

BULLETIN

University of Kentucky



Graduate School
1936-37

JULY, 1936

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GRADUATE FACULTY

FRANK LEROND McVEY, A. B., Ph. D., LL. D.
President of the University

WILLIAM DELBERT FUNKHOUSER, A. B., M. A., Ph. D., Sc. D.
Dean of the Graduate School

EZRA L GILLIS, A. B.
Secretary of the Graduate Faculty

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ESTON JACKSON ASHER, M. A.	Psychology
CHARLES BARKENBUS, B. S., Ph. D.	Chemistry
MATTHEW HUME BEDFORD, A. B., Ph. D.	Chemistry
HARRY BEST, A. B., LL. B., Ph. D.	Sociology
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GEORGE K. BRADY, A. B., Ph. D.	English
ALFRED BRAUER, M. A., Ph. D.	Zoology
ERNEST ADOLPHE BUREAU, B. S., Ph. B., E. E.	Engineering
MORRIS G. CALDWELL, A. B., M. A., Ph. D.	Sociology
CECIL C. CARPENTER, Ph. D.	Economics
LUCIAN H. CARTER, M. A.	Economics
LEO MARTIN CHAMBERLAIN, A. M., Ph. D.	Education
THOMAS D. CLARK, A. B., A. M., Ph. D.	History
PAUL H. CLYDE, A. B., A. M., Ph. D.	History
LEON W. COHEN, A. B., A. M., Ph. D.	Mathematics
LEHRE LIVINGSTON DANTZLER, A. M., Litt. D.	English
GRAHAM B. DIMMICK, Ph. D.	Psychology
HAROLD HARDESTY DOWNING, B. C. E., M. S., Ph. D.	Mathematics
STATIE ESTELLE ERIKSON, Ph. D.	Home Economics
ALVIN E. EVANS, M. A., Ph. D., J. D.	Law
EDWARD FRANKLIN FARQUHAR, M. A.	English
ERNEST NEWTON FERGUS, Ph. D.	Agriculture
WILLIAM FRANCIS GALLAWAY, M. A., Ph. D.	English
EDWIN STANTON GOOD, M. S.	Agriculture
ENOCH BACON GREHAN, A. B.	Journalism
THOMAS MARSHALL HAHN, M. S., Ph. D.	Physics
WALTER WILSON JENNINGS, M. A., Ph. D.	Commerce
FRITZ JOHN, Ph. D.	Mathematics
THEODORE TOLMAN JONES, A. M., Ph. D.	Ancient Languages
PERRY ELMER KARRAKER, M. A.	Agriculture
CHARLES MERRIAM KNAPP, A. B., Ph. D.	History

GRANT COCHRAN KNIGHT, A. M.	English
OTTO TOWNSEND KOPPIUS, B. S., Ph. D.	Physics
JOHN KUIPER, M. A.	Philosophy
CLAIBORNE GREEN LATIMER, B. S., Ph. D.	Mathematics
ARMON J. LAWRENCE, A. B., M. A.	Commerce
FLORA E. LESTOURGEON, B. A., Ph. D.	Mathematics
MOSES EDWARD LIGON, A. M.	Education
ARTHUR CRANE MCFARLAN, A. B., Ph. D.	Geology
FRANK T. MCFARLAND, Ph. D.	Botany
JOHN WALKER MANNING, A. B., M. A., Ph. D.	Political Science
JOSEPH HOLMES MARTIN, M. S., Ph. D.	Agriculture
RALPH NELSON MAXSON, B. S., Ph. D.	Chemistry
JAMES BURT MINER, B. S., LL. B., Ph. D.	Psychology
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EDGAR ZAVITZ PALMER, A. B., Ph. D.	Commerce
LOUIS ARTHUR PARDUE, A. B., M. S., Ph. D.	Physics
ETHEL LEE PARKER, M. A.	Education
MERWIN ELWOOD POTTER, B. S., M. A.	Physical Education
HUGH BRUCE PRICE, Ph. D.	Agriculture
EDWARD WARDER RANNELLS, B. A.	Art
GEORGE ROBERTS, M. S.	Agriculture
LEWIS CASS ROBINSON, M. S., Ph. D.	Geology
CLAY CAMPBELL ROSS, A. B., Ph. D.	Education
L. HOBART RYLAND, A. B., M. A.,	
Docteur de l'Universite.	Romance Languages
MORRIS SCHERAGO, B. S., D. V. M.	Bacteriology
OLUS JESSE STEWART, A. B., M. S., Ph. D.	Chemistry
RODMAN SULLIVAN, A. B., A. M.	Economics
WILLIAM SEPTIMUS TAYLOR, M. S., Ph. D.	Education
DANIEL VOIERS TERRELL, C. E.	Engineering
EDWARD TUTHILL, A. B., Ph. D.	History
WILLIAM DORNEY VALLEAU, Ph. D.	Agriculture
AMRY VANDENBOSCH, Ph. D.	Political Science
RALPH HOLDER WEAVER, M. S., Ph. D.	Bacteriology
WILLIAM SNYDER WEBB, M. S.	Physics
M. M. WHITE, M. A., Ph. D.	Psychology
EDWARD WIEST, A. M., Ph. D.	Commerce
RALPH HICKS WOODS, M. A., Ph. D.	Agriculture

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 Arts in Education
- Master of Science in Education
- Master of Science in Agriculture
- Master of Science in Home Economics
- Master of Science in Civil Engineering
- Master of Science in Electrical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Metallurgical Engineering
- Master of Science in Mining Engineering
- Civil Engineer (C. E.)
- Electrical Engineer (E. E.)
- Mechanical Engineer (M. E.)
- Metallurgical Engineer (Met. E.)
- Mining Engineer (E. M.)
- Doctor of Philosophy

The degree of Doctor of Philosophy is offered with major work in the following departments: Chemistry, Education, Economics, History, Mathematics, Physics, 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.

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

CREDITS:

The candidate shall complete twenty-four semester hours of graduate work in course with a standing of 2 and no grade below C shall be counted.

COURSES:

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

RESIDENCE:

The minimum residence requirement is one academic year of 36 weeks. This residence requirement may be fulfilled by any combination of regular semester or summer school sessions which total the required number of weeks.

This does not mean that the work prescribed for each individual can always be completed in the minimum length of time. Inadequate preparation or assistance in departments very frequently make a longer period necessary. Part-time work during a regular semester is evaluated on the basis of the amount of work carried.

TRANSFER OF CREDITS:

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

THESIS

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

LANGUAGE REQUIREMENT

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

EXAMINATIONS

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

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

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

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

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

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

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

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

1. The completion of 24 credits of graduate work for which all grades above D are counted, 36 weeks of residence and a thesis.
- Or—
2. The completion of 45 credits of graduate work with a standing of 2 or better, 54 weeks of residence and no thesis requirement.
 3. One-half the work must be in one department, the remainder in

any other department or departments approved by the major professor.

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

REQUIREMENTS FOR ADVANCED DEGREES IN ENGINEERING

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

THE MASTER'S DEGREES.—The master's degrees in engineering may be obtained in residence by satisfying the same requirements as those outlined for the M. A. and M. S. degrees, excepting that the language requirement may be omitted, providing the candidate holds the corresponding Bachelor of Science degree in engineering from this institution or from another engineering school of recognized standing. The degrees to be awarded are Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering, Master of Science in Metallurgical Engineering, Master of Science in Mining Engineering.

THE PROFESSIONAL DEGREES.—The professional degree of Civil Engineer (C. E.), Electrical Engineer (E. E.), Mechanical Engineer (M. E.), Metallurgical Engineer (Met. E.), or Mining Engineer (E. M.) will be granted only to graduates of the University of Kentucky, College of Engineering, who present evidence of professional work of creditable quality in the engineering field of his choice, extending over a period of five years, and who submit satisfactory theses as further evidence of their professional attainments.

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

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

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

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

The fees for the Master's Degree are the same as those for the M. A. and M. S. degrees. The fees for the Professional Degree are \$15.00 registration fee and \$15.00 graduation fee.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is conferred upon a candidate who, after completing not less than three years of graduate work devoted to the study of a special field of knowledge, passes the required 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.

Candidates for the doctor's degree who major in the College of Education may not satisfy residence requirements entirely by attendance in Summer Sessions, but must attend at least two semesters during the regular college year. (See announcement under EDUCATION.)

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

ate 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 requirements for the degree of Doctor of Philosophy in the University of Kentucky."

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

APPLICATION:

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

FINAL EXAMINATION:

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

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

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

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. PHYSICS

- C
- E
- G
- M
- P

V. AGRICULTURE

- A
- A
- A
- A
- A
- E
- F
- H
- H
- H
- M

VI. EDUCATION

- Ad
- Ag
- Co
- Ed
- El
- Hi
- Ho
- Ph
- Ph
- Sec

VII. ENGINEERING

- Civ
- Ele
- Mec
- Met
- Min

VIII. FINE ARTS

- Art
- Mus

IX. LAW

IV. PHYSICAL SCIENCES

Chemistry
Engineering (See Engineering)
Geology
Mathematics and Astronomy
Physics

V. AGRICULTURE

Agricultural Education (See Education)
Agricultural Entomology
Agronomy
Animal Industry
Animal Pathology
Farm Economics
Farm Engineering
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, A. D.

