancient conditions on the earth. Subsurface correlation of formations by insoluble residues, etc.

Prerequisites: Geology 15a-b; 109a-b.

3 credits

MATHEMATICS AND ASTRONOMY

MATHEMATICS

Graduate students will be able to obtain sufficient work to qualify for the doctor's degree. Graduate students must have had at least 12 credits beyond calculus before counting work toward an advanced degree. The White Mathematics Club and Pi Mu Epsilon meet regularly for the study of some book of general interest or for the presentation of special topics.

102—VECTOR ANALYSIS. An elementary course in the algebra and calculus of vectors with numerous applications in geometry and physics.

Prerequisite: Course 7b.

3 credits; 2nd semester (Rees)

[GIVEN 1933-34]

103—THEORY OF EQUATIONS. This course is based on Dick-

son's First Course in the Theory of Equations, which is used as a text.
Prerequisite: Course 7a. 3 credits; 2nd semester
(Downing)

[GIVEN 1933-34]

104—ADVANCED ANALYTICS. An account of some of the most important modern methods as presented in the treatises of C. Smith and Salmon.

Prerequisite: Course 7a. 3 credits; 2nd semester (Brown)
[OFFERED 1934-35]

105a—DIFFERENTIAL EQUATIONS. A first course in differential equations based on A. Cohen's text.

Prerequisite: Course 7b. 3 credits; 1st semester
(LeStourgeon, Cohen)

[GIVEN 1933-34; OFFERED 1934-35]

106a—ADVANCED CALCULUS. Topics included: Continuity of functions; derivatives and differentials; Taylor's series; power series; partial differentiation; total derivatives; implicit functions; Jacobians; applications to geometry—elements of arc, area, and surface; maxima and minima; curvature and torsion.

Prerequisite: Course 7b. 3 credits; 1st semester (Cohen)
[GIVEN 1933-34]

106b—ADVANCED CALCULUS. Continuation of Math. 106a. Topics included: Definite integrals—existence, properties, differentiation of a definite integral, integration under the integral sign, improper integrals; Gamma and Beta functions; Dirichlet integrals; line, surface, and space integrals; elliptic integrals.

Prerequisite: Course 106a. 3 credits; 2nd semester (Cohen)
[GIVEN 1933-34]

107—PROJECTIVE GEOMETRY. A brief course based on a text like Dowling's.

Prerequisite: Course 7a. 3 credits; 1st semester (Boyd)
[OFFERED 1934-35]

110a-d—INDEPENDENT WORK IN MATHEMATICS. Limited to upper division and graduate students of high standing.

Prerequisite: Course 7b. 3 credits; both semesters (Senior Staff)
[GIVEN 1933-34; OFFERED 1934-35]

115—SUBSTITUTION GROUPS. This course will cover the material contained in Chapters 7 to 14 of Dickson's "Modern Algebraic Theories."

3 credits; 2nd semester (Brauer)
[GIVEN 1933-34]

116—ANALYTIC MECHANICS. Topics included: Composition and resolution of forces; statics of a particle; moments; couples; center of gravity; friction; simple harmonic motion; moments; constrained motion; work and energy; inertia; impulse.

Prerequisite: Course 7b. 3 credits; 2nd semester (Downing)

[OFFERED 1934-35]

118—SOLID ANALYTIC GEOMETRY. Loci of equations of first and second degrees in three variables. Determinants and Matrices. Methods and principles of use in various fields of higher mathematics.

Prerequisite: Course 7b. 3 credits; 1st semester (LeSturgeon)

[OFFERED 1934-35]

119—MODERN GEOMETRY. A course covering the ground substantially as presented in Allschiller Court's text.

Prerequisite: Course 7a. 3 credits; 1st semester (Boyd)

[OFFERED 1933-34]

120—MATHEMATICAL STATISTICS. Topics considered: Averages, coefficient of dispersion and skewness, graphical representation, Bernoulli's Theorem, curve fitting, theory of sampling, correlation, and regression lines.

Prerequisite: Course 7a. 3 credits; 2nd semester (South)

[GIVEN 1934-35]

122—ACTUARIAL MATHEMATICS. Theory and construction of mortality tables, life annuities, premiums, terminal reserves, etc.

Prerequisites: Mathematics 3 credits; 1st semester (South)

14 and 7a.

[OFFERED 1934-35]

201a—GEOMETRIC TRANSFORMATIONS. This course covers a large part of Doehlemann's Geometrische Transformationen. (Revised Edition.)

3 credits; 2nd semester (Boyd)

[OFFERED 1934-35]

202a—ALGEBRAIC CURVES. The classical theory as presented by Salmon, Wieleitner or Ganguli.

3 credits; 2nd semester (Boyd)

[GIVEN 1933-34]

203—THESIS. Required in addition to twenty-four credits for the Master's degree.

3 credits; both semesters (Senior Staff)

[GIVEN 1933-34; OFFERED 1934-35]

204—CALCULUS OF VARIATIONS. Examples illustrating the various types of problems. The differential equation of a curve which

minimizes a definite integral. Other properties of a minimizing arc as deduced by Legendre, Wierstrass and Jacobi. Isoperimetric problems.

Prerequisites: Courses 105a, 106a. 3 credits; 1st semester
(Downing)

[GIVEN 1933-34]

205—DIFFERENTIAL GEOMETRY. Introductory study of metric properties of surfaces and twisted curves. Although vector analysis is not required, vector methods will be found of great assistance in the study.

3 credits; 1st semester (Rees)

[OFFERED 1934-35]

207a—THEORY OF NUMBERS. This course covers the material in Chapters 1-5 inclusive of Dickson's "Introduction to the Theory of Numbers."

3 credits; 1st semester (Latimer)

[OFFERED 1934-35]

207b—THEORY OF NUMBERS. This course covers the material in Chapters 6-10 inclusive of Dickson's "Introduction to the Theory of Numbers."

3 credits; 2nd semester (Latimer)

[OFFERED 1934-35]

208—THEORY OF FUNCTIONS OF A REAL VARIABLE. Theory of the real number system. Elements of point-set theory; measure or sets. Study of continuities and discontinuities, and the Riemann and Lebesgue theories of integration.

Prerequisites: Courses 105a, 106a. 3 credits; 2nd semester
(LeSturgeon)

[OFFERED 1934-35]

209—THEORY OF FUNCTIONS OF THE COMPLEX VARIABLE. Introduction to algebra and calculus of complex numbers and their geometric representation. Conformal transformation. Cauchy-Riemann viewpoint, Weierstrass development. Riemann surfaces.

Prerequisites: Courses 105a, 106a. 3 credits; 2nd semester
(LeSturgeon)

[GIVEN 1933-34]

211—HIGHER ALGEBRA. This course covers the material in Chapters 2-11 inclusive and Chapter XX in Bocher's "Introduction to Higher Algebra."

Prerequisite: Course 7a. 3 credits; 1st semester (Latimer)

[GIVEN 1933-34]

220a-b—MATHEMATICS SEMINAR.

2 credits; 2nd semester (Latimer, Cohen)

[OFFERED 1934-35]

ASTRONOMY

251a—CELESTIAL MECHANICS. Topics included: Rectilinear motion; central forces of various types; potential and attraction of bodies; problem of two bodies; Ivory's theorem; Kepler's equation.

3 credits; 1st semester (Downing)

[GIVEN 1933-34; OFFERED 1934-35]

251b—CELESTIAL MECHANICS. Continuation of 251a.

3 credits; 2nd semester (Downing)

[OFFERED 1934-35]

Note: Other courses such as Fourier's Series, Potential Function, Infinite Series, Algebraic Numbers, Algebraic Invariants, Practical Astronomy, second courses in various subjects, will be given from time to time.

PHYSICS

The Department of Physics is well equipped with instruments of precision and has adequate library facilities necessary to the proper conduct of the following list of advanced and graduate courses:

101—THEORY OF HEAT. A lecture and experimental course covering the fundamental principles of heat. Opportunity is offered to use the gas thermometer, resistance thermometer, and various types of radiation pyrometers. Determination of vapor pressure and densities, coefficients of viscosity, freezing and boiling points, latent and specific heats, heats of combustion, thermal conductivities. Calibration of thermocouples, etc.

*Prerequisites: Physics 3b, 6, and**5 credits (Koppius)**Mathematics 7a.*

102a—ELECTRICITY AND MAGNETISM. A course developing the fundamental theory of electricity and magnetism, emphasizing the physical concepts of electrical quantities and applying these to practical problems. The laboratory work is designed both to emphasize the principles covered and to give the student experience in the careful use of electrical measuring instruments. Lectures and recitations three hours, laboratory four hours a week.

*Prerequisites: Physics 3b, 6, and**5 credits (Warburton)**Mathematics 7a.*

103—THEORY OF LIGHT. A course covering the general theory of reflection, refraction, diffraction and polarization.

Prerequisites: Physics 3b, 6, and 5 credits (Webb)
Mathematics 7a.

104—THEORETICAL MECHANICS. This course begins with a careful statement of the fundamental laws of mechanics and the conditions under which they hold. Defined quantities are introduced logically. The work is usually based on some standard text but will be supplemented by lectures. The student is expected to solve a representative list of problems.

Prerequisites: Physics 3b, 6, and 5 credits (Pardue)
Mathematics 7a.

111—ELECTRICITY AND MAGNETISM. This course comprises the lectures and recitations of course 102a.

Prerequisites: Physics 3b, 6, and 3 credits (Warburton)
Mathematics 7a.

113—RADIO COMMUNICATION. A study of the properties of resonant circuits, vacuum tubes, types of amplification, the use of vacuum tubes as oscillators and detectors, modulation, sources of power, transmitters, receivers, and antenna. Lectures, recitations and laboratory.

Prerequisites: Physics 3b and 6. 3 credits (Hahn)

116a—PHYSICAL MANIPULATIONS. A course for those who wish to acquire a technique in various physical manipulations, as for example, glass blowing, and the preparation and use of materials used in physical experiments.

Prerequisites: College Physics or 1 credit (Webb)
College Chemistry.

116b—PHYSICAL MANIPULATIONS. A continuation of 116a.
1 credit (Webb)

119—PRINCIPLES OF X-RAYS. A basic course in X-rays for the advanced undergraduate and graduate, dealing with the production and properties of X-rays, the mathematical development of the formulae of absorption, scattering, polarization, etc.; methods of wave length measurement; the Compton effect and related quantum phenomena; a review of articles in the various scientific periodicals.

Prerequisites: Physics 3b, 6, and 3 credits (Hahn)
Mathematics 7a.

120—X-RAY TECHNIQUE. An introductory course in X-ray technology dealing with the design and operation of X-ray equipment, the use of intensifying screens, dark room procedure, etc. Some practice will be given in the radiography of the extremities and teeth

with special attention to voltage, current, time and distance factors. Lectures and recitations two hours a week.

Prerequisites: Physics 1a-b.

2 credits (Hahn)

122—X-RAY ANALYSIS OF CRYSTALS. A study of the determination of the symmetry, properties, size of unit cell and arrangement of atoms by methods of Laue, Bragg rotating crystal and powder spectroscopy. For students of chemistry, geology, metallurgy and physics.

Prerequisite: Physics 3b.

3 credits (Hahn)

125a, b, c, d—INDIVIDUAL WORK IN PHYSICS.

3 credits (Staff)

201—PHYSICAL OPTICS. This course covers in mathematical formulation the theories of interference and diffraction, the theory of optical instruments, the propagation of light in crystalline media and a comparison of the various theories of light.

Prerequisites: Physics 103, one additional "100" course in Physics, and Mathematics 105a.

3 credits (Webb)

202—MEASUREMENTS IN OPTICS. A course in the measurements of wave lengths; Fresnell mirrors and biprisms; determination of optical constants by Michelson's interferometer; reflection and transmission grating; spectroscopes and concave grating spectrograph. This course is designed to supplement 201.

Prerequisite: Physics 103.

2 credits (Webb)

204—DYNAMICS OF A PARTICLE, INCLUDING WAVE MOTION. A mathematical presentation of the dynamics of a particle in a conservative medium, and the calculations of the velocity of propagation of various wave forms and their synthesis and analysis by Fourier's theorem. A study of the velocity of propagation as a function of wave length, including a consideration of varying degrees of freedom and boundary conditions.

Prerequisites: Two "100" courses in Physics, and Mathematics 105a.

3 credits (Koppius)

205—KINETIC THEORY OF MATTER. A course of lectures covering the classical kinetic theory of gases, including the theorems of Clausius, Joule, Maxwell and Boltzman. Coefficients of viscosity and slip. Brownian movements and specific heat relations are treated

from the kinetic theory standpoint and equations of change of state are developed.

Prerequisites: Two "100" courses in Physics, and Mathematics 105a. 3 credits (Koppius)

210a—ELECTRODYNAMICS. The mathematical theory of electricity and magnetism, including an analysis of the energy relations between charges and between currents. Numerous problems are solved by introducing boundary conditions in the general solutions of the differential equations. The expressions for retarded potentials and the Maxwell field equations are developed. Vector notation is used throughout.

Prerequisites: Physics 102a and Mathematics 105. 3 credits (Warburton)

210b—ELECTRODYNAMICS. A treatment of the subject from the relativity point of view and on the electron theory. The topics treated will be the simultaneous and retarded fields of a point charge, the derivation and solution of the field equations, the dynamical equation of the electron, radiation from an electron and groups of electrons.

Prerequisites: Physics 102a and Mathematics 105a. 3 credits (Pardue)

Note: 210a and 210b are independent of each other.

212—CONDUCTION OF ELECTRICITY THROUGH GASES. A course of lectures covering the outstanding discoveries connected with the conduction of electricity through gases at low pressures. The subjects of diffusion, ionic mobility, e/m measurements, positive ray analysis, isotopes, photo-electricity, etc., are treated.

Prerequisites: Physics 102a and 104. 3 credits (Koppius)

213—ELECTRO-MAGNETIC THEORY OF LIGHT. A course of lectures covering the classical electro-magnetic theory as applied to the optical phenomena of reflection, refraction and polarization. Both isotropic and non-isotropic media as well as conducting and non-conducting media are treated.

Prerequisites: Physics 103, one additional "100" course in Physics, and Mathematics 105a. 3 credits (Webb)

215—QUANTUM THEORY. A brief review of the Bohr and Bohr-Sommerfeld theories. The general aspects of wave mechanics, matrix mechanics, uncertainty principle. Application of the above theories to numerous and important problems.

Prerequisites: Physics 217a and Mathematics 105a. 3 credits (Pardue)

216a—RECENT ADVANCES IN PHYSICS. Current developments in physics are carefully studied with special interest placed upon their background and their trend. Useful training is afforded in the organization of the literature upon special topics.

Prerequisite: One specialized "200" course in Physics.

1 credit (Staff)

216b—RECENT ADVANCES IN PHYSICS. A continuation of 216a.

1 credit (Staff)

217a—THEORETICAL PHYSICS. Lectures upon advanced classical and relative dynamics, hydrodynamics of perfect fluids and of viscous fluids, properties of elastic media. A substantial portion of the treatment of many of the topics will be taken from Page's "Introduction to Theoretical Physics."

Prerequisites: Two "100" courses in Physics, and Mathematics 105.

3 credits (Pardue)

217b—THEORETICAL PHYSICS. A continuation of 217a. Statistical mechanics, classical and modern. Origin of spectra including the classical theory of molecular spectra. Transformation of the elements. There is a slight flexibility which may be used to fit the needs of the students.

3 credits (Pardue)

218—THERMODYNAMICS. First and second laws of Thermodynamics, entropy, derivation of thermodynamic equations and their application to physical phenomena.

Prerequisites: Physics 101, 205, and Mathematics 105a.

3 credits (Webb)

220a—SEMINAR. A weekly meeting of the staff and advanced students of the department for presentation and discussion of recent developments in physics as reported in the current literature and of work in progress in the department. Credit is given only to those who satisfactorily present papers.

1 credit (Staff)

220b—SEMINAR. A continuation of 220a.

1 credit (Staff)

223a—GENERAL PHYSICS. Course covers Mechanics, Heat and Wave Motion. This course limited to graduate students of the College of Education.