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; 2nd semester (Jones)

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

Prerequisite: Latin 5. 1 credit; 1st 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.

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: Junior Standing. 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 eighteenth 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 nineteenth 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, Swineburne and Rossetti.
3 credits; 2nd semester (Brady)

110a—SHAKESPEARE—COMEDY. Shakespeare's comedies will be studied in detail.
3 credits; 2nd 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 tendencies 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 or the consent of the instructor.
3 credits; 2nd semester (Gallaway)

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

155a—CONTEMPORARY ENGLISH POETRY. An examination of the forces which developed to create modern poetry in England and America since 1900. The course to be historical of the movements and currents in their origins and ideas and to be literary and esthetic in an appreciation of form, matter, and style. Collateral reading.
3 credits; 1st semester (Farquhar)

155b—CONTEMPORARY ENGLISH POETRY. A continuation of 155a.

3 credits; 2nd semester (Farquhar)

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 180a-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

The Department of German requires as a prerequisite for the Master's degree, attainment in German equivalent to that required of a German major. The number of hours of German required for the M. A. degree will vary depending upon the advanced courses the student may be asked to take and/or permitted to take in related departments.

101a—NINETEENTH CENTURY LITERATURE. Studies in German Literature of the nineteenth century with special emphasis on representative authors.

Prerequisite: German 3b. 3 credits; 1st semester (Hegeman)
[GIVEN 1935-36; OFFERED 1936-37]

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

Prerequisite: German 3b. 3 credits; 2nd semester (Hegeman)
[GIVEN 1935-36; OFFERED 1936-37]

102a—TWENTIETH CENTURY LITERATURE. A study of the trend in German Literature of the twentieth century. Gerhart Hauptmann will be studied in greater detail than his contemporaries. Readings, reports and term paper.

Prerequisite: German 3b. 3 credits; 1st semester (Whitaker)
[GIVEN 1935-36; OFFERED 1936-37]

102b—TWENTIETH CENTURY LITERATURE. Continuation of 102a.

Prerequisite: German 3b. 3 credits; 2nd semester (Whitaker)
[GIVEN 1935-36; OFFERED 1936-37]

105—INDEPENDENT WORK IN GERMAN. This course is limited to those upper division and graduate students who have shown special proficiency in the department.

Prerequisite: German 3b. 3 credits; both semesters (Staff)
[GIVEN 1935-36; OFFERED 1936-37]

110a—GERMAN CONVERSATION AND COMPOSITION. This course is designed for students who have a good command of German grammar and fair conversational ability and who wish to achieve fluency and ease in the speaking and writing of German. The course will be conducted wholly in German, and conversation will be upon topics chosen from the field of literature, daily life, and current events. The composition work will consist in the reproduction in German of English articles and in the preparation of original themes.

Prerequisite: German 2b. 2 credits; 1st semester (Staff)
[OFFERED 1936-37]

110b—GERMAN CONVERSATION AND COMPOSITION. Continuation of 110a.

Prerequisite: German 2b. 2 credits; 2nd semester (Staff)
[OFFERED 1936-37]

S160a—LITERARY LANDMARKS OF GERMANY. This course will run approximately six weeks and will be devoted mainly to directed travel and study in Germany and Austria. It is the purpose of this course to review the noteworthy contributions of German men of letters and to acquaint the student with the actual circumstances calling forth the creating of these literary works. Tour, assigned readings, quizzes, lectures and reports. (Scheduled concurrently with S160b.)

Prerequisite: German 2b 3 credits; summer 1937 (Bigge)
or its equivalent and
permission of the Ger-
man Department.

S160b—LITERARY LANDMARKS OF GERMANY. Continuation of S160a. (To be scheduled concurrently with S160a.)

Prerequisites: German 2b 3 credits; summer 1937 (Bigge)
or its equivalent and
permission of the Ger-
man Department.

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 3 credits; 1st semester (Portmann)
standing.

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 3 credits; 2nd semester (Portmann)
standing.

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 3 credits; 1st semester (Portmann)
standing.

104b—COPYREADING, PROOFREADING, TYPOGRAPHY, EDITING. 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, N. R. A. 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.

115—ADVERTISING TYPOGRAPHY AND LAYOUT. A study of the principles of typographic families, illustrations, decorations, etc., as they pertain to modern advertising. Practical work with mer-

chants is included in the latter part of the course. Lecture two hours; laboratory two hours.

Prerequisites: Senior 3 credits; 2nd semester (Portmann)
standing; *Psychology*
5, or consent of instructor.

120a—SEMINAR IN PUBLIC OPINION. A study of the relationship of the press in its several departments to public opinion; propaganda and its effect; newspaper campaigns and crusades; influence of politics on the press; financial control of the press and its effect; ethics, principles, and standards.

Prerequisite: Senior, or 2 credits; 1st semester (Plummer)
Graduate standing.

120b—SEMINAR IN PUBLIC OPINION. A continuation of 120a.
Prerequisite: Senior, or 2 credits; 2nd semester (Plummer)
Graduate 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; personnel 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 year 1936-37.

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 libraries, including dictionaries, encyclopedias, atlases, yearbook, 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 (Cass)

2 credits; 2nd semester (Cass)

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 (Semmons)

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 (Wood)

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, social sciences, useful and fine arts, 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 movement 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.

Prerequisite: 133a, 126;
130 desirable.

2 credits; 2nd semester (Semmons)

ROMANCE LANGUAGES AND LITERATURES

FRENCH

109a—FRENCH LITERATURE OF THE NINETEENTH CENTURY. A survey of the literature of the period and the outstanding works of representative authors of the century.

3 credits; 1st semester (Ryland)

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

3 credits; 2nd semester (Ryland)

110a—FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. A survey of the literature. The classics of Corneille, Racine and Moliere. The state of French society and times.

3 credits; 1st semester (Ryland)

110b—FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. Continuation of 110a.

3 credits; 2nd semester (Ryland)

113a—ADVANCED FRENCH GRAMMAR; SYNTAX. A study of the grammar and syntax of the French language. Conducted entirely in French.

3 credits; 1st semester (Ryland)

113b—ADVANCED FRENCH GRAMMAR; SYNTAX. Continuation of 113a.

3 credits; 2nd semester (Ryland)

114a, b, c, d, etc.—INDEPENDENT WORK IN ROMANCE LANGUAGES. Independent work designed to meet the individual needs of students after consultation with the staff.

3 credits; both semesters (Staff)

115a—FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. A survey of the literature; the works of representative writers; written reports and assigned readings.

3 credits; 1st semester (Holmes)

115b—FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. Continuation of 115a.

3 credits; 2nd semester (Holmes)

116—FRENCH LITERATURE OF THE TWENTIETH CENTURY. A study of representative authors; comparison of pre and post war writers.

3 credits; 1st semester (Horsfield)

201a—FRENCH LITERATURE OF THE RENAISSANCE. A study of the works of Villon, Lemaire de Belges, Marot, Rabelais, Calvin, Montaigne, Ronsard, Du Bellay, Baif, Belleau, D'Aubigne, and Regnier. Conducted entirely in French.

3 credits; 1st semester (Ryland)

201b—FRENCH LITERATURE OF THE RENAISSANCE. A continuation of 201a.

3 credits; 2nd semester (Ryland)

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 (Holmes)

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

3 credits; 2nd semester (Holmes)

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—PUBLIC 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 (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 Carpenter)

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

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

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 and Beals)

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 (Palmer and others)

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

2 credits; 2nd semester (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 and Beals)

115—CONTEMPORARY ECONOMIC THEORY. The major emphasis is on price and distribution theory.

3 credits; 1st semester (Sullivan)

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: Commerce 1, 7a, 7b and 9. 3 credits; 2nd semester (Lawrence and Others)

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 and Beals)

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 (Sullivan)

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 STATEMENT ANALYSIS. The theory underlying credit-granting; credit administration; analysis and interpretation of financial statements.

Prerequisite: Course 7a.

2 credits; 1st semester
(Haun and Beals)

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 and Beals)

132b—C. P. A. PROBLEMS. Continuation of 132a.
3 credits; 2nd semester (Haun and Beals)

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 and Beals)

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

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 required to take either this course or 138, and to graduate students who have had the necessary prerequisite training. 3 credits; 2nd semester (Carter)

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 College of Commerce who are required to take either this course or 137, and to graduate students who have had the necessary prerequisite training. 3 credits; 2nd semester (Palmer)

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.