Prerequisites: One year of Elementary Physics and Mathematics 2 and 3.

7 credits (Koppius)

223b—GENERAL PHYSICS. A continuation of 223a. Covers Electricity, Sound and Light.

7 credits (Warburton)

224—X-RAYS AND THEIR APPLICATIONS TO PHYSICAL PROBLEMS. A course for students in physics and chemistry, giving the present theory of X-ray production, and the application of X-rays to microphysical problems.

Prerequisite: Physics 201.

3 credits (Hahn)

225—THESIS. 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.

(Staff)

226a—RESEARCH IN PHYSICS.

3 credits (Staff)

226b—RESEARCH IN PHYSICS.

3 credits (Staff)

227a—RESEARCH IN PHYSICS.

5 credits (Staff)

227b—RESEARCH IN PHYSICS.

5 credits (Staff)

250a—RELATIVITY. A theory of space and time measurements as applied to physical phenomena.

Prerequisites: Physics 103 and either Physics 102a or 104.

3 credits (Webb)

250b—RELATIVITY. A continuation of Physics 250a.

3 credits (Webb)

V. AGRICULTURE

AGRICULTURAL EDUCATION (See Education)

AGRONOMY

105—ADVANCED CROPS. The important crops are studied in more detail than is possible in the standard courses in crops. Structure, classification and history of crop plants are given special attention. Soil and climatic adaptation, economics of production, and numerous other fundamental problems of crop production are studied. To as large an extent as possible the best crop literature is reviewed. Some attention is given to the more practical phases of production, chiefly to give students an opportunity to become familiar with advances that have been made in the art of crop production in recent years.

3 credits; 2nd semester (Kinney)

106—FIELD CROP IMPROVEMENTS. In this course principles of genetics applicable to plant breeding, technique of breeding and development of plant breeding in the past are studied. Classification and inheritance of the various crops and the problems of improvement connected with each are given attention.

2 credits; 2nd semester (Kinney, Fergus)

109—ADVANCED SOIL MANAGEMENT. This course is a study of the problems of soil management, including erosion, tillage, moisture, liming, fertilization, and cropping. Lectures, discussions, reports and laboratory work.

Prerequisite: Agronomy 1.

3 credits; summer (Karraker)

110—ADVANCED SOILS. Biological studies in soils. Reference, classroom and laboratory work dealing with the biological processes in soils in relation to soil productivity. The studies include carbon dioxide production, ammonification, nitrification, nitrogen fixation, sulfonation, solvent action of biological activity products, and partial soil sterilization.

Prerequisites: Agronomy 1 and permission of the instructor.

3 credits; 1st semester (Karraker)

111—ADVANCED SOILS. Physico-chemical studies in soils. Reference, classroom and laboratory work on the physico-chemical conditions and changes in soils, emphasizing the theoretical and technical phases. Soil formation, air and water soil relationships, soil colloids, soil solution, and soil reaction are important parts of the work.

Prerequisites: Agronomy 1 and permission of the instructor.

3 credits; 2nd semester (Karraker)

112a-b—SPECIAL WORK IN SOILS.

Prerequisites: Agronomy 1 and permission of instructors. 3 credits each semester; 1st and 2nd semesters (Roberts, Karraker)

113—METHODS AND RESULTS IN AGRONOMY EXPERIMENTATION. A study of the essentials of reliable experimentation. Experimental data from various sources are studied, with special emphasis upon interpretation.

Prerequisite: Agronomy 1. 3 credits; 1st semester (Roberts)

114a-b—SPECIFIC CROPS. This course is for the student who wishes to study a crop intensively.

Prerequisite: Permission of instructors. 2 credits; each semester (Kinney, Fergus)

115—SOIL MANAGEMENT. Deals with erosion, soil moisture, tillage operations, soil organic matter and nitrogen, including animal and green manures, lime and fertilizers. Lectures 3 hours.

Prerequisite: Agronomy 1. 3 credits; 1st semester (Roberts)

202a-b—SPECIAL PROBLEMS IN CROP PRODUCTION.

2 credits; each semester (Kinney)

203a—LITERATURE OF PLANT PATHOLOGY.

3 credits; 1st semester (Valleau)

203b—LITERATURE OF PLANT PATHOLOGY.

3 credits; 2nd semester (Valleau)

204a-b—INVESTIGATION IN SOILS.

Prerequisite: Permission of instructors. 3 credits; each semester (Roberts, Karraker)

207a—SEMINAR.

1 credit (The Agronomy Staff)

207b—SEMINAR.

1 credit (The Agronomy Staff)

ANIMAL INDUSTRY

102—FARM BUTCHERING AND CURING MEATS. The slaughtering and blocking out of beeves, veals, hogs and lambs. Animals are judged on foot and on the hook. Wholesale and retail cuts are studied. A general study is made of the whole field of meat industry. Meat curing and cures are studied with special emphasis on pork.

Prerequisite: A. I. 21. 4 credits; 1st semester (Wilford)

104—ANIMAL BREEDING. A survey of the methods by which the breeders have built up the different types of domestic animals.

Prerequisites: A. I. 17 and A. I. 19. 4 credits, 2nd semester (Anderson)

105—BEEF PRODUCTION. A study of the development of the beef cattle industry in this and other countries. The feeding, breeding and management of beef cattle are given the most attention. Laboratory work consists in judging beef cattle and practical problems relating to the industry.

Prerequisite: A. I. 20. 3 credits; 2nd semester (Good)

106—PORK PRODUCTION. A study of breeds and types. General management and feeding of all classes of swine supplemented with laboratory in judging and management.

Prerequisite: A. I. 20. 3 credits; 1st semester (Wilford)

107—SHEEP PRODUCTION. Breeds and market classes; judging, breeding, feeding, management and marketing of sheep; production and marketing of wool.

Prerequisites: A. I. 17; 21. 3 credits; 2nd semester
(Horlacher)

108—ADVANCED LIVE STOCK JUDGING. Special attention is given to comparative and group judging and to the presentation of oral reasons.

1 credit; 1st semester (Horlacher)

110—ADVANCED STOCK JUDGING. Primarily for judging team candidates. Admission by permission of instructor.

Prerequisites: A. I. 17; 21. 3 credits; 1st semester
(Horlacher)

111a-b—SPECIAL PROBLEMS IN ANIMAL HUSBANDRY.

3 credits (Staff)

120—SYSTEMS OF LIVE STOCK PRODUCTION. A survey of the systems of live stock production in the various countries of the world; designed to give the student a broad view of the live stock industry.

Prerequisites: A. I. 17; 21. 3 credits; 1st semester
(Horlacher)

121—ADVANCED GENETICS. Study of the laws of heredity as they have been applied in plant and animal improvement and may be made applicable for human betterment.

Prerequisite: A. I. 19. 3 credits; 1st semester (Anderson)

124—ADVANCED STUDY OF THE DAIRY BREEDS. A classification of prominent strains and families within the leading dairy breeds. Interpretation of herd book data, advanced classification, selective and super registration, present day breed problems, selection

by type, proved sires and a constructive dairy breeding program. Lecture two hours a week; laboratory four hours a week.

Prerequisite: A. I. 23. 4 credits; 2nd semester (Ely)

125—DAIRY CATTLE FEEDING AND MANAGEMENT. The application of the principles of nutrition to dairy cattle feeding problems, up-to-date methods contributing to maximum efficiency in the production of quality dairy products on the farm.

Prerequisite: A. I. 20. 3 credits; 2nd semester (Ely)

127—ADVANCED POULTRY BREEDING. Fundamental genetic principles involved in poultry breeding. Emphasis laid on the transmission of egg production, broodiness, egg shell color and feather color. A breeding program is mapped out, analyzed, and studied in detail.

Prerequisite: Genetics. 3 credits; 2nd semester (Martin)

129—DAIRY BACTERIOLOGY. The application of bacteriological principles to the production and processing of milk and other dairy products, involving methods of micro-organisms into dairy products, effects of their growth and methods for their control. Lecture 2 hours; laboratory 4 hours a week.

Prerequisite: Bacteriology 52 or 102. 4 credits; 1st semester (Morrison)

130—BUTTER AND ICE CREAM. A study of the various processes and problems involved in the manufacture and storage of butter and ice cream. Lecture 1 hour, laboratory 4 hours a week.

Prerequisite: A. I. 23. 3 credits; 1st semester (Barkman)

131—MARKET MILK AND CHEESE. A study of the problems connected with the production and handling of milk and manufacture of certain types of cheese. Lecture 1 hour, laboratory 4 hours a week.

Prerequisite: A. I. 23. 3 credits; 2nd semester (Morrison)

132a-b—SPECIAL PROBLEMS IN DAIRYING.

3 credits (Staff)

133a-b—SPECIAL PROBLEMS IN POULTRY.

3 credits (Staff)

134—ADVANCED POULTRY PRODUCTION. Advanced problems involved in incubation, brooding, pathology, nutrition and flock management.

Prerequisite: A. I. 22. 3 credits; 2nd semester (Martin)

201—ECONOMIC FACTORS INVOLVED IN MEAT PRODUCTION. Problems involving the economical production of beef, pork, and mutton.

3 credits; each semester

(Good, Horlacher, Wilford, Harris)

202—MEATS. Research in any field touching on the industry.
Prerequisite: A. I. 102. 3 credits; both semesters

(Wilford)

203—RESEARCH IN GENETICS. Special problems involving original investigation on the part of the student. Throughout the year.
Prerequisite: Approval of head 3 credits; each semester
of department. (Anderson)

204a-b—RESEARCH IN DAIRYING. Special problems involving original investigation on the part of the student. Throughout the year.
Prerequisite: Approval of head 3 credits; each semester
of department. (Ely or Barkman or Morrison)

205—INVESTIGATIONS IN BREEDING LIGHT HORSES.
3 credits (Anderson)

206a-b—RESEARCH IN POULTRY. Special problems involving original investigation on the part of the student. Throughout the year.
Prerequisite: Approval of head 3 credits; each semester
of department. (Martin or Insko)

207—INVESTIGATIONS IN WOOL. Special research problems.
Prerequisite: A. I. 107. 3 credits; either semester
(Horlacher)

208—RESEARCH IN ANIMAL BREEDING. Special problems involving original investigation on the part of the student. Throughout the year.
Prerequisite: Approval of head 3 credits; each semester
of department. (Anderson)

209a-b—ANIMAL HUSBANDRY SEMINAR. Throughout the year.
1 credit; each semester (Good and Staff)

ANIMAL PATHOLOGY

116—DISEASES OF DOMESTIC ANIMALS. The course deals with the various infectious and parasitic diseases of animals, their distribution, general nature, methods of dissemination, sanitation, prevention and eradication. The work is presented from the standpoint of hygiene and preventive medicine, special emphasis being placed on the transmissible diseases. Lectures, recitations and reference reading.

4 credits; 2nd semester (Dimock)

126—ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS. A study of anatomy and physiology of domestic animals to show the correlation of structure and function of the various organs of the

body. The work is outlined so as to give the student an understanding of anatomy and physiology as related to work offered in other courses as livestock judging, butchering, animal nutrition, animal breeding and animal diseases.

4 credits; 1st semester (Hull)

201a-b—INVESTIGATION IN ANIMAL DISEASES. Special problems involving original investigation on the part of the student.

Prerequisite: 126 and 116, 4 credits; each semester
or equivalent. (Dimock and Staff)

ENTOMOLOGY

102—ADVANCED AGRICULTURAL ENTOMOLOGY. Life history, control and means of identification of the common and important insects of Kentucky; the making and care of school collections, cages and aquariums. Field trips and practical demonstrations of insect control. Especially planned for those intending to take up vocational agricultural teaching and county agent work.

Prerequisite: Entomology 10. 3 credits; 2nd semester (Price)

103—ECONOMIC ENTOMOLOGY. FRUIT AND GARDEN INSECTS. Beneficial and injurious insects of fruit and garden crops with special attention to the life histories, habits and control of injurious species found in Kentucky. A discussion of practical and specific control measures for each insect considered as garden and fruit pests.

Prerequisite: Entomology 10. 3 credits; 1st semester (Price)

104—ECONOMIC ENTOMOLOGY. FARM CROP INSECTS AND ANIMAL PARASITES. Beneficial and injurious insects of common farm crops including those of stored grains and forage. Detailed discussions of the more important Kentucky species with special reference to life histories and control measures. General theories of agronomic practice in the control of insects; fumigation methods and treatment for animal parasites.

Prerequisite: Entomology 10. 3 credits; 2nd semester (Price)

106a—SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. Insect physiology, anatomy, ecology and taxonomy; entomological literature and technique; studies of special groups of insects.

Prerequisites: Entomology 10 3 credits; 1st semester (Price)
and any one of the following: 102, 103, 104.

106b—SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. A continuation of 106a.

3 credits; 2nd semester (Price)

201a—ENTOMOLOGICAL PROBLEMS. Discussions and assignment of current insect subjects. Investigations of chosen insect problems including original research work.

Prerequisites: Entomology 10, 3 credits; 1st semester (Price)
103, 104, 106a and 106b.

201b—ENTOMOLOGICAL PROBLEMS. A continuation of 201a.
3 credits; 2nd semester (Price)

FARM ECONOMICS

107a—SPECIAL PROBLEMS IN FARM MANAGEMENT. Students enrolling in this course are assigned some special problem, as for example, the cost of producing some class of farm products such as dairy products, crop or live stock, the problem of profitable farm organization in a specified community; farm taxes, etc. Students are required to review the literature of the problem and report on it regularly to the instructor. In most cases they are also required to examine, classify and tabulate special statistical data previously collected by the College of Agriculture and to relate these data to the problem. Each student presents a final report showing results and conclusions arrived at.

1st semester (Nicholls)

107b—SPECIAL PROBLEMS IN FARM MANAGEMENT. A continuation of 107a.

2nd semester (Nicholls)

108—LAND PROBLEMS. The course deals particularly with problems of farm ownership and tenancy. Phases of the problem considered are the following: The classification of agricultural land; economic characteristics and peculiarities of land; principles involved in the determination of rent; the relation of rent to other distributive shares in production; factors determining the value and appraisal of farm land; problems of farm tenancy; land-tenant contracts and characteristics of such contracts which have been mutually satisfactory to landlords and tenants.

Prerequisite: Farm Economics 4. 2 credits; 1st semester
(Nicholls)

109—ADVANCED FARM MANAGEMENT. A course giving advanced consideration to the fundamental principles underlying the choice of a farm, the selection of crop and live stock enterprises, the management of labor and equipment and the organization of these elements into an efficient and profitable farm business. Trips are made to nearby farms that illustrate these principles and study is

devoted to the records of other successfully operated farms of the state.

Prerequisite: *Farm Economics* 113. 2 credits; 1st semester
[NOT GIVEN IN 1934-35] (Nicholls)

113—FARM MANAGEMENT. The course consists in a study of the principles underlying the choice of proper types of farming; the comparative merits of intensive and extensive farming; the relation of live stock to farm management; the best size of farm; the relation of capital to farm profits; farm rental systems; the management of men and horse labor and machinery for greatest profits; the layout of fields and farm buildings; farm accounts, including the annual inventory; the choice of a region for farming and important considerations in buying a farm; the other vital questions of farm organization and management.

Prerequisite: *Farm Economics* 4. 3 credits; 1st semester
(Nicholls)

120—RURAL COMMUNITY PROBLEMS. This course deals with the fundamental principles underlying the social organization of country life, and the application of those principles in the development of ways and means of community improvement. Among other matters will be considered the following: rural vital statistics; the shifting of the rural population; community hygiene and sanitation; good roads; the rural church; the rural school and organization for community betterment. An essential feature of the course will be a study of the student's own community, with a view of recommending action for the betterment of the general social, intellectual, moral and economic conditions.

3 credits; 1st semester (Oyler)

202a—RESEARCH IN FARM ECONOMICS. Open to graduate students. The student enrolling in this course is assigned 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 problem. The student is required to submit a report embodying his methods, generalizations and conclusions.

(Nicholls)

202b—RESEARCH IN FARM ECONOMICS. A continuation of 202a.