Prerequisite: Course 11, Psychology 5, or the consent of the instructor. 3 credits; 2nd semester (McIntyre)

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 (Carpenter)

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 (Carpenter)

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)

147—AMERICAN BUSINESS LEADERS. Biographical sketches of a selected list of men including their business achievements and their relationships to the economic and social life of their time.

1 credit; 1st semester (Jennings)

148—EUROPEAN BUSINESS LEADERS. Biographical sketches of a selected list of men including their business achievements and their relationships to the economic and social life of their time.

1 credit; 2nd semester (Jennings)

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 (Palmer and others)

202b—SEMINAR. Continuation of 202a.

3 credits; 2nd semester (Palmer 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 have taken Course 134 for graduate credit. 2 credits; 1st semester (Jennings)

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

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

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 (Sullivan)

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 (Sullivan)

208—ADVANCED ECONOMIC THEORY. A survey of current literature of theoretical economics. Special emphasis is placed on analysis of fundamental institutions.

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

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

3 credits; 2nd semester (Carpenter)

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

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:

(1) A PRELIMINARY EXAMINATION to test the candidate's previous work may be required at any time after reasonable notice.

(2) 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.

(3) 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.

(4) 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 3 credits; 1st semester (Clyde)
or equivalent.

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 American or English history in College. 3 credits; 2nd semester (Knapp)

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.

3 credits; 1st semester (Hall)

131b—ENGLISH CONSTITUTIONAL HISTORY SINCE 1603.

3 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)

138—BRITISH SOCIAL HISTORY DURING THE TUDOR PERIOD, 1485-1603. A study of British life, manners, and customs in town and country. Particular emphasis will be placed upon the age of Elizabeth, with political events subordinated to social changes. Lectures, discussions, and reports. Two hours a week.

2 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)

142—ADVANCED HISTORY OF KENTUCKY. The development of

Kentucky as a Western commonwealth. Emphasis on the economic and political phases from the eighteenth century to the present time. Carefully planned reading is expected, with writing of papers based upon some research among documents.

2 credits; 2nd semester (Clark)

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 1877. 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)

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)

180—ECONOMIC DEVELOPMENT OF THE SOUTH. A study of the development of cotton and tobacco, river, rail and highway transportation. Development of trade between the South and the grain growing Northwest and the industrial East.

3 credits (Clark)

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.

Prerequisite: 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 nineteenth 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)

194—THE UNITED STATES IN THE PACIFIC AND THE FAR EAST SINCE 1898. This course studies policies which resulted in annexation of Hawaii and the Philippines, the announcement of the so-called open door policies and the integrity of China, with their historical development. It concludes with the Stimson doctrine of non-recognition.

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.

202—THE AMERICAN REVOLUTION.

3 credits (Knapp)

206—AMERICAN CONFEDERATION.

3 credits (Knapp)

226—THE OLD SOUTH.

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

2 credits; 2nd semester (Knapp)

290—HISTORY OF JAPAN. A critical survey of Japanese history from the earliest times to the present day with emphasis on the modern period. Graduate students only.

Prerequisite: History 190a
or 190b or 194.

3 credits (Clyde)

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 property docu-

mented thesis). It is desirable that the student take the Senior Seminar before enrolling in "300" courses. Three hours credit. Two class hours. One conference hour.

315a, b, c, d—HENRY CLAY AND HIS TIMES.

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.

3 credits; 1st semester (Kuiper)

101b—HISTORY OF PHILOSOPHY. A critical survey of modern Philosophy from the Renaissance to contemporary times.

3 credits; 2nd semester (Kuiper)

110—THE MAKING OF THE MODERN MIND. A survey of the intellectual background of the present age.

3 credits (Kuiper)

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 101a, b.

3 credits (Kuiper)

111b—CONTEMPORARY PHILOSOPHY. Continuation of 111a.

Prerequisites: Philosophy 101a, b.

3 credits (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 (Kuiper)

120—GREAT RELIGIONS OF THE WORLD.

3 credits; 1st 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 (Kuiper)

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

3 credits (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.

I. POLITICAL PARTIES AND PUBLIC OPINION

170—POLITICAL PARTIES AND PUBLIC OPINION. An analysis of public opinion and pressure groups; a survey of the history, organization methods and functions of political parties in the United States; first hand studies of the individual's participation in government.

3 credits; 1st semester (Cole)

[GIVEN EVERY YEAR]

Related Courses in Other Departments

Psychology 104—Social Psychology.
Sociology 15—Social Control.

II. PUBLIC ADMINISTRATION

153—MUNICIPAL ADMINISTRATION. A more or less detailed study of the administrative problems of the city. Emphasis is placed on personnel, financial, welfare and public works administration.
3 credits; 2nd semester (Manning)

154—COUNTY GOVERNMENT AND ADMINISTRATION. A study of the background, the legal status, types and administrative activities of the American County. Special attention is given to the relationship of state and the county.
3 credits; 1st semester and summer (Manning)

155—REGULATION OF PUBLIC UTILITIES. Control of utilities through franchises and commissions, valuation, theory and law of valuations, rate structure, interstate problems.
3 credits; 1st semester (Manning)

172—GOVERNMENT OF KENTUCKY. An intensive study of government and administration in Kentucky. The course is intended primarily for teachers of civics in the secondary schools, and for teachers of government in colleges.
3 credits; summer (Manning)

Related Courses in Other Departments

Economics 102—Labor Problems.
Economics 104—Public Finance.
Economics 124—State and Local Taxation.
Economics 130—Labor Legislation.
Law 153—Taxation.
Law 167—Administrative Law.
Psychology 112—Personnel Administration.
Sociology 107—Community Welfare Work.
Sociology 112—Community Organization.

III. THEORY

171a—EARLY POLITICAL THEORY. The political theories of Plato, Aristotle, Roman Political Thought, Thomas Aquinas, Dante, Machiavelli, Bodin, Grotius, More, Bacon, Harrington, Filmer, Hobbes, Locke, Spinoza, Montesquieu, Rousseau.
3 credits; 1st semester (Trimble)

171b—MODERN POLITICAL THEORY. The theories of the American and French Revolutions, the English Utilitarians, Democratic Political Theory, Socialism, Fascism, Anarchism, Syndicalism, Guild Socialism, Communism. 3 credits; 2nd semester (Trimble)

174—PUBLIC WELFARE ADMINISTRATION. An intensive study of public welfare agencies of the state and local units, with emphasis on the problems of relief, rehabilitation, public and private control, and unified administration.

3 credits; 2nd semester (Manning)

Related Courses in Other Departments

Philosophy 111a-111b—Contemporary Philosophy.

Sociology 15—Social Control.

Sociology 105—Social Systems.

IV. PUBLIC LAW

155a—COMPARATIVE GOVERNMENT. A study of the governments of England, Ireland and the British self-governing dominions.

[GIVEN EVERY YEAR] 3 credits; 1st semester (Trimble)

155b—COMPARATIVE GOVERNMENT. A study of the government of Europe including France and Switzerland and the dictatorships of Italy, Germany and Russia.

[GIVEN EVERY YEAR] 3 credits; 2nd semester (Trimble)

159a—AMERICAN CONSTITUTIONAL DEVELOPMENT, 1787-1868. Chronological survey of the making of the constitution and its interpretation through principal statutes and judicial decisions; some emphasis upon the economic and social interests which influenced this growth.

[GIVEN EVERY YEAR] 3 credits; 1st semester (Cole)

159b—AMERICAN CONSTITUTIONAL DEVELOPMENT. From the adoption of the Civil War Amendments to the present time. Congressional policies embodied in social-economic legislation; doctrines developed by the Supreme Court. Analysis and criticism of chief cases on "due process", congressional powers and changes in the federal systems.

[GIVEN EVERY YEAR] 3 credits; 2nd semester (Cole)

Related Courses in Other Departments

History 131a-131b—English Constitutional History.

Law 149—Municipal Corporations.

Law 161a-161b—Constitutional Law I and II.

V. INTERNATIONAL LAW AND DIPLOMACY

101—LATIN AMERICAN RELATIONS. The relations between the United States and the Latin American countries, the Monroe Doctrine, Pan-Americanism, Pan-Hispanism, Latin America and the League of Nations.

3 credits; 2nd semester (Blanding)

[OFFERED 1936-37]

150—INTERNATIONAL LAW. Sources and sanctions of international law, recognition, intervention, jurisdiction, nationality, protection of citizens abroad, diplomatic intercourse of states, the making, termination and interpretation of treaties, the treatment of aliens and international claims.

3 credits; 2nd semester

[GIVEN EVERY YEAR]

(McVey or Vandenbosch)

164—INTERNATIONAL RELATIONS AND AMERICAN FOREIGN SERVICE. Nationalism, self determination, plebiscites, the protection of minorities, the modern state system, the mandates system, the League of Nations, the World Court, the limitation of armaments, international legislation, control of American foreign policy, the state department, American diplomatic and consular service.