(Nicholls)

203a—AGRICULTURAL ECONOMICS SEMINAR. Preparation and presentation of papers on current problems in the field of agricultural economics. Round table discussions, centering on the subject matter treated in the various reports, are held at each meeting.

1 credit; 1st semester (Farm Economics Staff)

203b—AGRICULTURAL ECONOMICS SEMINAR. A continuation of 203a.

1 credit; 2nd semester (Farm Economics Staff)

HOME ECONOMICS

104—PROBLEMS IN TEXTILES. Study of physical and chemical properties of major and minor fibers. Social and economic aspects of textile and clothing trades. Laboratory work includes microscopy of fibers, physical tests and quantitative determination of fabric content. Term papers based upon individual problems.

Prerequisites: Home Economics 26; 4 credits; 2nd semester
Economics 1a. (Wade)

105a-b—SEMINAR IN NUTRITION. Investigations of recent research on nutrition.

Prerequisite: Senior or graduate standing. 1 credit; throughout year
(Erikson)

106a-b—SEMINAR IN TEXTILES AND CLOTHING. Investigation of special textile and clothing problems.

Prerequisite: Senior or graduate standing. 1 credit; throughout year
(Wade)

109—NUTRITION. Investigations in nutrition and in metabolic processes of the body. It includes sugar tolerance tests; protein and mineral balance experiments on human subjects; biological tests of vitamins and proteins of various foods.

Prerequisite: Home Economics 4. 4 credits; 2nd semester
(Erikson)

112—PUBLIC SCHOOL NUTRITION. A study of the nutrition class movement with emphasis on causes and effects of malnutrition, methods of judging nutrition and height and weight standards. Development of health program in public schools. The laboratory work includes a health class with public school children.

3 credits; both semesters (Grundmeier)

115—CHILD CARE AND TRAINING. Survey of the field of child care and training from pre-natal life through the pre-school period. It includes consideration of problems of pre-natal life and infancy; standards for normal growth; breast and artificial feeding; habit formation; general care and hygiene.

Prerequisites: Home Economics 3; 3 credits; both semesters
Physiology 3; (Deephouse)
Psychology 7.

116—ADVANCED COSTUME DESIGN. History of Costume. A survey of costume from ancient to modern times, showing political,

religious and industrial influence in design, and furnishing opportunity to create new designs applicable to modern needs. Study of Egyptian, Greek, Roman, French, Eighteenth and Nineteenth Century Costumes.

Prerequisites: Home Economics 29; 3 credits; 2nd semester
Art 2b. (Wade)

117—INTERIOR DECORATION. Study of essentials of architecture in their relation to interiors. Correct composition and decoration of interiors. Drawings, elevations, embodying color theory, and principles of decorative design are made. Problems and their practical solutions emphasized.

Prerequisites: Home Economics 45, 3 credits; 1st semester
26; Art 2b. (Wade)

118—TAILORING. A study of the economics of clothing, budgets. Suit and coat are made.

Prerequisite: Home Economics 47. 3 credits; 2nd semester
(Wade)

119a-b—EXPERIMENTAL COOKERY. Study of the application of chemical methods to the problems of cookery. Observation on effect of pH and determinations of losses in vegetable cookery; experimental work on batter and dough mixtures; shortening power of fats; properties of emulsions; comparison of slow and quick-acting baking powders; jelling properties of fruit juices.

Prerequisites: Home Economics 4; 3 credits; each semester
109. (Erikson, Grundmeier)

121a-b—SPECIAL PROBLEMS. Special problems in undergraduate research.

2 credits; throughout year (Staff)

178—INSTITUTION ORGANIZATION AND ADMINISTRATION. Principles of organization are studied, types of institutional service, modern industrial tendencies, personnel, organization and financial control.

Prerequisite: Home Economics 180. 3 credits; 2nd semester
(Hoover)

179—INSTITUTION MANAGEMENT. Application of scientific principles of institutional management consisting of practical work in the institution six hours a day, six days a week, daily half-hour conferences and hour lecture a week. Remuneration: \$35 a semester plus noon meals and laundering of laboratory uniforms.

Prerequisite: Home Economics 178. 6 credits; 2nd semester
(Hoover)

180—INSTITUTION EQUIPMENT. Selection, arrangement, cost and care of institutional equipment is made. Problems of lighting, heating, ventilation, refrigeration are considered.

Prerequisite: *Home Economics 79.* 3 credits; 1st semester
(Hoover)

201—ADVANCED HOME MANAGEMENT AND FAMILY RELATIONSHIPS. Open to seniors and advanced students. A lecture course affording opportunity for special study in family relationships. The social and economic problems of the home are stressed.

Prerequisites: *Home Economics 42;* 3 credits; 2nd semester
Sociology 1a; (Deephouse)
Economics 1a.

202a-b—GRADUATE SEMINAR.

2 credits; each semester (Staff)

HOME ECONOMICS EDUCATION (See Education)

HORTICULTURE

103—POMOLOGY. Apple Production. A course dealing with the theory and practice of commercial apple growing. Adaptation, soil relations, fruitfulness, and orchard management problems are studied in detail.

Prerequisite: *Horticulture 1.* 3 credits; 1st semester
(Waltman)

104—POMOLOGY. Stone Fruits. A detailed study of commercial peach, plum, and cherry growing.

Prerequisite: *Horticulture 1.* 3 credits; 2nd semester
(Waltman)

[OFFERED 1934-35; NOT OFFERED 1935-36]

105—POMOLOGY. Small Fruits. A detailed study of the care and management of commercial plantings of strawberries, raspberries, and other bush fruits. Lecture one hour, laboratory two hours a week, first half; lecture two hours a week last half.

Prerequisite: *Horticulture 1.* 2 credits; 2nd semester
(Waltman)

[NOT OFFERED 1934-35; OFFERED 1935-36]

106—GREENHOUSE CONSTRUCTION AND MANAGEMENT. A study of the details of greenhouse construction and management. Lecture 1 hour, laboratory 2 hours.

2 credits; 1st semester (Emmert)

[NOT OFFERED 1934-35; OFFERED 1935-36]

108—VEGETABLE FORCING. A study of the culture of vegetable crops under glass. Lecture 2 hours, laboratory 2 hours.

3 credits; 1st semester (Emmert)

[OFFERED 1934-35; NOT OFFERED 1935-36]

110—VEGETABLE GARDENING. A study of the fundamental principles of vegetable growing, and the farmer's home garden.

3 credits; 2nd semester
(Emmert)

111—MARKET GARDENING. A detailed study of commercial vegetable growing, with special emphasis on crops suited to Kentucky conditions.

Prerequisites: Horticulture 8, 110. 3 credits; 2nd semester
(Emmert)

113—LANDSCAPE GARDENING. A study of lawns, trees and shrubs and their arrangements for home and school yard planting. Lecture 2 hours; laboratory 2 hours.

3 credits; 2nd semester (Elliott)

114—LANDSCAPE GARDENING. A continuation of 113. Special attention is given to design and the use of plant materials.

Prerequisites: Horticulture 113, 117. 3 credits; 2nd semester
(Elliott)

[NOT GIVEN 1934-35; OFFERED 1935-36]

115a—SPECIAL PROBLEMS. This course is designed to permit advanced students to make an intensive study of some phase of horticulture in which they are particularly interested. May be taken only with approval of the instructor.

3 credits; 1st semester (Olney and Staff)

115b—SPECIAL PROBLEMS. A continuation of 115a.

3 credits; 2nd semester (Olney and Staff)

117—ELEMENTS OF FLORICULTURE. A study of the fundamental principles of flower growing under glass and in the garden. Lecture 2 hours; laboratory 2 hours.

3 credits; 2nd semester (Elliott)

118—FLOWER GARDEN AND HOME GROUNDS. A detailed study of the culture and arrangement of garden flowers for the home grounds. Lecture 2 hours; laboratory 2 hours.

3 credits; 2nd semester (Elliott)

[OFFERED 1934-35; NOT OFFERED 1935-36]

200a—SEMINAR.

1 credit; 1st semester (Olney and Staff)

200b—SEMINAR.

1 credit; 2nd semester (Olney and Staff)

MARKETS AND RURAL FINANCE

108—MARKETING. Principles and methods of marketing farm products; methods of marketing at country points and in central markets; classes and functions of middlemen; marketing specific commodities; market prices; marketing costs; and cooperative marketing. Lectures 3 hours.

Prerequisite: Economics 1. 3 credits; 1st semester (Price)

109—COOPERATIVE MARKETING. Principles, methods and problems involved in the cooperative marketing of farm products; legal, organization, and management problems which cooperatives encounter for different classes of farm products. Lectures 3 hours.

Prerequisite: M. & R. F. 108. 3 credits; 2nd semester (Price)

110—ADVANCED MARKETING. Marketing live stock, dairy products, eggs and poultry; analysis of local and terminal market organization; factors affecting efficiency of business set-up and financial organization of marketing agencies. Lectures 3 hours.

Prerequisite: M. & R. F. 108. 3 credits; 1st semester (Price)

111—AGRICULTURAL PRICES. A study of the factors influencing prices of farm products, price movements and trends, and price relationships. Methods of price comparison, long-time price movements and cyclical tendencies are reviewed. Lectures 3 hours.

Prerequisite: Farm Economics 4. 3 credits; 1st semester (Card)

112—FARM FINANCE. Principles of financing the production and marketing of farm products; credit needs of agriculture, including short-time, intermediate and farm mortgage-credit requirements; organization and operation of the federal farm loan system, and other agencies which furnish credit for agriculture. Lectures 3 hours.

Prerequisite: Farm Economics 4. 3 credits; 2nd semester (Bradley)

113—AGRICULTURAL STATISTICS. Sources, methods of presentation and analysis of agricultural statistics with special reference to agricultural census and crop and live stock estimates; collection, tabulation and graphic presentation of data; measures of dispersion, index numbers, trends and correlation. Lectures 2 hours; laboratory 2 hours.

Prerequisite: Economics 1. 3 credits; 1st semester (Card)

131—ADVANCED AGRICULTURAL PRICES. A review of price theory and statistical method with special reference to research in agricultural prices; analysis of various price studies with reference

to the theory upon which they are based, research methods used and reliability of conclusions drawn. Lectures 2 hours.

Prerequisites: M. & R. F. 111-113 2 credits; 1st semester
or Commerce 107. (Card)

132—CURRENT PROBLEMS IN AGRICULTURAL ECONOMICS. This course emphasizes recent developments in agricultural marketing, production and credit. Especial consideration of federal production adjustment programs, organization of agricultural credit, marketing agreements and cooperation.

Prerequisites: M. & R. F. 108, 3 credits; summer
Farm Economics 4. (Price)

202a-b—SPECIAL PROBLEMS IN MARKETING AND RURAL FINANCE. Open to graduate students who have the necessary training and ability to do research on individual problems. The course consists of individual work on some selected problem related to agricultural marketing or agricultural finance.

Prerequisite: approval of head 3 credits; each semester
of department. (Price and Staff)

203a-b—SEMINAR. Analysis of current problems in field of marketing and rural finance.

1 credit; each semester (Price and Staff)

204—RESEARCH IN MARKETING. Types of research in marketing. Laying out the research project. Analysis of data.

Prerequisite: M. & R. F. 108. 2 credits; second semester (Price)

VI. EDUCATION

GENERAL STATEMENT OF REGULATIONS GOVERNING GRADUATE WORK IN THE COLLEGE OF EDUCATION

Work leading to the doctor's degree with a major in education must conform to the same rules and regulations as prescribed in the general requirements, pages five to thirteen of this bulletin.

The regulations governing graduate work leading to the master's degree in the college of education are as follows:

1. Of the graduate work offered by any candidate for the master's degree in education 15 semester hours (including the thesis course) must be in the courses at the "200" level or above.
2. The total number of credits (graduate and undergraduate combined) in education offered by any candidate for the master's degree must be at least 36 semester hours including the thesis course.
3. Two plans are provided for the work which leads to the master's degree:
 - A. The first plan consists of 30 semester hours of graduate work with an average standing of B or better and the writing of a thesis.
 - B. The second plan requires the completion of 45 semester hours of graduate work with an average standing of B or better and no requirement of a thesis. Both plans involve the passing of an oral and a written examination over the field of education and an oral examination in the minor field, if any.
4. The first semester of the thesis course shall be required of all candidates for the master's degree in education.
5. Review of Educational Literature shall be a required course of all persons graduating on the 45 semester hour basis.
6. The residence requirement for those not writing a thesis shall be three semesters.

EDUCATIONAL ADMINISTRATION

101—SCHOOL ORGANIZATION. A course designed to acquaint the prospective teacher with the organization of which she is to become a part, and to familiarize her with those administrative activities in which she may be expected to participate. Topics emphasized are the administrative organization for the control of education, prep-

aration of teachers, teacher selection and placement, tenure, loads, salaries, retirement, supervisory relationships, the curriculum and related administrative problems and problems of pupil personnel.

Prerequisite: Education 16. 3 credits; both semesters and summer session (Chamberlain)

202—LOCAL SCHOOL ADMINISTRATION. A general course in public school administration for the prospective superintendent of a county or city school system. The course deals with the state as an educational agency, the local school district, the board of education, the superintendent, the internal organization for the administration of a school system, problems of the teaching personnel, problems of pupil personnel, business management, finance and accounting, the curriculum, school building planning and management, and the supervision of instruction. This is one of the basic courses in school administration and should be taken at or near the beginning of the student's graduate program.

3 credits; second semester and summer session (Hill)

203—CONSTITUTIONAL AND LEGAL BASIS OF PUBLIC SCHOOL ADMINISTRATION. A study of court decisions in order to discover the legal principles involved in practical problems of school administration. Topics: the school and the state; school districts; school officers; relations of school districts and municipalities; authority of school districts and district officers; school board procedure and records; tort liability of school districts; personal liability of school officers; contractual authority and liability of boards of education; school money; the school debt; acquisitions and use of school property; employment and dismissal of teachers; school attendance; rules and regulations of school boards; discipline and punishment of pupils; textbooks and studies.

Prerequisite: Education 202 or 213 or 232. 3 credits; 2nd semester and summer session (Ligon)

204a—THE ADMINISTRATION OF HIGHER EDUCATION. This course deals with the following topics: problems relating to the organization and administration of universities, colleges, and teacher training institutions; financial problems of higher institutions; professional duties of registrars, deans, and business managers.

2 credits; summer session (McVey)

204b—THE ADMINISTRATION OF HIGHER EDUCATION. A continuation of Education 204a.

2 credits; summer session (McVey)

206—PROBLEMS OF COLLEGE TEACHING. This course covers among others the following topics: methods commonly used in college teaching; bases for measuring instruction; marking systems; qualifica-

tions for college teaching; and current attempts to improve college instruction.

2 credits (Taylor)

207—SCHOOL BUILDINGS AND EQUIPMENT. The major topics considered are the measurement and evaluation of existing building facilities, planning new school buildings, financing the building program, and building operation and maintenance. The student should have had considerable graduate work in education before enrolling in this course.

*Prerequisite: Education 202 or 3 credits; summer session
its equivalent. only (Chamberlain)*

210—SPECIAL PROBLEMS IN EDUCATION. An independent work course for students doing their first year of graduate work in education.

Prerequisite: Education 101 or 202. 3 credits (Chamberlain)

211—THE ADMINISTRATION OF VOCATIONAL EDUCATION. A course designed for city and county superintendents and for principals of high schools. The purpose of the course is to train for the administration and supervision of vocational education. Topics emphasized include aims and purposes of vocational education, relationships of vocational education to other education, financing vocational education, and relationships of local and state administration.

3 credits; summer session (Hammonds)

212—THE ELEMENTARY SCHOOL. This course is designed to acquaint the prospective principal or superintendent with the nature and function of the elementary school. This is one of the basic courses in the field of administration and should be taken at or near the beginning of the student's graduate program.

3 credits; 1st semester and summer session (Chamberlain)

213—STATE SCHOOL ADMINISTRATION. The administration of American education from the standpoint of the federal and state governments. The course deals with federal relations to education, the state as an educational agency, local units for the administration of education, the scope of the school system, state school support, state control of the material environment and equipment, the training and certification of teachers, and teacher's contracts, tenure and retirement.