3 credits; 1st semester (Vandenbosch)

165—WORLD POLITICS. A study of diplomatic history before and after the war with particular stress on the importance of alliances, imperialism, nationalism, militarism, and secret diplomacy. The latter part of the course deals with the development of international conferences, the League of Nations and the recent foreign policy of the important nations.

3 credits; 2nd semester (Blanding)

168—GOVERNMENTS AND POLITICS OF EASTERN ASIA. An introductory study of the political institutions of China, Japan, the Philippines, the Dutch East Indies and India. Constitutional principles, governmental organization, the party systems, current political issues and contemporary problems of international relations.

3 credits; 1st semester

(Vandenbosch)

[OFFERED 1936-37]

Related Courses in Other Departments

Economics 127—International Economic Policies.

History 100a-100b—The diplomacy and foreign policy of the United States.

History 190a-190b—The Far East.

History 119b—The Nineteenth Century.

History 120—The Twentieth Century.

Law 164—Conflict of Laws.

203—PUBLIC ADMINISTRATION. An advanced course in the field of governmental administration, with major emphasis on the theory and general practices of administration, the problems of administrative organization and reorganization, personnel administration.

3 credits; 1st semester (Manning)

[OFFERED EVERY YEAR]

204—INTERNATIONAL ORGANIZATION AND THE LEAGUE OF NATIONS. Social and economic factors leading to the establishment of international administrative organs, the Mandates System, the International Labor Organization, the League of Nations.

3 credits; 2nd semester (Vandenbosch)

[OFFERED EVERY YEAR]

205—FREEDOM OF THE SEAS. Belligerent and neutral rights at sea, violations of Maritime law during the World War, neutrality and recent international legislation, current problems and possible solutions.

3 credits; 1st semester (Vandenbosch)

[NOT GIVEN 1935-36; OFFERED 1936-37]

206—SPECIAL PROBLEMS IN PUBLIC ADMINISTRATION. A research course in selected problems of public administration. The problems will be selected in accordance with the needs and desires of students registering for the course.

3 credits (Manning)

210—SUPREME COURT AND POLITICS. Intensive study of the federal judiciary in the political and economic order. Factors in decision-making; personnel of the court; relations to other departments and processes of the national government and to the states; trends in the principle of judicial review.

3 credits; 2nd semester (Cole)

[OFFERED EVERY YEAR]

213—FEDERAL CENTRALIZATION. A study of the shifting of power and control from the states to the federal government as a result of the economic and social development of the country and the resulting alteration of our constitutional system. Special attention

will be given to the development of such provisions of the Constitution as the commerce clause, the taxing clause and of grants-in-aid and the more important measures of the New Deal.

[OFFERED EVERY YEAR] 3 credits; 1st semester (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.

In order to provide training for guidance counselors in the schools and colleges of the State this department has arranged, in cooperation with the College of Education, a comprehensive plan for training in this field including practice and research. In cooperation with the registrar it has also paid special attention to the preparation of registrars.

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.

In cooperation with the Junior League of Lexington the Department has also established a Child Guidance Service which affords additional opportunities for the study and observation of both normal and maladjusted children.

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 in 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.

3 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 or equivalent. 2 credits; either semester (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 or equivalent. 2 credits; either semester (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. A typical 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)

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 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 personnel officer. Given in alternate years with 112.

3 credits; 2nd semester (Miner or Beaumont)

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)

[GIVEN 1935-36; NOT GIVEN 1936-37]

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)

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)

[GIVEN 1935-36; NOT GIVEN 1936-37]

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)

219—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)

SOCIOLOGY

101—SOCIAL DEPENDENCE. A study of poverty and social dependence, and of measures for its relief and reduction, with special attention to present private and public activities in this direction, including social insurance.

3 credits; 1st semester (Caldwell)

102—SOCIAL PATHOLOGY. A study of illness and accidents, mortality rates, mental and physical impairment or defectiveness, health insurance, and hospitals and similar institutions and agencies, all from a sociological point of view.

3 credits; 2nd semester (Caldwell)

103—CRIMINOLOGY. A study of general conditions as to crime and delinquency, of measures of punishment and reform of the offender, 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 propounded or attempted in human society from Plato's Republic down to the present.

3 credits; 1st semester (Best)

106—AMERICAN IMMIGRATION. A study of immigrant peoples and races in the United States and of proposed national policies for dealing with the matter, including special study of the Negro problem.

3 credits; 2nd semester (Best)

107—COMMUNITY WELFARE WORK. Course involving an inspection of the several public welfare agencies and institutions of the

community, and of certain ones of the State, after a preliminary theoretical consideration.

Prerequisites: Sociology 101, 102, 103. 3 credits; 1st semester (Caldwell)

109—THE FAMILY. A study of the family, both in its historical aspects and in connection with modern life.

2 credits; 1st semester (Caldwell)

110—CHILD WELFARE. A study of present social attitudes toward the child, and of methods and agencies for its care and protection.

3 credits; 1st semester (Caldwell)

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 (Caldwell)

113—INTRODUCTION TO SOCIAL CASE WORK. A more or less technical course in social case work open only to properly authorized students.

3 credits; 1st semester (Buckingham)

114—INDEPENDENT WORK. Study of some special topic by duly authorized students.

1 credit; either semester (Staff)

116—RURAL SOCIAL ECONOMY. A study of rural life and its tendencies at the present day.

3 credits; 1st semester (Caldwell)

117—ADVANCED SOCIAL CASE WORK. Continuation of 113.

3 credits; 2nd semester (Buckingham)

118—URBAN SOCIAL ECONOMY. A study of the problems of the city.

2 credits; 2nd semester (Caldwell)

120a—SUPERVISED FIELD WORK. A field or "laboratory" course in connection with an accredited social agency, and under the guidance of a qualified member of its staff. (150 hours.)

3 credits; 1st semester (Buckingham)

120b—SUPERVISED FIELD WORK. Continuation of 120a. (150 hours.)

3 credits; 2nd semester (Buckingham)

121—POPULATION MOVEMENTS. A study of the movements and trends in population, and with respect to race, age, birth-rates, etc.

2 credits; 2nd semester (Caldwell)

122—THEORY OF SOCIAL WORK. A study of the theoretical

aspects of social work; its philosophy, objectives, and methods; its history and development; its present professional status; and its place in modern programs of human progress.

3 credits; 2nd semester (Buckingham)

201a—SOCIOLOGY SEMINAR. Consideration mainly of methods of research and of current sociology 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

105—ARCHITECTURE OF THE HUMAN SKELETON. The course is designed for the student who wishes advanced study in Anatomy and Physiology, for students of Anthropology, for students in Art, and for those who are preparing for the study of medicine. The study begins with the development of the skeleton and joints. This is followed by the process of ossification and the histology of bones. Each bone of the body is studied in great detail, organized demonstrations are given with architecture and function being stressed. Variations in the skeleton are also considered and whenever possible, the bone is compared with that of the lower vertebrates. The physiology of the bone, joint and muscular relations are studied in detail. Lecture and recitation, one hour a week; laboratory, six hours a week.

4 credits; 1st semester

(Sherwood and Assistant)

106—INTRODUCTION TO ENDOCRINOLOGY. This is an introductory study of the glands of internal secretion or the endocrine glands in which the general development, anatomical location and structure, and fundamental functions of the organs are presented. The purpose of the course is to give a general knowledge in this particular field rather than a technical and detailed knowledge. The course will be found to be of value not only to the student of Anatomy and Physiology and related subjects but also to those students of education and sociological interests. Lectures and recitations, three hours a week.

*Prerequisites: A. & P. 1a and 1b
or the equivalent; Zoology
7b; Chemistry 1a and
1b; and with the consent
of the instructor.*

3 credits; 1st semester

(Allen)

107—ADVANCED ANATOMY. An introduction to the anatomy and physiology of the nervous system. The aim of the course is to provide an introductory laboratory course on form, structure, and functional arrangements of the nervous system for students of biology, physiology, psychology and those preparing for the study of medicine or the medical sciences. The work of the course includes a careful study of the nervous systems of vertebrates. The simpler types of nervous systems are compared with that of man. The development of the various reflexes are considered. The relation of the structure of

the nervous system to psychological reactions are studied. Lectures and recitations, two hours a week; laboratory, four hours a week.

Prerequisites: A. & P. 1a and 1b, 4 credits; 2nd semester or the equivalent. (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 4 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 process of digestion, absorption, excretion, heat production; voice and the production of speech. Lectures and recitation, three hours a week; laboratory, four hours a week.

Prerequisites: A. & P. 108. 4 credits; 2nd semester (Allen, Sherwood and Assistants)

109—APPLICATION OF PHYSICAL PRINCIPLES TO THE HUMAN BODY. This course is especially designed for students interested in Anatomy and Physiology or the natural sciences. Students of the physical sciences as well as others will also find the course to be of practical and cultural value. The course is opened by thoroughly acquainting the student with the various physical phenomena that are to be considered. This will be followed by applying the same to the physiological processes of the body. Such will include stress and strain with respect to the bones of the skeleton, types of

levers involved in joint action, permeability, calorimetry, mechanics of circulation and temperature regulation, mechanics of vision, mechanics of hearing, mechanics of speech or voice. The early part of the course will be given by the Department of Physics while the balance or greater part will be presented by the Department of Anatomy and Physiology. Lectures and recitations, two hours a week; laboratory, two hours a week.

Prerequisites: A. & P. 1a and 1b
or the equivalent; Physics 1a
and 1b; Chemistry 1a and 1b.

3 credits; 1st semester
(Allen, Assistant and
members of the staff of
Department of Physics)

[NOT OFFERED 1936-37]

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
or the equivalent.

1 credit; 1st semester
(Allen, Sherwood)

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

Prerequisites: A. & P. 1a and 1b
or the equivalent.

1 credit; 2nd semester
(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
or the equivalent; Chemistry
127a and 127b (131a and
131b desirable); Physics, one
year.

5 credits; 1st semester
(Allen, Sherwood)

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

Prerequisites: A. & P. 1a and 1b
or the equivalent; Chemistry
127a and 127b (131a and
131b desirable); Physics, one
year.

5 credits; 2nd semester
(Allen, Sherwood)

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 occupation 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.

Prerequisites: 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 protomorphic, archimorphic and metamorphic groups with discussions of their cultures and religions.

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

106—ETHNOLOGY OF EUROPE. A study of the origins and migrations of the ethnological groups of Europe. The influence of Hamitic, Ligurian, Iberian and Pelasgian stocks on prehistoric civilizations; the effect of the migration of the Indo-Iranian Division; the contribution of the Semites to early European cultures; the contrasts between the Aryans and Nordics in racial characters with particular attention given to the Q-Kelts, P-Kelts, Slavs and Anglo-Saxons. Three lectures per week.

Prerequisite: *Ethnology* 105. 2 credits (Funkhouser)

110 a, b, c, d—FIELD ARCHAEOLOGY. Field work in archaeology including the actual excavation of prehistoric sites, the surveying, photographing and measuring involved and the preparation of technical reports.

3 credits per course (Funkhouser and Webb)

BACTERIOLOGY

102—GENERAL BACTERIOLOGY. Observation and cultivation of bacteria and related microorganisms; study of their morphology, classification, physiology, relation to certain fermentations, to foods, to soil fertility, and to disease. Lectures and recitations, two hours a week; laboratory, four hours a week.

Prerequisite: *Chemistry* 1b. 4 credits (Scherago)

103—PATHOGENIC BACTERIOLOGY. A study of human and animal pathogenic microorganisms, especially their morphological, cultural, biochemical and pathogenic properties. Lectures and recitations, two hours a week; laboratory, four hours a week.

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. Laboratory, four hours a week.

Chemistry 1b or Bacteriology 52 or 102. (Weaver)

110a—LABORATORY DIAGNOSIS. Laboratory methods employed in diagnostic and public health laboratories. Designed primarily for students interested in Medical Technology. Examination of sputum, urine and blood. Laboratory, six hours a week.

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

110b—LABORATORY DIAGNOSIS. A continuation of 110a. Laboratory diagnosis of intestinal parasitism; examination of stomach and intestinal contents; laboratory methods used in diagnosis of gonorrhea, typhoid fever, syphilis, etc. Laboratory, six hours a week.

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

111—GENERAL PATHOLOGY. The effect of disease on the organs and tissues of the human body. Fresh and museum specimens as well as histological sections will be examined. Degenerations, infiltrations, regenerations, inflammation, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied. Lectures and recitations, two hours a week; laboratory, four hours a week.

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

115—INDIVIDUAL WORK. Students will be assigned special problems in laboratory work and reference reading. Laboratory, six hours a week.

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

120a—HOSPITAL LABORATORY PRACTICE. Students will be required to carry out, under supervision, the laboratory work in one of the hospitals in Lexington. Laboratory, twelve hours a week.

Prerequisites: Bacteriology 110a, b; consent of Head of Department. 4 credits; 1st semester (Maxwell)

120b—HOSPITAL LABORATORY PRACTICE. Continuation of 120a. Laboratory, eighteen hours a week.

Prerequisites: Bacteriology 110a, b; 6 credits; 2nd semester
consent of Head of Department. (Maxwell)

125—IMMUNOLOGY AND SEROLOGY. The theories and mechanism of infection and immunity; the preparation, standardization and uses of vaccines, toxins, antibodies and other biological products related to the diagnosis, prevention and treatment of specific infectious diseases; agglutination, precipitation, complement fixation, etc.; receptor analysis; hypersensitiveness. Lectures and recitations, two hours a week; laboratory, six hours a week.

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

150a-d—SEMINAR. Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies.

1 credit; both semesters (Scherago, Weaver)

201a-d—RESEARCH IN BACTERIOLOGY. Laboratory, ten hours a week.

5 credits; both semesters (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.

206—BACTERIOLOGY OF FOODS. Microbiology of milk and milk products, eggs, tomato products, meat and meat products; food preservation; bacterial food poisoning. Lectures and recitations, two hours a week; laboratory, four hours a week.

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

207—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. Lectures and recitations, two hours a week; laboratory, four hours a week.

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

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)

103—PLANT PHYSIOLOGY. A course dealing with the fundamental functions of the plant cell life, nature of protoplasmic membranes, osmotic phenomena, metabolism, growth and responses of various kinds. Lecture, one hour; recitation, one hour; laboratory four hours.

Prerequisites: Botany 1a, 1b. 4 credits (McInteer)

114—ECOLOGY. A course dealing with plants in relation to their habitats. Studies will be made along the lines of plant groups and quadrat formation. The influence of various soils and environment on plants and their growth. Lecture, two hours; laboratory, two hours.

Prerequisites: Botany 1a, 1b, 15. 3 credits (McInteer)

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)

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)

124—PRINCIPLES AND PRACTICE OF PUBLIC HEALTH NURSING. A general course covering the principles and practice of public health nursing.

3 credits; summer school only (Eagan)

140—SURVEY COURSE FOR NURSES. A lecture course arranged primarily for public health nurses, but open to others interested in public health. Its purpose is to present current scientific information relating to public health. The lectures will be presented by leaders in specialized fields. Topics that may be considered are: Mental Hygiene, Vital Statistics, Child Growth and Development, Sanitation, Correctible Defects, Maternity Care, Foods, Communicable Diseases, and Dietary Deficiency Diseases.

2 credits; summer school only (Staff)

150a¹—PROBLEMS IN HEALTH EDUCATION. An individual-problems course for teachers in service, based upon a systematic attack upon the health problems of a school. The work of the course will consist of an initial survey, a statement of problems, a diary of steps in problem solving, a report of related community activities, a final survey and a summary and evaluation of results.

3 credits (Staff)

150a²—PROBLEMS IN HEALTH EDUCATION. A continuation of 150a¹.

3 credits (Staff)

160—COMMUNITY HEALTH EDUCATION. A course designed for public health nurses already engaged in the field for the purpose of

acquainting them with principles and methods in adult education, that may be effectively applied in a community health program, particularly as it relates to the nurses' daily activities.

2 credits; summer school only (Staff)

200—EPIDEMIOLOGY AND COMMUNICABLE DISEASES. The control of communicable diseases. For health officers only.

2 credits; summer school only (Mustard)

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

2 credits; summer school only (Mustard)

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

2 credits; summer school only (Reed)

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, urinogenital systems, and cascular 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

Requirements for the degree of Master of Science: Twenty-four credits in graduate courses exclusive of the thesis, one academic year (36 weeks) in residence, and an acceptable thesis.

The applicant must have a good reading knowledge of scientific German. Ability to read scientific French is often required of the candidate.

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)

103—QUALITATIVE ORGANIC ANALYSIS. A systematic study of the separation and identification of organic compounds. Laboratory, ten hours a week.

Prerequisite: Chemistry 127b. 5 credits; either semester
(Barkenbus)

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; second 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 the chemical literature and a 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 (Maxson)

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 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 7 or 127a. 5 credits; 1st semester (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 Heterogeneous Equilibria; Chemical Kinetics; Structure of Matter; Periodic Law; Radio-Chemistry; Colloids; Electro-Chemistry.

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

140—INDUSTRIAL STOICHIOMETRY. Chemical calculations of manufacturing processes, e. g., calculations related to the production of water and producer gas, lime, cement, nitric and sulphuric acids and other industrial products.

Prerequisite: Chemistry 119a. 3 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.

Prerequisites: 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; either semester (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 (Averitt)

106b—ECONOMIC GEOLOGY. Metallic mineral deposits.

3 credits (Averitt)

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

Prerequisite: Chemistry 1a-b. 2 credits; 1st semester
(Robinson)

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

2 credits; 2nd semester (Robinson)

122—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.* 3 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 diatrophism.