3 credits; 2nd semester and summer session (Chamberlain)

214—THE SECONDARY SCHOOL. This course is designed to acquaint the prospective principal or superintendent with the nature and function of the secondary school. This is one of the basic courses in the field of administration and should be taken at or near the beginning of the student's graduate program.

3 credits; 2nd semester and summer session (Ligon)

225—SUPERVISION OF INSTRUCTION. The topics considered are the development of supervision; the purpose of supervision; organization for supervision; planning supervision; supervisory techniques—classroom visitation, demonstration lessons, teachers' meetings, individual conference, curriculum construction, and tests and measurements; equipment and supplies; the teacher; and the pupil.

Desirable Prerequisite: Education 3 credits; 1st semester
202 or equivalent. and summer session (Adams)

231—FINANCING PUBLIC EDUCATION. This course consists of a series of topics treated primarily from the viewpoint of the superintendent or prospective superintendent. The topics are: budgetary procedure, school costs, school indebtedness, state finance, fiscal reports and accounting procedures.

Desirable Prerequisite: Education 3 credits; 1st semester
202 or equivalent. and summer session (Hill)

232—HIGH SCHOOL ADMINISTRATION. A course designed primarily for high school principals and prospective administrators. Topics emphasized are secondary school organization, the principal, the staff, the pupil, program of studies, schedules, community relationships, records and reports, articulation, library, plant, finance, and the aims of secondary education.

3 credits; 1st semester and summer session (Ligon)

290a—TECHNIQUE AND PROFESSIONAL WORK OF THE REGISTRAR. A comprehensive study of admissions including the literature, history and present day tendencies; the rules of the University; recommendations of the American Association of Collegiate Registrars; special problems in the administration of the office. Limited to six students. Lecture 1 hour, laboratory 2 hours a week.

Prerequisite: Consent of 2 credits; 1st semester
instructor. (Gillis)

290b—TECHNIQUE AND PROFESSIONAL WORK OF THE REGISTRAR. A comprehensive study of permanent records and transcripts, including the history, literature and present day tendencies; rules of the University; recommendations of the American Association of Collegiate Registrars. Special problems in the administration of the office. Limited to six students. Lecture 1 hour, laboratory 2 hours a week.

Prerequisite: Consent of 2 credits; 2nd semester
instructor. (Gillis)

291a, b, and c—PROBLEMS IN THE REGISTRAR'S FIELD OF ADMINISTRATION. Independent work. The purpose of the course is to give experience and training in the analysis and interpretation of data; organization of source material, so as to make the office an

effective laboratory for the study of problems in administration and education. A committee will conduct the final oral examination to determine the administrative value of the study.

Prerequisites: Education 290a-b 2 credits; both semesters
or equivalent.

(Gillis)

301a-b—RESEARCH PROBLEMS IN EDUCATIONAL ADMINISTRATION. An independent research course. The student will confer with the instructor, whenever either or both of them deem it advisable.

Prerequisite: One year of 3 credits; both semesters
graduate work.

(Chamberlain)

307a-b—SPECIAL PROBLEMS IN SECONDARY EDUCATION. Same type of course as Education 301.

Prerequisite: One year of graduate work. 3 credits; both
semesters (Ligon)

308a-b—SPECIAL PROBLEMS IN ELEMENTARY EDUCATION. Same type of course as Education 301.

Prerequisite: One year of graduate work. 3 credits (Duncan)

321a-b—SPECIAL PROBLEMS IN HIGHER EDUCATION. Same type of course as Education 301.

Prerequisite: One year of graduate work. 3 credits (Taylor)

AGRICULTURAL EDUCATION

179—DETERMINING CONTENT IN VOCATIONAL AGRICULTURE. Interpreting data as a basis for course building. Working out the content of a four-year course in vocational agriculture.

3 credits; summer session (Hammonds)

181—TEACHING VOCATIONAL AGRICULTURE. Designed to prepare men for the teaching of agriculture. About one-half of the course is practice.

7 credits; both semesters (Hammonds,
Woods and Armstrong)

188—FARM-PRACTICE SUPERVISION. Practice and directed study in supervising farm-practice of pupils in vocational agriculture.

1 credit; both semesters (Hammonds,
Woods and Armstrong)

280—METHOD IN TEACHING VOCATIONAL AGRICULTURE. The principles of method are applied to the teaching of agriculture. For men with experience in teaching vocational agriculture.

3 credits; summer session (Hammonds)

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

3 credits; summer session (Woods)

287a—ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION. The specific problems considered vary according to the needs of the group.

Prerequisite: Graduate standing. 3 credits; both semesters and summer session (Hammonds and Woods)

287b—SELECTING TEACHING MATERIALS. Specific references and other teaching materials are selected to be used in the teaching of vocational agriculture.

3 credits; summer session (Woods)

287c—EVENING SCHOOLS. Designed to prepare men to teach adult farmers. Includes organizing the school, determining content, method of teaching, follow-up work.

3 credits; summer session (Hammonds, Woods)

287d—DIRECTING FARM PRACTICE. Considers farm practice as a method of teaching. Takes up standards, planning, supervision, records.

3 credits; summer session (Hammonds)

289—RESEARCH IN AGRICULTURAL EDUCATION. The student works on some problem of importance to agricultural education.

3 credits; both semesters (Hammonds and Woods)

COMMERCIAL EDUCATION

158—METHOD OF TEACHING COMMERCIAL SUBJECTS. A study of classroom methods in accounting, shorthand, typewriting, business English, business law, and other commercial subjects usually offered in the high school.

3 credits; summer session (Lawrence)

159—THE COMMERCIAL CURRICULUM. Commercial subjects offered in high school are examined to determine their content and the place each should occupy in the curriculum. Some time is given to the course of study.

3 credits; summer session (Lawrence)

192—METHODS AND MATERIALS IN JUNIOR BUSINESS. The objectives of junior business are examined critically and materials prepared for teaching are developed. Since the subject is relatively

new and is offered on the junior high school level, definite projects are set up.

Prerequisite: Junior standing or experience teaching business subjects. 3 credits; summer session (Lawrence)

208—PROBLEMS IN COMMERCIAL EDUCATION. Some of the more advanced problems in the field are studied. The type of problems considered is influenced by the interests and needs of the group. Some of these problems are: Testing in business subjects; extra-curricular activities in commerce; job studies; placement and follow up; types of equipment; and supervision.

3 credits; summer session (Lawrence)

EDUCATIONAL PSYCHOLOGY

118—EDUCATIONAL TESTS AND MEASUREMENTS FOR ELEMENTARY TEACHERS. The problems of measurement in the elementary school; formal and informal tests, marking systems, etc.

Prerequisite: One semester of psychology. 2 credits; 1st semester (Ross)

122—EDUCATIONAL TESTS AND MEASUREMENTS FOR HIGH SCHOOL TEACHERS. The problems of measurement in the junior and senior high school, with special emphasis on standardized tests. The construction and use of new-type tests, use and limitations of traditional examinations, marking systems, etc.

Prerequisite: Education 16. 3 credits; 2nd semester (Ross)

147—FOUNDATIONS OF SECONDARY EDUCATION. The psychology of the student in junior and senior high school.

Prerequisite: One semester of psychology. 3 credits; 2nd semester (Ross)

152—PROBLEMS IN EDUCATIONAL PSYCHOLOGY. A critical survey of the conflicting schools of psychology, theories of learning, etc.

Prerequisite: Education 16. 3 credits; 2nd semester (Ross)

216—SEMINAR IN EDUCATIONAL TESTS AND MEASUREMENTS. A critical study of certain problems in measurement. Individual work.

Prerequisites: Education 122a-b. 3 credits; 1st semester (Ross)

223—EDUCATIONAL STATISTICS. A non-mathematical study of the applications of statistical and graphical methods to educational data.

3 credits; 1st semester (Ross)

ELEMENTARY EDUCATION

172—TEACHING READING IN THE ELEMENTARY SCHOOL. A practical application of principles derived from psychology and research. Discussion of aims, primary reading, activities leading to reading, reading in the intermediate grades, oral and silent reading, phonics, diagnostic and remedial work, means of testing and suitable material for each grade.

3 credits; 1st semester (Duncan)

173—TEACHING LITERATURE TO CHILDREN. A study of the literature for children from Kindergarten to Grade VI. Readings and book reports from various types; Mother Goose, folklore, modern fantastic tales, poetry, realistic stories, biography, myths and legends. Children's interests at different ages and stages of development; story telling and dramatization.

3 credits; 2nd semester (Duncan)

174—PRE-SCHOOL THEORY AND MANAGEMENT. A study of the nature, development, care and training educationally of the pre-school child. Emphasis will be placed on the formation of proper emotional and social habits and standards for right environment set up. Students will schedule regular periods for observation and assistance in the Kindergarten (by appointment).

4 credits; 1st semester (Martin)

176—PRE-SCHOOL ORGANIZATION AND TEACHING. A study of the pre-school movement in Europe and America. A study of the organization, equipment, curriculum and methods of pre-school teaching. Students taking this course will schedule regular periods (by appointment) for observation and assistance in the University Kindergarten.

4 credits; 2nd semester (Martin)

218—PROBLEMS IN PRE-SCHOOL AND NURSERY SCHOOL EDUCATION. This course is for graduate students who have had courses in pre-school or nursery school theory. Each student will be required to select a problem upon nursery school procedure or upon some phase of child development. Records will be kept and references read on each problem and reports made at special conferences. A final report on the problem will be submitted at the end of the term. Attendance at laboratory periods twice a week is required.

2 credits; 2nd semester (Martin)

HISTORY OF EDUCATION

117a—HISTORY OF EDUCATION. This course is a survey of the

history of secondary education from the Greek period to the present time.

3 credits; 1st semester (Patrick)

117b—HISTORY OF EDUCATION. A survey of the history of elementary education beginning with Athenian education and closing with present elementary education in America.

3 credits; 2nd semester (Patrick)

121—HISTORY OF EDUCATION IN THE UNITED STATES. A course in the history of the development of the public school system in the United States. It is designed to give a background for the appreciation of the aims and purposes of modern education.

3 credits; 2nd semester (Patrick)

219—GREAT EDUCATORS AND THEIR WORK. A study of the lives and writings of the world's educators to enable the student to appreciate more fully the ideals, attitudes and contributions to society of the men and women in education who have served best.

3 credits; 1st semester (Patrick)

220—COMPARATIVE EDUCATION. A course giving comparisons of systems of education.

3 credits; 2nd semester (Taylor)

HOME ECONOMICS EDUCATION

160—TECHNIQUE OF TEACHING HOME ECONOMICS. A study of methods of teaching as applied to home economics.

Prerequisite: Home Economics 26, 3 credits; both semesters
6a and b, 29, 3, 51, Education 16. (Parker or Spickard)

162—DIRECTED TEACHING IN HOME ECONOMICS. Practical application of methods in teaching various phases of home economics.

Prerequisite: Education 160. 6 credits; both semesters
(Parker or Spickard)

164—METHODS OF TEACHING CHILD CARE. A critical evaluation of subject matter in child care and methods of presenting it to high school pupils.

Prerequisites: Home Economics 115 3 credits; summer session
or equivalent. (Parker or Spickard)

165—PROBLEMS IN VOCATIONAL EDUCATION. This course deals with the problems involved in teaching vocational homemaking in day, part-time and evening schools.

3 credits; 2nd semester (Parker or Spickard)

178—METHOD OF TEACHING HOME MANAGEMENT AND

FAMILY RELATIONS IN JUNIOR AND SENIOR HIGH SCHOOL. This course deals with the selecting of subject matter and methods suitable for junior and senior high school pupils.

Prerequisites: Home Economics 42, 3 credits
experience in teaching. (Parker or Spickard)

261—HOME ECONOMICS SUPERVISION. A course planned primarily to help prepare teacher trainers and supervisors of home economics education.

Prerequisites: Education 160, 162, 3 credits; either semester
experience in teaching and (Parker or Spickard)
approval of instructor.

263—CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. A study of some recent developments in the field of home economics education.

Prerequisites: Education 160 3 credits; either semester
and 162, experience and summer session
in teaching. (Parker or Spickard)

266—SEMINAR IN HOME ECONOMICS EDUCATION. Provision is made for students to make individual investigations and report on special problems in home economics education.

3 credits; either semester and summer session
(Parker or Spickard)

268—HOME ECONOMICS CURRICULUM CONSTRUCTION. A study of the underlying principles of curriculum building for junior and senior high school home economics.

Prerequisites: Education 160, 162. 3 credits; both semesters
(Parker or Spickard)

PHILOSOPHY OF EDUCATION

114—EDUCATIONAL SOCIOLOGY. A study in the application of sociological findings to the field of education.

Prerequisites: Education 3 credits; 1st and 2nd semesters
101, 122. (Adams)

127a—PRINCIPLES OF CURRICULUM CONSTRUCTION (for elementary teachers). A study of the philosophy and technics of curriculum construction and some practical work in construction.

Prerequisite: Junior standing. 3 credits; 2nd semester (Haines)

200—ADVANCED COURSE IN PHILOSOPHY OF EDUCATION. This is an advanced course dealing with the philosophy underlying the larger educational problems of today.

Prerequisites: Graduate standing 3 credits; 2nd semester
and at least 12 hours (Adams)
in education.

205—REVIEW OF CURRENT EDUCATIONAL LITERATURE.

An extensive study of current educational literature as found in educational periodicals.

Prerequisite: 12 hours
in education.

3 credits; 1st semester
(Adams)

222a—THESIS COURSE. This course is intended to acquaint the student with the various techniques of research and to aid him in methods of attack on his own particular research problems.

Prerequisite: 12 hours
education.

3 credits; 1st semester
(Taylor)

222b—THESIS COURSE. Continuation of 222a.

Prerequisite: 12 hours education.

3 credits; 2nd semester
(Taylor)

227a—PRINCIPLES OF CURRICULUM CONSTRUCTION. A survey of modern curriculum making as carried on in progressive city school systems, laboratory schools and state school systems. Also an intensive study of the principles underlying curriculum revision.

Prerequisites: Teaching experience
and 12 hours in education.

3 credits; 1st semester
(Adams)

227b—TECHNIQUES IN CURRICULUM CONSTRUCTION. This course has to do with the techniques being used to determine content of courses of study.

Prerequisites: Teaching experience,
12 hours education.

3 credits; 2nd semester
(Adams)

230—PROBLEMS OF EDUCATIONAL SOCIOLOGY. An advanced course in the application of sociology to the educational field.

Prerequisites: 12 hours education,
including Education 114.

3 credits; 2nd semester
(Adams)

SECONDARY EDUCATION

105—THE TECHNIQUE OF TEACHING. Deals with laboratory methods of instruction. Units: fundamental processes, control, operation, administration.

Prerequisite: Ed. 101.

3 credits; both semesters (Ligon)

109—PRINCIPLES OF SECONDARY EDUCATION. This course is planned to give an overview of the field of secondary education. The principal topics of this course are: (1) historical background; (2) scope and functions of secondary education; (3) characteristics and needs of secondary school pupils; (4) curriculum making; (5) extra-curricular activities; (6) changing conceptions of secondary teaching; (7) future trends.

3 credits (Ligon)

149—EXTRA CURRICULAR ACTIVITIES. Underlying principles, faculty activities, home room activities, student council, clubs, athletics, publications, dramatics, honor societies, commencements. *Prerequisite: 12 hours education.* 3 credits (Ligon)

PHYSICAL EDUCATION

(For Men)

120—PHYSICAL DIAGNOSIS AND MEDICAL GYMNASTICS. Theory and practice in physical and health examinations, with special emphasis on the detection of physical abnormalities; physical efficiency tests and measurements. Therapeutic exercises and their application to the prevention or arrest, the cure or correction of disturbances amenable to physio-therapeutic measures. Theory and practice of after-treatment in joint injuries, sprains and fractures.

3 credits; 2nd semester and
summer school (Potter)

124—HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION. History of Physical Education from the ancient Greeks and Romans, through the Middle Ages and the Modern Era. The philosophy of the German, Swedish and French systems is outlined. Lectures and recitations on present day athletics and physical training in the United States and foreign countries. Two hours recitation a week.