Prerequisites: Geology 15a-b; (Robinson)

109a-b; Physics 1a-b.

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

Prerequisites: *Geology 101a-b.*

3 credits (McFarlan)

MATHEMATICS AND ASTRONOMY

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.

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

Prerequisite: *Course 20b.*

3 credits; 2nd semester
(Downing)

[GIVEN 1935-36]

103—THEORY OF EQUATIONS. This course is based on Dickson's First Course in the Theory of Equations, which is used as a text.

Prerequisite: *Course 20a.*

3 credits; 2nd semester
(Boyd, Downing)

[GIVEN 1935-36; OFFERED 1936-37]

104—ADVANCED ANALYTICS. Plane analytics as presented in such texts as Salmon and C. Smith.

Prerequisite: *Course 20b.*

3 credits (LeSturgeon)

[OFFERED 1936-37]

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

Prerequisite: *Course 20b.*

3 credits; 1st semester
(LeSturgeon, Cohen)

[GIVEN 1935-36; OFFERED 1936-37]

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 20b.*

3 credits; 1st semester (Cohen)

[OFFERED 1936-37]

106b—ADVANCED CALCULUS. Continuation of Mathematics 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 or 3 credits; 2nd semester
consent of instructor. (Cohen)

[GIVEN 1935-36; OFFERED 1936-37]

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

Prerequisite: Course 20a. 3 credits; 1st semester (Boyd)

[OFFERED 1935-36]

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

Prerequisite: Course 20b. 3 credits; both semesters
(Senior Staff)

[GIVEN 1935-36; OFFERED 1936-37]

112—SERIES. Important theorems on limits, properties of infinite series, uniform convergence, multiplication of series.

Prerequisite: Course 20b. 3 credits; 2nd semester (Brown)

[GIVEN 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 (Latimer)

[OFFERED 1936-37]

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 20b. 3 credits; 2nd semester
(Downing)

[OFFERED 1936-37]

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 20b. 3 credits; 1st semester
(LeSturgeon)

[OFFERED 1936-37]

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

Prerequisite: Course 20a. 3 credits; 1st semester (Boyd)

[GIVEN 1935-36]

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 20a. 3 credits; 2nd semester (South)
[GIVEN 1935-36]

201a—GEOMETRIC TRANSFORMATIONS. This course covers a large part of Winger's Projective Geometry.

3 credits; 1st semester (John)
[GIVEN 1935-36]

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

3 credits; 1st semester (Boyd)
[OFFERED 1936-37]

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

3 credits; both semesters
(Senior Staff)
[GIVEN 1935-36; OFFERED 1936-37]

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, Weierstrass and Jacobi. Isoperimetric problems.

Prerequisites: Courses 105a, 106a. 3 credits; 1st semester
(Downing)
[GIVEN 1935-36]

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 (Downing)
[OFFERED 1936-37]

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)
[GIVEN 1935-36]

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)

[GIVEN 1935-36]

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
(Cohen)

[OFFERED 1936-37]

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 1935-36]

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 20a.

3 credits; 1st semester (Latimer)

[OFFERED 1936-37]

220a-d—MATHEMATICS SEMINAR.

2 credits; 2nd semester (Cohen)

[OFFERED 1936-37]

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)

[OFFERED 1936-37]

NOTE.—Other courses such as Fourier's Series, Potential Function, Infinite Series, Actuarial Mathematics, Algebraic Numbers, Algebraic Invariants, Practical Astronomy, Elementary Observations in 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 2b and
Mathematics 20b.*

5 credits (Koppius)

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 2b and
Mathematics 20b.*

5 credits (Warburton)

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

*Prerequisites: Physics 2b, and
Mathematics 20b.*

5 credits (Webb)

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 2b and
Mathematics 20b.*

5 credits (Pardue)

108—THEORY OF LIGHT. This course comprises the lectures and recitations of Course 103.

3 credits

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

*Prerequisites: Physics 2b and
Mathematics 20b.*

3 credits (Warburton)

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.

Prerequisite: Physics 2b.

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
College Chemistry.*

1 credit (Webb)

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

117—THEORY OF HEAT. This course comprises the lectures and recitations of Course 101.

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 2b and
Mathematics 20b.*

3 credits (Hahn)

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.

Prerequisite: 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 119.

3 credits (Hahn)

123—PRINCIPLES OF THERMODYNAMICS. A lecture and problem course covering the first and second laws of thermodynamics, derivation of thermodynamic relations and their application to processes in physics and allied sciences. Topics considered: The gas laws for both ideal and real gases, specific heat relations, continuity and change of state, vapor and osmotic pressures, equilibrium, solutions, electrical phenomena and radiation, etc.

*Prerequisites: Physics 2b and
Mathematics 20b.*

3 credits
(Koppius)

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 105a.

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* 3 credits (Pardue)

Mathematics 105a.

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)
and Mathematics 105a.

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,* 3 credits (Webb)
and Mathematics 105a.

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* 3 credits (Pardue)
Mathematics 105a.

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 relativity 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 105a.* 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. A review of the two classical laws of thermodynamics and their dynamical and statistical mechanical support; Nernst's heat theorem; applications of classical thermodynamics to important problems; relativity thermodynamics.

*Prerequisites: Physics 101
and Mathematics 105a.*

3 credits

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-d—SEMINAR. A continuation of 220a.

1 credit (Staff)

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 119.

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—RECENT DEVELOPMENTS IN SOIL MANAGEMENT. Consideration will be given to the water, erosion, leaching, tillage, liming, fertilization, and cropping of soils in the light of recent knowledge.

Prerequisites: Undergraduates,
Agronomy 115; graduates,
Agronomy 1.

3 credits; summer
(Roberts or 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, Fergus)

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 4 credits; 2nd semester
A. I. 19. (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 LIVESTOCK 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. Offered every other year; to be given 1935-36, 1937-38.

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)

136—TECHNICAL CONTROL OF DAIRY PRODUCTS. This course is designed to give the student a working knowledge of various chemical and bacteriological tests used in the control of production or processing of dairy products. Laboratory and recitations 6 hours. Offered in alternate years.

Prerequisites: A. I. 23, 129.

3 credits; 2nd semester
(Morrison)

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
of department.

3 credits; each semester
(Anderson)

204a-b—RESEARCH IN DAIRYING. Special problems involving original investigation on the part of the student. Throughout the year.

Prerequisite: Approval of head
of department.

3 credits; each semester (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
of department.

3 credits; each semester
(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
of department.

3 credits; each semester
(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.

Prerequisites: 126 and 116,
or equivalent.

4 credits; each semester
(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 fol-
lowing: 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 livestock, 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 char-

acteristics of such contracts which have been mutually satisfactory to landlords and tenants.

Prerequisite: *Farm Economics* 4.

2 credits; 1st semester
(Nicholls)

[NOT OFFERED 1936-37]

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
(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)

121—SPECIAL PROBLEMS IN RURAL LIFE. Rural Community organization, rural migration, and rural institutions such as the family and the church are some of the problems that may be selected.

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)

FARM ENGINEERING

101a-b—SPECIAL PROBLEMS IN FARM ENGINEERING. This course is a study of one or more problems in the field of agricultural engineering.

Prerequisite: Farm Engineering 10. 3 credits; both semesters

(Kelly)

102—DAIRY ENGINEERING. A study of the engineering principles involved in the construction, installation, operation and management of machinery and equipment used in the handling and manufacturing of dairy products. Lectures and recitations 2 hours; laboratory 2 hours.

Prerequisite: Farm Engineering 10. 3 credits; 1st semester

(Kelly)

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. Readings in recent research on nutrition.

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

106a-b—SEMINAR IN TEXTILES AND CLOTHING. Study 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 124. 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, Physiology 3, Psychology 7. 3 credits; both semesters (Deephouse)

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, Art 2b. 3 credits; 2nd semester (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 41, Art 2b. 3 credits; 1st semester (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; jellying properties of fruit juices.

Prerequisites: Home Economics 124, 109. 3 credits; each semester
(Erikson, Grundmeier)

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

2 credits; throughout year (Staff)

124—DIETETICS. A study of daily food requirements of human beings at different age levels, emphasis being given to satisfying the divergent needs of families and other groups. Practice is given in normal dietaries for the different ages and different groups. Lectures 2 hours; laboratory 4 hours.

Prerequisites: H. E. 3, 6b; Physiology 3. 4 credits; both semesters
(Grundmeier)

142—HOME MANAGEMENT AND FAMILY RELATIONSHIPS. A study of the problems of the home from the standpoint of management of materials; time and money; consumer buying; household accounts; leisure; social and cultural training. Students live for a stated period in the University Home Management House. Lectures 2 hours; laboratory 6 hours.

Prerequisites: H. E. 124, 41. 5 credits; both semesters
(Deephouse)

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 institution management consisting of practical work in the institution six hours a day, six days a week, daily half hour conferences and one hour lecture a week.

Prerequisite: H. E. 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, Economics 1a. (Deephouse)

202a-b—GRADUATE SEMINAR.

2 credits; each semester (Staff)

HOME ECONOMICS EDUCATION (See Education.)

125—CONSUMER PROBLEMS. The course aims to acquaint students with the problems of efficient buying. The relation of production to family and individual consumption, marketing policies and systems, adequacy of consumer information, standards and specifications of consumer goods, cooperatives, credit unions and sources of information are studied.

3 credits; 2nd semester (Deephouse)

126—FAMILY LIVING. The interlocking relationships of community and family living are studied. Influences of housing, nutrition, clothes, activities and income on the members of the family individually and on the family as a social group are considered. Relationship of child to child and child to adult are given emphasis. Through observation in the Nursery School and discussion of significant behavior and desirable and undesirable ways of meeting different situations, the students will have the opportunity to see how applications can be made to her own personality and individual problems and how that in turn applies to family living.

3 credits; 1st semester

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. Lectures 2 hours; laboratory 2 hours.

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

104—POMOLOGY. Stone Fruits. A detailed study of commercial peach, plum and cherry growing. Lectures 2 hours; laboratory 2 hours.

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

[OFFERED 1936-37]

105—POMOLOGY. Small fruits. A detailed study of the care and management of commercial plantings of strawberries, raspberries and other bush fruits. Lecture 1 hour, laboratory 2 hours a week, first half; lecture 2 hours a week, last half.

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

[NOT OFFERED 1936-37]

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 1936-37]

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 1936-37]

110—VEGETABLE GARDENING. A study of the fundamental principles of vegetable growing, and the farmer's home garden. Lectures 2 hours; laboratory 2 hours.

3 credits; 2nd semester (Emmert)

111—MARKET GARDENING. A detailed study of commercial vegetable growing, with special emphasis on crops suited to Kentucky. Lectures 2 hours; laboratory 2 hours.

Prerequisites: Horticulture 108, 110. 3 credits; 2nd semester
(Emmert)

113—LANDSCAPE GARDENING. A study of lawns, trees and shrubs and their arrangement 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. Lectures 2 hours; laboratory 2 hours.

Prerequisites: Horticulture 113, 117. 3 credits; 2nd semester
(Elliott)

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.

Prerequisite: Horticulture 117.

3 credits; 2nd semester
(Elliott)

[NOT OFFERED 1936-37]

119—PLANT PROPAGATION. A detailed study of the principles and methods of propagating plants. Lectures 2 hours; laboratory 2 hours.

Prerequisites: Botany 7a and 7b.

3 credits; 2nd semester
(Elliott)

[OFFERED 1936-37]

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 markets.

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 method used and reliability of conclusions drawn. Lectures 2 hours.

Prerequisites: M. & R. F. 111-113 2 credits; 1st semester (Card)
or Commerce 107.

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.

Prerequisite: Farm Economics 4. 3 credits; 2nd semester (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 of department. 3 credits; each semester (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; 2nd 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 degree of Master of Arts in Education and to the degree of Master of Science in Education are as follows:

1. Of the graduate work offered by any candidate for the master's degree for majors in education, 15 semester hours must be in courses at the "200" level or above for persons completing the degree requirements on the 30-hour basis and 21 semester hours must be in courses at the "200" level or above for persons completing the degree requirements on the 45-hour basis.
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. If a student desires to qualify for the Master of Arts or the Master of Science degree rather than for the Master of Arts in Education or the Master of Science in Education, he must satisfy the language requirement.

Candidates for the Doctor's degree who major in the College of Education at the University of Kentucky, to satisfy the one-year minimum residence requirement, shall be in attendance at the University

of Kentucky two full semesters during the regular year, at least one semester of which shall be done during the last two years of work toward the doctorate degree. This requirement shall apply to all candidates whose committees have not been approved by September 1, 1935.

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, preparation 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 (Chamberlain)

198—THE ADMINISTRATION OF PUPIL PERSONNEL. This course deals with the school census, enforcement of attendance, personnel records, marking, pupil progress, and classification. The course is designed primarily for prospective superintendents and attendance officers.

3 credits

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 (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 (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 (McVey)

204b—THE ADMINISTRATION OF HIGHER EDUCATION. A continuation of Education 204a.

2 credits (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; qualifications 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 its equivalent. 3 credits (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 (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 (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 teachers' contracts, tenure and retirement.

3 credits (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 (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
202 or equivalent.

3 credits (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
202 or equivalent.

3 credits (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 (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 instructor. 2 credits (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 instructor. 2 credits (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 or equivalent. 2 credits (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 graduate work. 3 credits (Chamberlain)

307a-b—RESEARCH PROBLEMS IN SECONDARY EDUCATION. Same type of course as Education 301.

Prerequisite: One year of graduate work. 3 credits (Ligon)

308a-b—RESEARCH PROBLEMS IN ELEMENTARY EDUCATION. Same type of course as Education 301.

Prerequisite: One year of graduate work. 3 credits (Duncan)

321a-b—RESEARCH 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 (Hammonds)

181—TEACHING VOCATIONAL AGRICULTURE. Designed to prepare men for the teaching of agriculture. About one-half of the course is practice.

7 credits; (Hammonds, Woods and Armstrong)

188—FARM PRACTICE SUPERVISION. Practice and directed study in supervising farm practice of pupils in vocational agriculture.

1 credit (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 (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 (Woods)

287a—ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION. The specific problems considered vary according to the needs of the group.

Prerequisite: Graduate standing.

3 credits (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 (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 (Hammonds, Woods)

287d—DIRECTING FARM PRACTICE. Considers farm practice as a method of teaching. Takes up standards, planning, supervision, records.

3 credits (Hammonds)

- 289—RESEARCH IN AGRICULTURAL EDUCATION. The student works on some problem of importance to agricultural education.
3 credits (Hammonds, Woods)

BUSINESS EDUCATION

- 158a—METHODS OF TEACHING SECRETARIAL SUBJECTS. Special techniques and devices for teaching shorthand, typewriting and secretarial office practice are considered.

2 credits (Lawrence)

- 158b—METHODS AND MATERIALS IN TEACHING ACCOUNTING. This course provides materials and techniques in the teaching of accounting. The different approaches to the subject are examined critically.

2 credits (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 (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.

3 credits (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 (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 (Ross)

- 119—FOUNDATION OF ELEMENTARY EDUCATION. The psychology of the child in the primary and intermediate grades.

Prerequisite: One semester
of Psychology.

3 credits (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 (Ross)

147—FOUNDATIONS OF SECONDARY EDUCATION. The psychology of the student in junior and senior high school.

Prerequisite: One semester of Psychology.

3 credits (Ross)

152—PROBLEMS IN EDUCATIONAL PSYCHOLOGY. A critical survey of the conflicting schools of psychology, theories of learning, etc.

Prerequisite: Education 16.

3 credits (Ross)

216—SEMINAR IN EDUCATIONAL TESTS AND MEASUREMENTS. A critical study in certain problems in measurement. Individual work.

Prerequisites: Education 122a-b.

3 credits (Ross)

223—EDUCATIONAL STATISTICS. A non-mathematical study of the applications of statistical and graphical methods to educational data.

3 credits (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 (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 (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 (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 (Martin)

195a-b—ORGANIZATION AND MANAGEMENT OF PRE-SCHOOL EDUCATION. This course deals with the problems of teaching in nursery schools and concerns itself primarily with the education of children from two to four and one-half years of age. It includes observation and participation in the nursery school. Students desiring to register for this course must have their applications approved by the instructor and by the dean of the college.

6 credits each (Martin)

196—SCIENCE IN THE ELEMENTARY SCHOOL. This course is planned to give a background of elementary science usable with children in the first six grades. The course includes planning units of work, organizing and using materials and references, use of illustrative materials, excursions, and making bibliographies for teachers and children.

3 credits (Daniel)

197—COURSE FOR LEADERS IN PARENT EDUCATION. (For nursery school, kindergarten and elementary teachers.) This course is planned to help teachers conduct effective parent education programs. It includes a study of the principles of adult education, acquaintance with types of programs, study of reference materials, knowledge of various social and educational agencies in the community and the planning of a parental education program by each student based on the special needs and problems of the community.

3 credits (Daniel)

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 (Chamberlain)

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 (Martin)

224a-b-c—ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. This course has been planned for students preparing to do critic teaching in the fields of elementary and secondary education. Education 224a is a general course that will include the basic principles underlying the entire program. Education 224b will have to do with specific problems for critic teachers on the secondary level, while Education 224c will deal with problems on the elementary level.

3 credits each (Williams, Duncan)

308a-b—RESEARCH PROBLEMS IN ELEMENTARY EDUCATION. (For description of this course see 308a-b, under Educational Administration.)

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 (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 (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 (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 (Patrick)

220—COMPARATIVE EDUCATION. A course giving comparisons of systems of education.