2 credits; 1st semester (Hackensmith)

128—SCHOOL PROGRAMS OF PHYSICAL EDUCATION. Lectures, discussions and preparation of papers covering the objectives of physical education; the educational, health and recreational significances; the content of the school program; types of activities for grade school, high school, and college.

3 credits; 2nd semester (Potter)

131—ADVANCED BASKETBALL. Lectures and recitations on theory and practice of team play in basketball. Special emphasis is placed on systems of offense and defense as used by the leading coaches throughout the country. Two hours per week.

2 credits; 1st semester (Rupp)

142—ADVANCED FOOTBALL. Lectures and recitations on the theory of football. Special stress is placed on generalship, signal systems, scouting and conditioning of players. Football is studied from the coach's viewpoint. Two hours a week.

2 credits; 2nd semester (Wynne)

148—ORGANIZATION AND ADMINISTRATION OF ATHLETICS. Special emphasis on equipment, care of the gymnasium plant, execu-

tive and administrative duties of an athletic director, establishment and enforcement of eligibility rules, making of schedules, selecting a coach, sportsmanship and publicity are studied. Three hours recitation and lecture a week.

3 credits; 2nd semester (Boles)

201—RESEARCH IN PHYSICAL EDUCATION. Theory and practice in research and statistical procedures as applied to the field of problems of research pertaining to athletics, recreation, intramural and other phases of Physical Education. Lectures and study on the technique and procedure of research. Special problems and the preparation of papers dealing with studies and surveys of Physical Education. Five hours recitation a week.

5 credits; 2nd semester (Potter)

VII. ENGINEERING

CIVIL ENGINEERING

Prerequisites 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 baccalaureate degree in civil engineering.

201a—CONSTRUCTION. Advanced work in plain and reinforced concrete, theory, design and experimental work. Lectures, reading and design. Twenty hours a week.

10 credits; 1st semester (Terrell)

201b—CONSTRUCTION. Continuation of 201a. Lectures, reading and designing. Twenty hours a week.

10 credits; 2nd semester (Terrell)

231a—HIGHWAY ENGINEERING. Advanced course designed for graduate civil engineers who wish to enter the field of highway engineering. Road laws, organization of highway departments, traffic, cost contracts, and specifications, laboratory investigations on all kinds of surfacing materials. Structures, their design and maintenance. Twenty-four hours a week.

12 credits; 1st semester (Chambers)

231b—HIGHWAY ENGINEERING. Continuation of 231a. Twenty-four hours a week.

12 credits; 2nd semester (Chambers)

241a—RAILROAD ENGINEERING. Advanced course in location, construction, maintenance, economical selection of lines, grade reductions, cost of operation, valuation, structures and their maintenance. Fifteen hours a week.

7 credits; 1st semester (Shaver)

241b—RAILROAD ENGINEERING. Continuation of 241a. Fifteen hours a week.

7 credits; 2nd semester (Shaver)

251a—SANITARY ENGINEERING. Advanced course in sewer design, construction and maintenance. Design, maintenance, and operation of sewage disposal plants. Water supply and water works design, construction and maintenance. (Courses in water analysis,

sewerage analysis, and bacteriology should be taken in connection with this course.) Twenty hours a week.

10 credits; 1st semester (Terrell)

251b—SANITARY ENGINEERING. Continuation of 251a. Twenty hours a week.

10 credits; 2nd semester (Terrell)

271a—STRUCTURAL ENGINEERING. Advanced course in the theory of structures, mill buildings, railroad and highway bridges. The use of influence diagrams and detail drawings. Eighteen hours a week.

9 credits; 1st semester (Carrel)

271b—STRUCTURAL ENGINEERING. Continuation of 271a. Eighteen hours a week.

9 credits; 2nd semester (Carrel)

ELECTRICAL ENGINEERING

201a—ADVANCED ALTERNATING CURRENTS. An intensive study of the fundamental theory of alternating current phenomena and machines. Designs of machines and layouts for central stations and distribution systems are made. Lectures and recitations five hours, laboratory ten hours, and drawing ten hours a week.

Prerequisite: B. S. in Electrical Engineering or its equivalent. 12 credits; 1st semester (Bureau)

201b—ADVANCED ALTERNATING CURRENTS. A continuation of course 201a. Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week.

Prerequisite: E. E. 201a. 12 credits; 2nd semester (Bureau)

202—TELEPHONE ENGINEERING. A study of the theory and operation of modern telephone exchanges. Layouts and designs are made to meet different assumed conditions. Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week.

Prerequisite: B. S. in Electrical Engineering or its equivalent. 12 credits; 1st semester (Freeman)

203—ILLUMINATION. A study of the principles underlying both exterior and interior illumination. The characteristics of the various commercial illuminants are compared and layouts for lighting systems are made. Lectures and recitations five hours; laboratory ten hours and drawing ten hours a week.

Prerequisite: B. S. in Electrical Engineering or its equivalent. 12 credits; 2nd semester (Freeman)

MECHANICAL ENGINEERING

201a—AUTOMOTIVE ENGINEERING. An advanced course in the essentials of motor vehicle design, construction and operation. Recitation five hours a week; design ten hours a week, and laboratory fifteen hours a week.

Prerequisite: B. S. in Mech. Eng. 12 credits; 1st semester
or its equivalent. (C. H. Anderson)

201b—AUTOMOTIVE ENGINEERING. Continuation of M. E. 201a. Recitation five hours a week; design ten hours a week; laboratory fifteen hours a week.

Prerequisite: M. E. 201a. 12 credits; 2nd semester
(C. H. Anderson)

202a—POWER PLANTS. Advanced work in the design, selection and operation of power plant equipment. Usually involves a research problem as the major topic for study.

Prerequisite: B. S. Mech. Eng. 12 credits; 1st semester
or its equivalent. (O'Bannon)

202b—POWER PLANTS. Continuation of M. E. 202a.

Prerequisite: M. E. 202a. 12 credits; 2nd semester
(O'Bannon)

203a—HEATING AND VENTILATION. Advanced work in the design, selection and operation of heating and ventilating equipment, usually with special emphasis on a particular research problem.

Prerequisite: B. S. Mech. Eng. 12 credits; 1st semester
or its equivalent. (O'Bannon)

203b—HEATING AND VENTILATION. Continuation of M. E. 203a.

Prerequisite: M. E. 203a. 12 credits; 2nd semester
(O'Bannon)

METALLURGICAL ENGINEERING

101—ELEMENTS OF OIL SHALE ENGINEERING. Comprises an elementary study of the destructive distillation of oil shales for the production of oil, gas and by-products, together with the history of the oil shale industry and the economic factors upon which the future development of the industry depends.

Prerequisites: Phys. 3b, Chem. 10. 2 credits; 1st semester
(Crouse)

105—ADVANCED METALLURGY OF IRON AND STEEL. A consideration of the metallurgy of iron and steel from the standpoint of

the calculations involved in figuring charges, slags, heat efficiency and similar factors of a metallurgist's work.

Prerequisite: Met. 114.

2½ credits; 1st half,
2nd semester (Crouse)

114—METALLURGICAL CALCULATIONS. Comprises a study of the calculations involved in the practical application of the principles of general metallurgy and the metallurgy of non-ferrous metals such as copper, lead, zinc and aluminum.

Prerequisites: Met. 28, 29;

3 credits; 1st semester
(Crouse)

Phys. 3b, 6;

Chem. 10.

115—PYROMETRY. A lecture and laboratory course in the heat treatment of steel including a study of the various methods used in the measuring of high temperatures. Lecture and recitations two hours a week for the full semester, laboratory four hours a week for the second half of the semester.

Prerequisites: Phys. 3b, 6;

2 credits; 2nd semester
(Crouse, Beebe)

Met. 22.

205—HEAT TREATMENT OF METALS AND ALLOYS. The various factors involved in the heat treatment of metals and alloys are considered with special emphasis to the particular metal or alloy on which the student wishes to specialize. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: B. S. in Met. Eng.
or its equivalent.

6 credits; 1st semester
(Crouse)

206—OIL SHALE TECHNOLOGY. Involving a detailed study of the principles and methods used in the production of oil from shales. Reference reading and laboratory work emphasized. It is desirable that the student have some knowledge of physical and organic chemistry. Lectures and recitations three hours a week; laboratory twelve hours a week.

Prerequisites: Chem. 10; Phys. 3b.

9 credits; 2nd semester
(Crouse)

207—TECHNOLOGY OF ALLOYS. A study of the principles and practice used in the production of alloys of various kinds with special stress on any particular group of alloys that the student may choose. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: B. S. in Met. Eng.
or its equivalent.

6 credits; 1st semester
(Crouse)

208—ADVANCED METALLOGRAPHY. A detailed study of the

structure of metals and alloys together with their preparation for examination under the microscope for such examination. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: B. S. in Met. Eng. 6 credits; 2nd semester
or its equivalent. (Crouse)

209—ADVANCED ORE DRESSING. A study of the technique of ore dressing plant design and an opportunity for original research in concentration problems. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: B. S. in Met. Eng. 6 credits; 1st semester
or its equivalent. (Emrath)

210—TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. A detailed study of the principles and practices employed in the low temperature carbonization of carbonaceous materials such as bituminous and channel coals. Reference reading and laboratory work emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: B. S. in Met. Eng. 6 credits; 2nd semester
or its equivalent. (Crouse)

MINING ENGINEERING

203—MINE ORGANIZATION. A detailed study of the structure and function of a mining enterprise from both the financial and engineering standpoints.

Prerequisite: B. S. in Met. Eng. 3 credits; 1st semester
or its equivalent. (Emrath)

206—EXPLOSIVE ENGINEERING. A study of the principles involved in the use of explosives in large-scale mining and quarrying practice.

Prerequisite: B. S. in Min. Eng. 2 credits; 2nd semester
or its equivalent. (Emrath)

207—ADVANCED PROSPECTING. A detailed study of the principles involved in geophysical investigation of the mineral of the earth's crust.

Prerequisite: B. S. in Min. Eng. 2 credits; 1st semester
or its equivalent. (Emrath)

208—COAL DUST INVESTIGATION. Research work. The design of a laboratory scale gallery for the investigation of the explosive qualities of native bituminous coals.

Prerequisite: B. S. in Min. Eng. 4 credits; 2nd semester
or its equivalent. (Emrath)

209—ADVANCED MINE ENGINEERING. A detailed study of the procedure and methods used, in collecting and recording data and engineering information, involved in the systematic development and exploitation of a mining property. Lecture and recitations three hours a week, drawing and mapping eight hours a week.

*Prerequisite: B. S. in Min. Eng.
or its equivalent.*

7 credits; 1st semester
(Emrath)

VIII. FINE ARTS

ART

112a—ADVANCED COMPOSITION. A study of pictorial organization for advanced students. Six studio hours a week.

Prerequisites: 12 credits in Drawing and Painting, 2 credits in Design, and approval of Department Head. 2 credits; 1st semester (Fisk)

112b—ADVANCED COMPOSITION. Continuation of 112a. One major problem will be carried out in this course. Six studio hours a week.

2 credits; 2nd semester (Fisk)

115a—INDEPENDENT WORK. Individual work in Painting, Illustration, Applied Design or historical research. Open only to advanced students upon approval of Department Head.

3 credits; 1st semester (Rannells, Fisk)

115b—INDEPENDENT WORK. Continuation of 115a.

3 credits; 2nd semester (Rannells, Fisk)

116a—ETCHING. This is a course in the process of etching open only to advanced students whose work merits reproduction. Eight studio hours and weekly problems.

Prerequisites: 12 credits in Drawing and Painting, 2 credits in Design, and approval of Department Head. 4 credits; 1st semester (Fisk)

116b—ETCHING. Continuation of 116a. Eight studio hours and weekly problems.

4 credits; 2nd semester (Fisk)

140—SURVEY OF ARTS. This course is recommended to those students and graduates of the upper division who have not scheduled the regular undergraduate History of Art courses. Graphic and plastic arts are studied analytically for basis of judgment and appreciation. Lectures, conferences and reports. Three hours a week.

3 credits; both semesters (Rannells, Lowry)

159a—INTERMEDIATE PAINTING. Still life and outdoor painting in oil and watercolor mediums. A study of pictorial means and

Prerequisites: 12 credits in Drawing and Painting, 2 credits in Design, or approval of Department Head based on actual examples of work accomplished.

167a—ADVANCED PAINTING. Still life and outdoor painting in oil and water-color mediums. An introduction to professional requirements in picture making. Composition problems and fifteen studio hours a week.

167b—ADVANCED PAINTING. Continuation of 167a.
5 credits; 2nd semester (Fisk)

110a-d—INDEPENDENT WORK IN MUSIC.
3 credits; per semester (Lampert and Parker)

IX. LAW

The following courses in the College of Law are accepted as graduate work when taken by students majoring in Political Science, Economics, Sociology, Commerce or other fields in which such courses are recommended by the major professors:

105—AGENCY. Keedy's Cases. Nature of the relation, competency of parties, appointment, delegation of authority, liabilities of principal and of agent, ratification, undisclosed principal, termination.
3 credits; 2nd semester (Moreland)

106—PLEADING. Sunderland's Cases. The Anglo-American legal system, common law forms of actions, common law pleading, modifications thereof by the codes and equity pleading.
4 credits; 2nd semester (Randall)

164—CONFLICT OF LAWS. Lorenzen's Cases. Domicile, jurisdiction of courts, procedure, contracts, property, movable and immovable, family law, divorce, inheritance, foreign administration, foreign judgments.
3 credits; 2nd semester (Black)

161a-161b—CONSTITUTIONAL LAW I and II. Dodd's Cases. Division of powers, the dual system of government, scope of federal powers, taxation, money, banking, postal, military and treaty powers, regulation of commerce, the impairment of contracts, jurisdiction of federal courts, the police power, due process of law, equal protection of the law.
4 credits; 1st and 2nd semesters (Black)

101a-101b—CONTRACTS I and II. Williston's Cases. Formation, parties, consideration, formalities, contracts for the benefit of third persons, assignments, joint obligations, conditions and implied conditions, impossibility.
6 credits; 1st and 2nd semesters (Murray)

107a-107b—CRIMINAL LAW I and II. Sayre's Cases. Nature of the crime problem, the theory of punishment, procedure, characteristics of particular crimes.
2 credits; 1st and 2nd semesters (Moreland)

121a-121b—EQUITY I and II. Cook's Cases, Volumes I and II. Methods of enforcing and legal effects of equitable decrees, relation of common law and equity, powers of courts of equity, inadequacy of remedy at law, interests protected, balancing the equities. Specific performance, affirmative and negative contracts, mutuality considera-

tion, c
tions, p
equitab
take, h

124
presum
dence,
and its
stateme
stateme
cumstan

123
Cases (
delivery
acceptor

125a
argumen
ceedings

160a
Cases an
liabilitie
tion, cre

104-
ren's Ca
use from
dicial sa
sale and
law met
incident
ments, l

122-
Adverse
deeds, bo
covenant

tion, conditions, marketable title, laches and the Statute of Limitations, partial performance with compensation, the Statute of Frauds, equitable conversion, equitable servitudes, misrepresentations, mistake, hardship, plaintiff's conduct as a defense.

6 credits; 1st and 2nd semesters (Moreland)

124a-124b—EVIDENCE I and II. Hinton's Cases. Court and jury, presumptions and burden of proof, admission and exclusion of evidence, competency, privileges, examination of witnesses, hearsay rule and its exceptions, dying declarations, admissions, and confessions; statements against interest, regular and official entries, reputation, statement of pedigree, spontaneous statements, the opinion rule, circumstantial evidence, best evidence rule, parole evidence rule.

4 credits; 1st and 2nd semesters (Randall)

123—NEGOTIABLE INSTRUMENTS. Bills and Notes. Britton's Cases (2nd edition). Formal requisites of negotiability, acceptance, delivery, endorsement, rights and duties of holder, liability of maker, acceptor, drawer and endorser.

3 credits; 1st semester (Roberts)

125a—PRACTICE COURT. Selected Cases. Presentation and argument of cases by members of the class before the trial court, proceedings in review before appellate court.

2 credits; 1st semester (Randall)

160a-160b—PRIVATE CORPORATIONS I and II. Warren's Cases and Douglas and Shanks. Characteristics, formation, powers and liabilities, rights of stockholders' directors, legislative control, dissolution, creditors.

*3 credits 1st semester; 2 credits
2nd semester (Evans)*

104—PROPERTY I and II. Personal and Real Property. Warren's Cases. The nature of possession, separation of the custody or use from the possession, bailments, finders, bona fide purchase, judicial sale, Statute of Limitations, accession, tortious confusion, gifts, sale and bailments, liens and pledges, conversion. Estates, common law method of creating and conveying estates, Statute of Uses, rights incident to the ownership of land, fixtures, easements, waste, emblements, licenses and covenants running with the land.

4 credits; 1st semester (Roberts)

122—PROPERTY III. Titles and Conveyancing. Warren's Cases. Adverse possession, prescription, accretion, execution and delivery of deeds, boundaries, exception and reservation, easements by implication, covenants of title, estoppel, priorities.

3 credits; 1st semester (Murray)

162—PROPERTY IV. Future Interest. Kale's Cases on Future Interests. Rights of entry, possibilities of reverter, reversions, remainders, executory limitations, limitations to classes, powers, rule against perpetuities and illegal restraints and conditions.

2 credits; 2nd semester (Roberts)

166—SALES. Williston's Cases. Subject matter of sale, executory and executed sales, bills of lading, fraud, liens and their enforcement, stoppage in transitu, inspection, warranty and remedies for breach of warranty, Statutes of Frauds.

3 credits; 2nd semester (Murray)

102a-102b—TORTS I and II. Ames and Smith's Cases (Pound's Edition). Assault and battery, false imprisonment, negligence and contributory negligence, unintended non-negligent interference, deceit, malicious prosecution, defamation, interference with privacy, interference with advantageous relations.

6 credits; 1st and 2nd semester (Black)

120a-120b—TRIAL PROCEDURE. Sunderland's Cases. The jurisdiction of courts, process and appearance, proceedings based on the record, incidents of jury trial, instructions, argument of counsel, verdicts, judgments, new trials, appellate practice, review.

4 credits; 1st semester (Randall)

165—TRUSTS. Scott's Cases. The nature of a trust as compared with other relations, the creation and elements of a trust including charitable trusts, resulting and constructive trusts, remedies of the cestui que trust, the transfer by the cestui to trust, who are bound, liabilities of the trustee, investment of funds, termination of trusts.

4 credits; 1st semester (Evans)

163—WILLS AND THE ADMINISTRATION OF ESTATES. Warren's Cases. Testamentary capacity, the making, revocation, republication and revival of wills, lapsed and void devises and legacies, jurisdiction of court to grant letters testamentary and of administration, the interests, contracts and transfers of the personal representative, inventory, inheritance tax, payment of debts, legacies and distributive shares.

3 credits; 2nd semester (Evans)

167—ADMINISTRATIVE LAW. Frankfurter and Davidson's Cases in Administrative Law, 2nd edition. Administrative power and action, administrative discretion, notice of hearing, summary action, relief against administrative action, mandamus, certiorari, and other extraordinary legal remedies, equitable relief, jurisdictional limitations, and administrative finality.

3 credits; 1st semester (Black)

168—ADMINISTRATION OF THE CRIMINAL LAW. Keedy's Cases on the Administration of Criminal Law. Police officers, arrest, investigation of crime, the magistrate, indictment and information, jurisdiction of the trial court, venue, interstate rendition, arraignment, the petit jury, the prosecuting attorney, counsel for defense, the verdict, methods of review.

2 credits; 1st semester (Moreland)

146—BANKRUPTCY. Holbrook and Aigler's Cases. Relation of state and federal governments in matters of bankruptcy, the bankrupt, petitioning creditor, acts of bankruptcy, the trustee, provable claims, preferences and discharge.

2 credits; 1st semester (Moreland)

154—DAMAGES. Beale's Cases. Nature of damages, avoidable consequences, counsel fees, certainty, compensation, damages for non-pecuniary injuries, pain, inconvenience, mental suffering, aggravation value, interest, special rules in certain actions, damages for death, eminent domain.

2 credits; summer session (Moreland)

148—DOMESTIC RELATIONS. Jacob's Cases. Marriage and divorce, property interests of husband and wife, mutual obligations of the spouses, parent and child.

2 credits; 2nd semester (Moreland)

145—INSURANCE. Goble's Cases. Insurable interests, the contract, concealment, representations and warranties, implied conditions, waiver and estoppel, construction.

3 credits; 2nd semester (Roberts)

140—INTERNATIONAL LAW. Evans' Cases. Sources, international persons, jurisdiction and state sovereignty, diplomatic representatives, belligerency, prize law, blockade, neutrality.

2 credits; 2nd semester (Vandenbosch)

173—CREDIT TRANSACTIONS. Hanna's Cases on Security. This course deals with the subject matter usually covered in courses in suretyship and mortgages; also, problems of collateral, banking, distribution of stocks and bonds, pledges and conditional sales.

3 credits; 1st semester (Roberts)

178—CREDITOR'S RIGHTS. Hanna's Cases. Enforcement of judgments; fraudulent conveyances; general assignments; receivership; bankruptcy; assets; distribution.

3 credits; 1st semester (Roberts)

149—MUNICIPAL CORPORATIONS. Tooke's Cases. Incorpora-

tion and existence, municipal officers, revenue, indebtedness, police power, zoning, liability for injuries received upon contracts implied in law and on implied contracts.

2 credits; 1st semester (Black)

152—OIL AND GAS. Kulp's Cases. Nature of landlord's right in oil and gas, interference, measures of damages, the oil and gas lease, drilling operations, storage and use of oil and gas, pipe line and transportation companies, taxation.

2 credits; summer session (Moreland)

141—PARTNERSHIP. Crane and Magruder's Cases. Elements, formalities of organization, powers of partners, partnership obligations, duties, insolvency and bankruptcy, dissolution, accounting, estoppel.

2 credits; 2nd semester (Roberts)

150—PUBLIC UTILITIES. Robinson's Cases. Nature of public service, public employment and profession, withdrawal, duty to public, refusing service, commencement of service, management, liability for default, termination of service, regulation of charges, discrimination.

3 credits; 2nd semester (Roberts)

147—QUASI-CONTRACTS. Thurston's Cases. Nature of quasi-contracts, benefits conferred by mistake, benefits conferred where further performance is impossible or contract is illegal or unenforceable, benefits conferred without contract or under compulsion.

2 credits; summer session (Roberts)

153—TAXATION. Beale's Cases. Jurisdiction, public purpose, classification, exemptions, taxation of governmental agencies, direct and indirect taxes.

3 credits; 1st semester (Black)

144—USE OF LAW BOOKS. Selected Problems, Eldean's, How to Find the Law. How to find the law, use of digests, reports, textbooks, and encyclopedias.

2 credits; 1st semester (Roberts)

176—TRADE REGULATION. Selected Cases and Readings. Contracts not to compete at common law; competitive practices; intimidating and molesting; unfair practices; unfair advertising; combinations; the earlier statutes and the N. I. R. A.

2 credits; summer session (Evans)

177—STATUTORY INTERPRETATION. de Sloovere's Cases. Judicial notice; process of interpretation; subject matter and purpose of the statute; context; associated words; extrinsic aids; relation to

other statutes and to the common law; mandatory and directory provisions; operation; effect; repeal.

2 credits; summer-session (Murray)

169—LAW OF THE AIR. Selected Cases and Readings. The course will deal principally with aircraft law as follows: proprietary rights in air space at common law, federal and state statutes, tort liability, criminal responsibility, aircraft as common carriers, the rules of the road, international aspects of air law, legislation for future development of air law.

2 credits; summer session (Randall)

142—INDUSTRIAL RELATIONS. Albertsworth's Cases. The servant at common law, constitutionality of compensation acts, Kentucky and other compensation acts, abolishment of common law defenses, class legislation, police power, compulsory acts, "personal injury by accident", sunstroke, pre-existing diseases, traumatic injuries, occupational diseases, the locus of the accident, horseplay, an intensive study of the provisions of the Kentucky Workmen's Compensation Act.

2 credits; 1st semester (Moreland)

125b—OFFICE PRACTICE. Drawing papers and documents; pleadings in uncontested actions; attempt to cover most important features of the everyday work of the lawyer outside of court; principles of office management; making of abstracts.

2 credits; 2nd semester (Randall)

GRADUATE STUDENTS

FELLOWS

Lois Ernestine Neal	Chicago, Illinois
John Jacob Owen	Arlington
Lilian Margaret Rowbotham	Lexington
Jeff Frank Smith	Hindman
Anita Wells	Stanton

SCHOLARS

Louise Barton	Erlanger
Otto Gustav Koppius	Lexington
Thomas Miller Owsley, Jr.	Lexington
Margeret MacLeod Ratliff	Winchester
James Henry D. Teller	Chicago
Emory Jones Wesley	Lexington
William Clemard Wineland	Frankfort

OFFICERS OF GRADUATE CLUB

PRESIDENT

John Jacob Owen	Arlington
-----------------------	-----------

VICE PRESIDENT

William Clemard Wineland	Frankfort
--------------------------------	-----------

SECRETARY

Louise Oliva Otterbach	Louisville
------------------------------	------------

Nar
 Adair
 Adam
 Adam
 Alban
 Alexa
 Alexa
 Allen,
 Allen,
 Allen,
 Alliso
 Alliso
 Alms,
 Alton,
 Amis,
 Amis,
 Amis,
 Amyx
 Ander
 Archd
 Armst
 Arnett
 Arterh
 Atkins
 Atkins
 Austin
 Babb,
 Bacon,
 Baker
 Baker
 Baker,
 Baldw
 Banta,
 Barker
 Barnes
 Barton
 Baucon
 Baugh
 Baute,
 Bayles
 Beard,

REGISTER OF GRADUATE STUDENTS 1933-1934

Name	Major	Address
Adair, Mary Eunice	Education	Lexington
Adams, Cora Bevier	Education	Harrodsburg
Adams, Henry A.	Education	Owenton
Alband, Jo Della	Education	Lexington
Alexander, Georgia E.	Ancient Languages	Lexington
Alexander, Ralph M.	English	Bybee
Allen, Charles Edward	Education	Wilmore
Allen, H. Edwin	Education	Elihu
Allen, Wayne Edwin	Commerce	Huntington, W. Va.
Allison, E. E.	Education	Minerva
Allison, Nathan B.	Mathematics	Lexington
Alms, Henry Frederick	Marketing	Lexington
Alton, James T.	Education	Glendale
Amis, Cora Mae	English	Himyar
Amis, Edward Stephen	Chemistry	Himyar
Amis, Otis C.	Education	Mt. Vernon
Amyx, Thomas Clifford	Philosophy	Lexington
Anderson, Lindson Pryor	Bacteriology	Lexington
Archdeacon, James William	Zoology	Lexington
Armstrong, Watson Andrews	Education	Flemingsburg
Arnett, Edgar	Education	Erlanger
Arterberry, Terry Lorenzo	Education	Tompkinsville
Atkinson, Frank Lester	Economics	Louisville
Atkinson, Mrs. Stella C.	Ancient Languages	Irvine
Austin, Robert Jackson	Chemistry	Providence
Babb, Harvey Arthur	Education	Mt. Sterling
Bacon, James Richard	Physical Education	Barbourville
Baker, Christine	Education	Selbyville, Del.
Baker, Robert H.	Chemistry	Lexington
Baker, William Allen	Economics	So. Porstmouth
Baldwin, John Daniel	Education	Cadiz
Banta, Sallie Mae	English	Midway
Barker, Opal William	Animal Industry	Paducah
Barnes, B. Carl	Economics	Arlington, Tex.
Barton, Louise	Geology	Erlanger
Baucom, Glynn D.	Education	Sharpsburg
Baugh, Dan R.	Mathematics	Pineville
Baute, Edward Arthur	Animal Industry	Lexington
Bayless, Duard Elsworth	Farm Economics	Concord
Beard, Mary Matilda	Education	Shelbyville

Name	Major	Address
Beavers, Anna M.	Library Science	Hopkinsville
Bell, Florence	Public Health	Lexington
Bell, Sallie Paul	Education	Paris
Belle, Raymond Frank	Mathematics	Smithers, W. Va.
Bennett, Eleanor Louise	English	Winchester
Bennett, Reginald V.	Mathematics	Winchester
Bennett, Mrs. Wilber	Economics	Hartford
Bennett, William Arch	Education	Cynthiana
Berg, Sidney Howard	Psychology	Lexington
Berry, Kitty	Education	Lexington
Berryman, Robert Anderson	Education	Winchester
Best, Nannie Louise	Romance Languages	Lexington
Bevarly, Philip Allen	Education	Paducah
Bevarly, Raymond Walker	Education	Worthville
Bird, Terry	Public Health	Carlisle
Bishop, Paul Morris	Commerce	Harrisburg, Penn.
Black, Marshall	History	Harrodsburg
Blankenship, Charles F.	Public Health	Leitchfield
Bogardus, Carl Robert	Public Health	Warsaw
Booth, Hilda Lucille	Sociology	Carlisle
Bowling, Justus H.	Education	Kenova, W. Va.
Bowman, Robert D.	Romance Languages	Tompkinsville
Boyd, Emerson John	Education	Evansville, Ind.
Boyd, Nelson	Chemistry	Paducah
Boyd, Paul Bailey	Education	Carrollton
Boyd, Virginia Drusilla	English	Lexington
Braden, Norman A.	Zoology	Paducah
Branham, Iva B.	Home Economics	Oil Springs
Breitenhirt, Boynton B.	Psychology	Gilbert, W. Va.
Brewton, Vencie A.	Sociology	Castleberry, Ala.
Briscoe, Maye Howell	Education	Stanton
Britt, Edward C.	Commerce	Lexington
Brom, Roman T.	Education	Louisville
Brown, Harlan R.	Education	Paintsville
Brown, Irmel Nelson	Education	McAfee
Brown, Mrs. Lorena B.	Home Economics	Beaver Dam
Brown, Raymond Lee	Zoology	Beaver Dam
Brown, R. P.	History	Beaver Dam
Brown, Theodore Cecil	Physics	Ashland
Bryson, George Wayman	Education	War, W. Va.
Buchanan, John Victor	Education	Morganfield
Budden, Charles J.	Anatomy and Phys.	Louisville
Bullock, Elizabeth L.	English	Maysville
Burk, Joseph Caden	Philosophy	Lexington

Name	Major	Address
Burrows, Justus G.	Chemistry	Stamping Ground
Butcher, Nola M.	English	Middlesboro
Caldwell, Katherine	Education	Lexington
Callahan, Sister Mary Rosine	Education	Nazareth
Campbell, G. W.	Education	Corbin
Campbell, Rose C.	Education	Louisville
Campbell, Walter	Education	Walden
Campbell, William A.	Education	Lexington
Capablanca, Hilda Juliana	Psychology	Lexington
Capurso, Alexander Alexis	Education	Philadelphia, Pa.
Carder, Roscoe Hamilton	Education	Murraysville
Carpenter, Ahna Lee	Botany	Lexington
Carpenter, Dauris Clyde	Commerce	Lexington
Carr, John B.	Education	Linton
Carter, Sara Douglas	Library Science	Charlotte, N. C.
Cash, Henley Lewis	Education	Lancaster
Catron, Thomas	History	Barbourville
Cawby, Elmer Leonard	Engineering	Lexington
Cawthorne, Donald B.	Anatomy & Physiology	Pineville
Cella, Raymond	Mathematics	Winchester
Chambers, Tullus A.	Education	Benton
Chase, Dorothy Carolyn	Education	Lexington
Chatfield, Harriett Scott	Education	Catlettsburg
Cherry, Ralph Walter	Mathematics	Harrodsburg
Chesnut, Glenn Forrest	English	Barbourville
Chinn, Harriette Lorraine	Zoology	Wurtland
Church, Mary Frances	Education	Frankfort
Clark, Buford Thomas	Physical Education	Corbin
Clark, Charles Richard	Anat. and Phys.	New Albany, Ind.
Clark, Julia Ruth	Education	Paris
Clark, Mary Belle	Education	Murray
Clark, William Edwin	English	Cumberland
Clarke, David Spivey	Farm Economics	Salyersville
Clay, Mrs. Mary L. C.	English	Paris
Clay, Maurice A.	Phys. Education	Winchester
Cleek, Mary Lydia	Zoology	Lexington
Clements, Philip	Chemistry	Fulton
Cleveland, Forrest F.	Physics	Lexington
Clifton, Louis	Education	Lexington
Cobb, John Buford	Education	Crestwood
Coffey, Maurine	Home Economics	Yosemite
Cole, Charlie T.	Mathematics	Albany
Collins, Jimmie Martha	Education	Lexington

Name	Major	Address
Collins, R. D.	Hygiene	Whitesburg
Conner, Lila	Education	Franklin
Conrad, William Karl	Engineering	Dry Ridge
Conroy, Katherine	Education	Mt. Sterling
Coppock, Maurice E.	Education	Hatcher
Corbin, Martha Louis	English	Smithfield
Cornett, James	Education	Paint Lick
Couch, V. L.	Commerce	Lexington
Covington, Aubrey Young	Public Health	Princeton
Cox, Fred W.	Education	Millard
Cox, John K.	History	Burgin
Cox, Lloyd Bryant	Education	Liberty
Cracraft, Lucy Jane	Ancient Languages	Shelbyville
Crayton, Sherman G.	Education	Lexington
Crick, Mrs. Evelyn B.	Education	White Plains
Croft, Lysle Warrick	Psychology	Lexington
Cropper, Sarah Early	Education	Burlington
Crouch, Lois Alexander	Latin	Wichita Falls, Texas
Crutcher, Ernest James	English	Williamstown
Crutcher, Frank D.	Education	Versailles
Culton, Martha Jane	English	Corbin
Cummins, Eliza A.	History	Stanford
Cunov, Harvey Frank	Bacteriology	Detroit, Michigan
Cyrus, Mason G.	Education	Kenova, W. Virginia
Daniel, Henry McDaniel	Animal Industry	Narrows
Daniel, Zebulon C.	Education	Hazard
Davenport, Elizabeth	Education	Lexington
Davidson, William K.	Education	Ft. Blackmore, Va.
Davis, Elizabeth H.	French	Glasgow
Davis, Gladys Fleming	English	Paris
Davis, Horace Leonard	Education	Lexington
Davis, Hugh L.	Education	Harrodsburg
Davis, J. Burnam	Economics	Berea
Davis, Mary Magdalene	English	Glasgow
Davis, Robert E.	Education	Science Hill
Davis, Russell Spruce	History	Lexington
Deitz, Ezella N.	History	Wilmore
Depew, Bertha	Education	Lexington
Derickson, Elise Marshall	Latin	Mt. Sterling
Dickey, Mrs. Katherine B.	Education	Lexington
Dinkle, Pansy Pence	English	Frankfort
Dinning, Houston A.	Education	New Concord
Dorsey, Eugene Ray	Pol. Science	Huntington, W. Va.
Doss, Nancy Elizabeth	Library Science	Shelbyville

Name	Major	Address
Dotson, John Andrew	Education	Benham
Dudley, Hal Ellsworth	Education	Henderson
Dugan, Ann	Education	Warsaw
Dunn, James Henry	Public Health	Lee City
Dunne, Catherine Helen	Romance Languages	Lexington
Dunning, Ellis G.	Commerce	Paducah
Durbin, Virginia Omer	Library Science	Lexington
Durling, Alice May	Library Science	Lexington
Duvall, William N.	Education	Washington
Eagle, Delbert Pfaff	History	Lancaster
Easley, Willie Kate	Home Econ.	Stamping Ground
Eckler, Ralph Clifton	Education	Dry Ridge
Elam, James Alexander	Economics	Petersburg
Elliott, Jo Martha	Home Economics	Danville
Elrod, Sarah Edith	Library Science	Mannsville
Emberger, Margaret D.	Education	Eddyville
Emmerich, Harry Henry	Geology	Henderson
Engle, Myrtle Mae	Education	Princeton
Essery, Marion Ruth	English	Brookline, Mass.
Evans, Lee	Education	Fordsville
Evans, Mary Elizabeth	French	Beattyville
Evans, Thelma Bernice	Education	Lexington
Eversole, Roy Grigsby	Education	Domino
Fann, Thomas U.	Sociology	Olympia
Farrell, Anna	Education	Paris
Ferrille, Andrew	Mathematics	Stanford
Fetty, Irene	Education	Winchester
Flannery, Mildred D.	Bacteriology	Jacobs
Flege, Robert F.	Education	Irvine
Floyd, William B.	Education	Henderson
Forsythe, Katharine	Psychology	Lexington
Foster, James Russell	Zoology	Springfield
Foster, Nettie Belle	Education	Lexington
Foust, Geneva	Mathematics	Owensboro
Fox, Bernice	English	Ashland
Franklin, Harry Lee	Political Science	Munfordsville
Frantz, Helen	German	Louisville
Frantz, Louise U.	Education	Louisville
Fraysure, William H.	Education	Springfield
Frazar, Ellen Lois	English	Paducah
Frazer, William Durham	Art	Lexington
French, Irene	Education	Owensboro
Frisby, Monta Victor	Education	Frankfort
Frye, Lois A.	Education	Cynthiana

Name	Major	Address
Gabbard, James Lawrence	Chemistry	Lexington
Gaffin, Otho R.	Education	Mackville
Galloway, Frances L.	English	Winchester
Gardner, Huston T.	Home Economics	Owensboro
Gardner, S. Jack	Education	Bardwell
Garrett, Paul L.	Education	Versailles
Garrison, Catherine Maye	French	Bardstown
Gary, J. Carson	Education	Lexington
Gilbreth, Harold B.	Commerce	Bowling Green
Gill, Anna Dade	Economics	Morganfield
Gillis, Catherine E.	English	Williamsburg
Gillock, Morgan Edward	Political Science	Port Royal
Glass, Dan R.	Education	Wilmore
Gleason, George Thomas	Economics	Waverly
Glenn, M. F.	Education	Stone
Goodloe, Ollie Morris	Public Health	Jackson
Goodman, Daniel William	English	Lexington
Goodpaster, Joseph S.	Public Health	Owingsville
Gordon, Katherine Norine	Mathematics	Winchester
Gordon, Mary Pauline	Mathematics	Winchester
Gragg, Eva	Education	Pineville
Graham, Charles C.	Zoology	Berea
Green, Robert C.	Education	Howell
Greeno, Loretta L.	Education	Ft. Thomas
Grehan, Henry Enright	History	Lexington
Gridelli, Marie Isobel	History	Welch, W. Va.
Gruelle, Orie P.	Education	Dry Ridge
Guard, Norman M.	Education	Lexington
Gunter, Ralph H.	Engineering	Louisville
Guthrie, Julia A.	Education	Henderson
Guthrie, Mildred Bush	History	Lexington
Guy, Hollis P.	Commerce	Beckley, W. Va.
Guy, Mrs. Katharine C.	Zoology	Beckley, W. Va.
Haag, William G., Jr.	Geology	Henderson
Hackensmith, Charles W.	Anatomy and Phys.	Lexington
Haggan, Henry Clay	Animal Industry	Morehead
Hamilton, Robert C.	Education	Summers, W. Va.
Hammack, Katherine	Education	Lexington
Hammond, Annie	Commerce	Madisonville
Hammonds, Colonel	Education	Bourne
Hancock, Ada M. E.	Education	Newtonia, Mo.
Harbold, Lucile Lee	Political Science	Lexington
Hardin, Clarence	French	Winchester
Harmon, Ella Maude	History	Perryville

Name	Major	Address
Harmon, Judson S.	Education	Whitley City
Harned, Tone Goodwin	Education	McAfee
Harris, Lelia Jane	Education	Richmond
Harrison, Bruce E.	Education	Bowling Green
Hart, Nell Kinnaird	History	Lexington
Hartford, Ellis Ford	History	Fordsville
Hastie, Edna Maybelle	History	Bowling Green
Hatfield, Elsie	French	Lancaster
Hayden, Basil Ewing	Education	Paris
Haynsworth, Jos. Herbert, Jr.	Physics	Lexington
Hays, Erle Milton	Engineering	Lexington
Hazelip, Orilla	English	Owensboro
Hearn, Spicie Belle	Education	Midway
Heird, Albert M.	Education	Campbellsville
Helm, Blanche	German	Greensburg
Hembree, George N.	Education	Richmond
Henderson, Oliver Warren	Education	Lexington
Hensley, Ernest L.	Commerce	Oneida
Hensley, Mayme	Education	Manchester
Henson, Claiborne T.	Education	Milton
Hernandez y Alvarez, J. Eduardo	Romance Languages	Winchester
Hesson, H. T.	Education	Science Hill
Hicklin, Richard S.	Geology	Marion
Hicks, Carl	History	Catlettsburg
Hieatt, Kate Gray	Library Science	Lexington
Hillis Margaret Jeannette	Home Economics	Lexington
Hilton, Everett P.	Education	Mayslick
Hinsdale, Reuben C.	Education	Covington
Hirsch, Jack	Geology	Henderson
Hixson, Mrs. Lona	Education	Lexington
Hogan, Willard N.	Political Science	Lexington
Hogge, Ernest	Chemistry	Morehead
Holdoway, Helen	Home Economics	Sparta, Ill.
Holland, Joel Preston	Education	Murray
Holliday, Frances L.	Sociology	Jackson
Holt, Joseph P.	Physics	Versailles
Holtzclaw, Harry L.	Education	Stanford
Hoover, John Lynn	Commerce	Altoona, Pa.
Horn, Clarence A.	Education	Princeton
Horton, Herman	Education	Grahn
Hosack, Ivan Gentry	Anatomy and Phys.	Pittsburg, Pa.
Houchell, Harry Lee	Education	Milton
Hounshell, Arthur C.	Political Science	Cloverport
House, Darrell	Physical Education	Lexington

Name	Major	Address
Howard, Curtis W.	Physical Education	Dayhoit
Howard, Hugh A.	History	Corbin
Howard, Wendell E.	Education	Calvert City
Howton, Euel B.	Education	Hebbardsville
Hubbard, Charles	Education	Princeton
Hubbard, Etta	Anatomy and Phys.	Bright Shade
Hubbard, Ruth	Education	Mayfield
Hughes, Mrs. Beulah S.	English	Lexington
Hughes, Margaret	Education	Leitchfield
Hunt, Henry Wilson	Education	Hopkinsville
Hunter, Ballard	Political Science	Woods
Hurt, Lester E.	Agronomy	Morgantown
Hutchison, Lee Pressley	Mathematics	Lexington
Ingram, Gladys.	Education	Columbia
Irvine, Jessie Frank	Psychology	Paris
Irvine, Kate Tipton	Library Science	Paris
Jackson, Edward Dwight	History	Wilmore
Jackway, William S.	Physiology	Lexington
Jenkins, David C.	Mathematics	State College, Pa.
Jennings, Rienzi W.	Economics	Lexington
Jesse, Edwin Gay	Education	Nicholasville
Jesse, Elizabeth F.	Library Science	Nicholasville
Johnson, Emil Williams	Education	Lexington
Johnson, Mildred	Latin	Huntington, W. Va.
Johnston, Ella Buckner	English	Lexington
Jones, Ann Elizabeth	Romance Languages	Lexington
Jones, Lillian Blanche	Latin	Williamsburg
Jones, Warren F.	Education	Winchester
Juergensmeyer, Charles	Education	Denton
Juergensmeyer, Thelma P.	French	Denton
Kavanaugh, Mary Ann	Education	Lancaster
Keffer, John LeRoy	Chemistry	Lexington
Kegley, B. Herbert	Mathematics	Newfoundland
Keller, Wayne H.	Chemistry	Lexington
Keller, Winnie B.	English	Clarkson
Kelly, Edna Arabellah	Education	Richmond
Kelly, Lucile Newland	Education	Pineville
Kerr, Robert Pettit	Bacteriology	Louisville
Ketron, C. V.	Education	Athens, Tenn.
Key, Judith Peyton	Education	Maysville
Kimbrough, John Thomas	Mathematics	Owingsville
King, Effie	Chemistry	Lexington
King, Samuel E.	Education	Falmouth
King, W. Ralph	Botany	Liberty

Name	Major	Address
Kinstler, Ella Marie	Library Science	Louisa
Kirk, Edwin L.	Physics	Lexington
Kirk, Ernest W.	Education	Philpot
Knuckles, Letcher W.	Education	Beverly
Koppius, O. G.	Physics	Lexington
Krewson, Charles F.	Chemistry	Lexington
Kwoh, Yu-Yu	Education	Luchowfu, China
Lamb, Helen Lauretta	Education	Lexington
Lampert, Marcia	Education	Lexington
Landram, Margaret P.	Education	Warsaw
Landrum, William G.	Physics	Mt. Vernon
Larabee, Norman C.	Education	Wilmore
Law, Howard G.	Education	Covington
Lawrence, Armon Jay	Commerce	Lexington
Lawson, Carl Edwin	Chemistry	Corbin
Layman, Morton Briscoe	History	Corbin
Leach, Alenne	History	Beaver Dam
Leake, James Carl	Education	Huntington, W. Va.
Ledford, Mrs. D. W.	Library Science	Hopkinsville
Lee, Raymond Gilbert	Education	Waddy
Lehman, Jeannette	Library Science	Midway
Lentz, Jack	Anat. and Phys.	Nashville, Tenn.
Leonard, Granville B.	Education	Cornishville
Lester, William Stewart, Jr.	Political Science	Winchester
Letton, George C.	Education	Carlisle
Lewis, Bennett	Education	Winchester
Lewis, Jane Stanford	Education	Lexington
Lewis, Mary Elizabeth	History	Finchville
Liles, Alton B. Parker	Economics	Louisville
Lindsey, Carrie B.	Commerce	Elkton
Littrell, Edith	Library Science	Williamstown
Littlefield, J. Wesley	English	Hopkinsville
Lively, Elizabeth	English	Ravenna
Loudenslager, Ralph L.	Education	Wilmore
Lovell, Mrs. Aaron G.	Library Science	Greenville
Lovely, Lucile	Education	Lexington
Lowry, Lucie	English	Catlettsburg
Luckner, Wendelin George	Anatomy and Phys.,	Stepney, Conn.
Lynch, Otis Raymond	Public Health	Horse Cave
Lytle, Edwin G.	Mathematics	Calhoun
McAnelly, Jesse Guy	Education	Oil Springs
McBride, Helen Anne	Library Science	Steubenville, O.
McCartt, Kenneth C.	Chemistry	Lexington
McClain, Samuel Scott	Education	Taylorsville

Name	Major	Address
McClintock, Alice T.	Latin	Paris
McCollum, Mrs. Emma E.	Political Science	Paris
McCoy, Thomas Nevil	Botany	Calvert City
McCray, Carl Augustus	Education	Berea
McGinnis, Lawrence	Education	Lexington
McHargue, Lester	Economics	Pine Hill
McKenna, Richard Taylor	Bacteriology	Lexington
McKinney, David H.	Economics	Richmond
McKinney, Jane	Education	Chilesburg
McMahan, James William	Education	Bedford
Maddox, Billie Edna	Psychology	Prospect
Mahoney, Charles H.	Engineering	Lexington
Mahoney, D. H.	Psychology	Lexington
Main, Ruth L.	English	Barbourville
Manis, Lloyd Powell	English	Wallings Creek
Markham, Evelyn C.	History	Wilmore
Markus, Esther A.	English	Annville
Marshall, Hardinia	History	Winchester
Martin, Ben Riley	Education	Ashland
Martin, John L.	Spanish	Huntington, W. Va.
Martin, Lassia E.	Home Economics	Langley
Mason, Lela Scoville	Education	London
Mathews, H. Tillman	Education	Williamstown
Mathis, Buena Craig	Mathematics	Lexington
Mathis, Edward W.	Education	Ashland
Mattingly, Cleveland O.	History	Lexington
Maxson, Charles Reynolds	Commerce	Lexington
May, Llewellyn H.	Education	Georgetown
May, Robert	Education	Danville
Mayfield, H. P.	History	Marietta, S. C.
Mayse, C. D.	Education	Catlettsburg
Meece, Leonard E.	Education	Lexington
Megibben, Katherine	Library Science	Cynthiana
Mercer, Mrs. Anne M.	Mathematics	Frankfort
Messamore, Ford	History	Cobden, Ill.
Miller, E. M.	Education	Beverly
Miller, Frank	Education	Clintonville
Miller, Frank B.	Education	Lexington
Mills, Joseph H.	Geology	Lexington
Milton, Henry S.	Education	Lawrenceburg
Milward, Lewis Burton	English	Lexington
Minter, Flossie Louise	Education	Lexington
Mitchell, John Stapp	Education	Lexington
Moberly, Jesse	Physical Education	Richmond

Name	Major	Address
Moore, Helen E.	Education	Annville
Moore, Josephine	Library Science	Danville
Moore, Mrs. Violet M.	Education	Neon
Moore, Laura Prewitt	Zoology	Lexington
Moore, Mary Edith	Education	Waco
Morgan, Irene	Education	Sirocco
Morgan, Luther Frank	Education	Salysersville
Morris, Florence	History	Huntington, W. Va.
Moss, Alice Virginia	Education	Lexington
Moss, Nancy Belle		Mt. Sterling
Mullins, Robert Edward	Psychology	Mt. Vernon
Munday, Jessie Childs	Education	Louisville
Murrell, Katherine E.	Library Science	Columbia
Nash, Mary Moore	English	Versailles
Neal, Lois Ernestine	English	Lexington
Neblett, Patrick Henry	Education	Jackson
Newbolt, William Edgar	Education	Berea
Nickel, Robert J.	Chemistry	Greenup
Offutt, Mollie Mack	Education	Lexington
Ogden, Marcella	History	Hattiesburg, Miss.
Ohne, Ida Margaret	Latin	Ghent
Oldham, Morean Browne	English	Winchester
O'Leary, Sister Mary Rosalia	Education	Nazareth
Orem, H. Philip	Chemistry	Campbellsburg
Otterbach, Louise Oliva	Education	Louisville
Owen, John Jacob	Chemistry	Arlington
Owen, Loice	Education	Slaughters
Owen, Naomi Woodson	Library Science	London
Owens, Mildred Rea	Library Science	Maysville
Owsley, Thomas Miller, Jr.	Engineering	Lexington
Pack, Kermit Allen	Commerce	Mt. Healthy, O.
Palmer, Lewis Lyndon	Chemistry	Lexington
Parker, Bertha Josephine	Education	Lexington
Parker, Herbert	Geology	Lexington
Parker, James Edward, Jr.	Animal Industry	Lexington
Parker, Joe Henry	Education	Harrodsburg
Parris, Holley H.	Economics	Lexington
Payne, Eleanor Maria	English	Paris
Pelphrey, Nell M.	Education	Lancaster
Pennington, Henry Morrison	Anatomy and Phys.	London
Perry, George Earl	Education	Lexington
Peterson, Frank	Education	Frankfort
Petit, Herbert H.	French	Cynthiana
Pfanstiel, Everett Earl	Education	Carlisle

Name	Major	Address
Phelps, Eunice Castle	Education	Paintsville
Phillips, Stanley	History	Centertown
Plummer, Leonard Niel	Political Science	Lexington
Poindexter, Ann Frances	Psychology	Georgetown
Pollard, Mary Elizabeth	Latin	Worthville
Portwood, Alfred S.	Education	Richmond
Praither, Mrs. Anne S.	Education	Lexington
Preston, Burman H.	Public Health	Salyersville
Prewitt, Daniel Webster	History	Packard
Price, Orville K.	Education	Cottonburg
Price, Robert E.	Education	Bremen
Prows, Dorothy Louise	Home Economics	Lexington
Pruitt, Elizabeth Reed	English	Millersburg
Pulliam, Virginia Lee	Education	Leitchfield
Purdy, Ralph D.	Education	Wilmore
Purnell, James Asbury	Engineering	Lexington
Pyles, James Lawrence	Education	Maysville
Raidt, Harold Anderson	Bacteriology	Lexington
Ramey, Mrs. Clarice P.	History	Eubank
Ramsay, Bertrand P.	Physics	Lexington
Ransdell, Marvin	Public Health	Prestonburg
Ratliff, Anna M.	Education	Winchester
Ratliff, Margaret M.	Psychology	Winchester
Ratliff, Mark T.	History	Pikeville
Rawlins, Vivian Mae	Education	Donerail
Ray, Willie Cassell H.	Education	Shelbyville
Razor, Alyeene C.	Music	Flemingsburg
Ream, Elmus L.	Commerce	Mt. Lake Park, Md.
Reasor, Marguerite	Psychology	Louisville
Redding, Henrietta Emma	Romance Languages	Louisville
Redmon, Charles H.	Animal Industry	Paris
Reece, Alfred M., Jr.	Physical Education	Lexington
Reed, Curtis J.	Political Science	Fleming
Rees, Albert Owen	Zoology	Owenton
Rees, Janie H.	English	Owenton
Reeves, H. Clyde	Political Science	Midway
Reynolds, Robert S.	Marketing	Tyner
Rice, Lawrence Kelly	Education	Jackson
Richards, Bonnie	Latin	Woodburn
Richardson, James D.	Chemistry	Richmond
Richmond, Harry Enfield	Education	Henderson
Riley, Edgar C.	Education	Lexington
Roaden, Ova G.	Education	Alva
Roads, Frances Emeline	Education	Hillsboro, O.

Name	Major	Address
Roberts, Elizabeth F.	Education	Covington
Roberts, Martin	Education	Spottsville
Roberts, Mildred C.	English	Berea
Roberts, Roland	Education	Nicholasville
Robinson, Lucy Erwina	Sociology	Owensboro
Rodman, George Bush	Education	Frankfort
Rogers, Amelia Clay Van Meter	History	Lexington
Rogers, Emory G.	History	Bowen
Rogers, Frances Landrum	Philosophy	Mt. Sterling
Roman, Roy Lee	Education	Buechel
Rouse, Georgia M.	Latin	Walton
Rowbotham, Lilian Margaret	Ancient Languages	Lexington
Roy, Wallace R.	Chemistry	Lexington
Rudd, Robert K.	English	Covington
Runyon, Esther Lutes	Education	Primrose
Rupley, Lula Margaret	History	Danville
Russell, Clem Wilson	Education	Bowling Green
Sale, Elmer Forest	Education	Lawrenceburg
Salyer, Amanda Patrick	History	Sharpsburg
Salyer, Harold A.	Education	Louisville
Salyers, Mary Alice	English	Lexington
Sanford, Theodore A.	Education	Murray
Saunders, James Maurice	Physics	Lexington
Scheuerman, Alta L.	German	Wilmore
Schultz, Michael J.	Psychology	Port Royal
Scott, Ellen	History	Paris
Scott, Jess Arnold	Education	Lexington
Scott, Mildred Christine	Education	Sandusky, O.
Seay, Gladys V.	Education	Salvisa
Seidenman, Ruth W.	Education	Louisville
Settle, Margery L.	Education	Calhoun
Shafer, William A.	Political Science	Falmouth
Sharon, Robert E.	Education	Falmouth
Sharpe, Foyster	Commerce	Richmond
Sherwood, Thomas C.	Zoology	Lexington
Shipman, Martha V.	History	Lexington
Shouse, Claude F.	English	Wheeling, W. Va.
Shropshire, Anne	Education	Lexington
Shultz, Leslie G.	Mathematics	Horse Branch
Sikking, Kathryn	Education	Louisville
Simons, Royce Evans	Education	Browder
Simpson, Sidney	Public Health	Brownsville
Skidmore, Hugh P.	Education	Campbellsburg
Skinner, Charles E.	Education	Lexington

Name	Major	Address
Slusher, Thelma	English	Danville
Smallwood, C. C.	Education	Pikeville
Smith, Ina Kay	Education	Lexington
Smith, Jean Lyne	Education	Lexington
Smith, Jeff Frank	Education	Sonora
Smith, Katherine Louise	Education	Frankfort
Smith, Marguerite	English	Lexington
Smith, Robert L.	Education	Jenkins
Snapp, Carlos V.	Education	Jenkins
Snyder, J. William	Education	Owensboro
Soward, Mary Andrews	Library Science	Frankfort
Spencer, Robert Koder	Romance Lang.	Philadelphia, Pa.
Spickard, Ronella	Education	Princeton
Spillman, Claude Omar	Education	Berea
Stacey, General	English	Ary
Stacy, Adam, Jr.	Public Health	Jackson
Stamper, Anna Mae	Education	Lexington
Standard, Martin	Engineering	Elkton
Starks, Winnifred	Mathematics	Midway
Steers, Mary Allen	Education	Lexington
Stenken, Julia H.	Home Economics	Covington
Stewart, James Henry	Mathematics	Carlisle
Stewart, Jesse J.	Education	Bowling Green
Stith, William Allen	Education	Guston
Stone, Talton K.	Political Science	Richmond
Strange, Cordelia Y.	Education	Wilmore
Strother, J. Park	Education	Booneville
Strother, J. Russell	Education	Buffalo, Wyo.
Sturgill, Virgil L.	English	Ashland
Sullivan, Harris Martin	Physics	Lexington
Summers, G. P.	Education	Glendale
Talbert, Charles G.	Mathematics	Carlisle
Talbert, Nancy Elizabeth	Education	Carlisle
Tallent, Bernard Cox	Political Science	Corbin
Tapp, Leamon	Education	Smith Mills
Tartar, Elmo E.	Education	Beaver Dam
Tarter, Curtis B.	Anatomy and Phys.	Liberty
Taylor, A. Cecil	Zoology	Wilmore
Taylor, George Duey	Education	Williamstown
Taylor, Marie	History	Marion
Tehan, Katie A.	Education	Louisville
Teller, James Henry D	Mathematics	Lexington
Thomas, Ellen Beall	Education	Georgetown
Thompson, Celeste R.	Horticulture	Lexington

Name	Major	Address
Thompson, Elizabeth W	English	Lexington
Thompson, Forest S.	Education	Myers
Thompson, Mrs. Forest S.	History	Morgan
Thompson, J. Walter	Zoology	Webbville
Thompson, Lewis M.	Education	Wilmore
Thompson, Taft O.	Education	Ennis
Thorn, John McClintock	History	Lexington
Threlkeld, Mary Allison	Mathematics	Lexington
Thurmond, Charles J.	Education	Danville
Tilson, Howard G.	Education	Mt. Sterling
Todd, Jack Rudisall	Bacteriology	Lexington
Tolbert, Clarence B.	Physical Education	Winchester
Tracy, Leonard G.	English	Lexington
Trammell, Mildred	English	Pine Knot
Truitt, J. P.	Education	Crofton
Tucker, Charles E.	Animal Industry	Lexington
Tucker, Elon B.	Zoology	Lexington
Tucker, Robert G., Jr.	Education	Bloomfield
Turner, Isabelle F.	Library Science	Steubenville, O.
Turnipseed, Allan Lloyd	Education	Maysville
Tuttle, Samuel O.	Education	West Irvine
Tye, Mrs. Bertha K.	Library Science	Barbourville
Vandiver, Mary Wilma	History	Livermore
Van Meter, Elizabeth	Chemistry	Shelbyville
Vanzant, Sallie	Latin	Edmonton
Vaughan, Joseph B.	Geology	Marion
Vaughan, Mary Belle	Education	Shelbyville
Vaughn, J. T.	Physical Ed.	Georgetown
Viley, Lizzie S.	Education	Georgetown
Viley, Mary Offutt	Education	Georgetown
Vincent, James O.	Education	Bee Spring
Waddle, Nancy Alice	Ancient Languages	Luretha
Walker, Cecil Byron	Anatomy and Phys.	Lexington
Walker, Edward A.	Education	Perryville
Walker, Milton H.	Ancient Languages	Germantown
Walker, Morton	English	Hartford
Wall, Elizabeth Farley	English	Holden, W. Va.
Wallace, Wilbur T.	Education	Lexington
Walters, Roy Nathan	Sociology	Berea
Ware, Lucy Ferguson	Library Science	Lexington
Warren, Challis H.	Education	Richmond
Warren, Clarence O.	Education	Ewing
Warren, Frances MacLea	English	Lexington
Wash, Margaret	Education	Lawrenceburg

Name	Major	Address
Wathen, Charles A.	Public Health	Annville
Watkins, Alice E.	Education	Louisville
Watson, Horace Jefferson	Education	Princeton
Watson, Walter E.	Psychology	Valley Station
Webb, William Lary	Chemistry	Lexington
Webster, Franklin	History	Estill
Wehle, Ruth Dowling	English	Lexington
Wells, Anita	Political Science	Stanton
Wert, James Verner	Education	Covington
Wesley, Emory Jones	Education	Lexington
Wesley, George Rutherford	Geology	Middleburg
Whalin, Clarence M.	Education	Bowling Green
Wheeler, Jewel Andrew	Agriculture	Hardinsburg
Wheeler, Ruth Ella	Library Science	Lexington
White, Dorothy Frances	Home Economics	Batesville, Ind.
White, Joseph J.	Education	California
White, Mary Belle	Home Economics	Shelbyville
Whitehead, Dock K.	History	Walland, Tenn.
Whitney, Odis Lee	Education	Georgetown
Wilder, Don E.	Public Health	Booneville
Wilder, Newell M.	Geology	Corbin
Williams, Anna C.	Education	Mt. Sterling
Williams, Cratis D.	English	Blevins
Williams, Lucille S.	History	Lexington
Williams, May	English	Lexington
Williams, Nicholas Winn	English	Winchester
Williams, Thomas O.	Education	Lexington
Williamson, Milton W.	Public Health	Greensburg
Willis, Mrs. Kyle Avis	Education	Neibert, W. Va.
Wilson, Genevieve L.	Mathematics	Lexington
Wilson, Homer	Education	Corinth
Wilson, Kenneth Faulkner	Chemistry	Mt. Sterling
Wilson, Mrs. Regina J.	Education	Lexington
Wilson, Stephen S.	Education	Caneyville
Wineland, William C.	Physics	Frankfort
Woford, Ernest	Education	Danville
Wolfe, William Lawrence	Commerce	Nicholasville
Woodyard, Virginia H.	Education	Frankfort
Woolum, Letcher Ernest	Education	Alexandria
Woosley, Lester Bryant	Education	Edmonson
Worten, James Ned	Education	Smithland
Wright, Robert Shaw	Education	Hodgenville
Wright, W. O.	Education	Morganfield
Yates, Elizabeth M.	Education	Laeger, W. Va.

Name	Major	Address
Yelton, Mary Lou	English	Butler
Young, David M.	Geology	Lexington
Young, David Wilson	Chemistry	Lexington
Zimmerman, Ila See	Education	Mt. Sterling

ORGANIZATION

UNIVERSITY OF KENTUCKY

Lexington, Kentucky

Frank L. McVey, Ph. D., LL. D., President

COLLEGE OF ARTS AND SCIENCES

Paul P. Boyd, M. A., Ph. D., Dean

Courses in Arts, Sciences, Journalism

COLLEGE OF AGRICULTURE

Thos. P. Cooper, B. S., Dean and Director

Courses in Agriculture and Home Economics

Experiment Station

Extension Division of Agriculture

COLLEGE OF ENGINEERING

W. E. Freeman, A. B., E. E., Acting Dean

COLLEGE OF LAW

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

COLLEGE OF EDUCATION

William S. Taylor, Ph. D., Dean

COLLEGE OF COMMERCE

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

GRADUATE SCHOOL

William D. Funkhouser, A. M., Ph. D., Sc. D., Dean

SUMMER SESSION

J. E. Adams, Ph. D., Director

UNIVERSITY EXTENSION DEPARTMENT

Wellington Patrick, Ph. D., Director

For information regarding courses and catalogs, address Ezra L. Gillis, Registrar, University of Kentucky, Lexington, Kentucky.