3 credits (Taylor)

HOME ECONOMICS EDUCATION

160—TECHNIQUE OF TEACHING HOME ECONOMICS. A study of methods of teaching as applied to home economics.

Prerequisites: *Home Economics* 26, 3 credits (Parker or Spickard)
6a and b, 29, 3, 51; *Education* 147.

162—DIRECTED TEACHING IN HOME ECONOMICS. Practical application of methods in teaching various phases of home economics.

Prerequisite: *Education* 160. 6 credits (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.

Prerequisite: *Home Economics* 115 3 credits (Parker or Spickard)
or equivalent.

165a—PROBLEMS IN VOCATIONAL EDUCATION. This course deals with organization of vocational home economics and the problem of teaching related art and related science in the vocational high schools.

Prerequisite: *Ed.* 160. 3 credits (Parker or Spickard)

165b—PROBLEMS IN VOCATIONAL EDUCATION. This course deals with the organization of adult classes, units of instruction, and methods of teaching adult classes.

3 credits (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 (Parker or Spickard)
experience in teaching.

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 (Parker or Spickard)
experience in teaching and
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 and 162; 3 credits (Parker or Spickard)
experience in teaching.

266a-b—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 (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 (Parker or
Spickard)

PHILOSOPHY OF EDUCATION

114—EDUCATIONAL SOCIOLOGY. A study in the application of sociological findings to the field of education.

3 credits (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 (Haines)

175a-f—MODERN EDUCATIONAL PROBLEMS. A brief survey of some of the problems in modern education.

3 credits each

200—ADVANCED COURSE IN PHILOSOPHY OF EDUCATION. This is an advanced course dealing with the philosophy underlying the larger educational problems of today.

Prerequisite: Graduate standing.

3 credits (Adams)

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 (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 (Taylor)

222b—THESIS COURSE. Continuation of 222a.

Prerequisite: 12 hours Education.

3 credits (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

3 credits (Adams)

and 12 hours in Education.

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; 3 credits (Adams)
12 hours Education.

223a-d—SEMINAR IN EDUCATION. This course has been planned for graduate students majoring in education, to be given under the direction of the faculty of the College of Education.

1 credit each.

230—PROBLEMS OF EDUCATIONAL SOCIOLOGY. An advanced course in the application of sociology to the educational field.

Prerequisite: 12 hours Education, 3 credits (Adams)
including Education 114.

240—CHARACTER EDUCATION. This course will make an extensive survey of plans and methods of teaching character education in the best public school systems. It will take up such points as the relation between character and conduct, how character is correlated with intrinsic and extrinsic learning, the direct and indirect methods of presentation, and the contribution which other institutions than the school should make to character education.

3 credits

SECONDARY EDUCATION

105—THE TECHNIQUE OF TEACHING. Deals with laboratory methods of instruction. Units: fundamental processes, control, operation, administration.

Prerequisite: Education 101. 3 credits (Ligon)

100—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)

123—VOCATIONAL GUIDANCE. A course designed to give teachers, principals, superintendents and welfare workers a comprehensive view of the factors in vocational guidance, the agencies contributing to or influencing life choices and an analysis of the human and economic resources of a given civic unit.

3 credits

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)

153—DIRECTED TEACHING IN ENGLISH. Topics: Course of study, minimum essentials, materials, methods, testing. Part I, languages and composition; Part II, literature. Observation and practice five hours, conference two hours.
Prerequisites: *Education* (See *Professional Major*), and 18 hours in *English*. 6 credits (Anderson)

154—DIRECTED TEACHING IN FOREIGN LANGUAGES. Topics: Aims and objectives, course of study, methods, tests, equipment, analysis of textbooks. Observation and practice five hours, conference two hours.
Prerequisites: *Education* (See *Professional Major*), and 18 hours in subject to be taught. 6 credits (West)

155—DIRECTED TEACHING IN THE SCIENCES. Topics: Aims and objectives, courses of study, methods, tests, equipment. General science, biology, physics and chemistry. Observation and practice five hours, conference two hours.
Prerequisites: *Education* (See *Professional Major*), and 18 hours in subject to be taught. 6 credits (Kemper)

156—DIRECTED TEACHING IN MATHEMATICS. Topics: Course of study, materials, methods, testing. Observation and practice five hours, conference two hours.
Prerequisites: *Education* (See *Professional Major*), and 18 hours in *Mathematics*. 6 credits (Mitchell)

157—DIRECTED TEACHING IN THE SOCIAL STUDIES. Topics: Objectives, preparation of the teachers, courses of study, methods, supplementary materials, visual instruction, testing and professional helps. Observation and practice five hours, conference two hours.
Prerequisites: *Education* (See *Professional Major*), and 18 hours in subject to be taught. 6 credits (Peck)

169a—DIRECTED TEACHING IN PHYSICAL EDUCATION. This

course has been planned for students who desire to become directors of physical education and coaches of athletics in the public schools.

Prerequisites: Education (See Professional Major), and 18 hours in Physical Education. 3 credits (Potter)

169b—DIRECTED TEACHING IN PHYSICAL EDUCATION. A continuation of Education 169a.

3 credits (Potter)

177a—DIRECTED TEACHING IN MUSIC. This course has been planned for teachers who contemplate becoming supervisors of music in the public schools.

3 credits (Morse)

177b—DIRECTED TEACHING IN MUSIC. A continuation of Education 177a.

3 credits (Morse)

193—DIRECTED TEACHING IN COMMERCIAL SUBJECTS. For seniors. This course will include practice in junior business training; in shorthand; in typewriting and in such other commercial subjects as are commonly taught on the secondary level.

6 credits (Morton)

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 (Ligon)

224a-b-c—ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. (For description of this course see 224a-b-c, under Elementary Education.)

307a-b—RESEARCH PROBLEMS IN SECONDARY EDUCATION. (For description of this course see 307a-b, under Educational Administration.)

PHYSICAL EDUCATION

The requirements for a Master's degree in Physical Education are the same as those listed on pages six and seven of this bulletin and are not the special requirements for the Master's degree in Education.

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 ap-

plication 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; 1st 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; 2nd semester and summer school (Hackensmith)

125—ADMINISTRATION AND ORGANIZATION OF MUNICIPAL AND COMMUNITY RECREATION. A general consideration of the principles and procedures involved in organization methods and administrative policies for supervised children's, youths' and adults' recreation. Visitation and field trips to local municipalities and communities to study and discuss conditions as they pertain to organized recreational projects.

*Prerequisite: Physical Education 29,
or sufficient experience in
organized recreational work.*

*3 credits; 2nd semester
and summer school
(Shively)*

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; 1st semester and summer school (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; summer school (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; 1st semester and summer school.
(Wynne, Shively)*

148—ORGANIZATION AND ADMINISTRATION OF ATHLETICS. Special emphasis on equipment, care of the gymnasium plant, executive and administrative duties of an athletic director, establishment and enforcement of eligibility rules, making of schedules, selecting a

coach, sportsmanship and publicity are studied. Three hours recitation and lecture a week.

3 credits; 2nd semester and summer school (Shively)

150—ORGANIZATION AND SUPERVISION OF INTRAMURAL ATHLETICS. The course will make a critical analysis of the outstanding intramural programs fostered throughout the United States. The relationship of intramural athletics to the school curriculum, physical education and interscholastic program will be studied. Problems of policy and administration of programs on the elementary, secondary, and college levels will be considered.

2 credits

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 and summer school (Potter)

VII. 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 the division of engineering in which he is registered.

CIVIL ENGINEERING

102—REINFORCED CONCRETE. A study of concrete mixtures. Theory and design of beams, slabs, columns, bridges and buildings.
Prerequisite: E. M. 13. 3 credits; 1st semester (Terrell)

103—WALLS AND DAMS. Theory and design of retaining walls and dams.
Prerequisites: E. M. 13, 101 2 credits; 1st semester (Terrell)

104a—REINFORCED CONCRETE DESIGN. Design of columns, beams, buildings, bridges, retaining walls, dams and arches. Special problems assigned to each student. Drawing room two hours a week.
Prerequisite: E. M. 13. 0.7 credit; 1st semester (Terrell)

104b—REINFORCED CONCRETE DESIGN. Design of a reinforced concrete arch. Drawing room two hours a week.
Prerequisite: C. E. 104a. 0.7 credit; 2nd semester (Carrel)

111—CONTRACTS AND SPECIFICATIONS. Legal forms and provisions of an engineering contract and details for specification writing.
1 credit; 2nd semester (Carrel)

113—GEODESY, PRECISE SURVEYING AND LEVELING. Method of making and adjusting observations in triangulation systems, and precise traverses. Observation and calculations for determining time, azimuth, latitude and longitude. Class work two hours a week, first semester; field work four hours a week first half of first semester.
Prerequisites: Math. 11, 12; 3 credits; 1st semester (Terrell)
C. E. 13.

122—WATER POWER ENGINEERING. Investigations, design and operation of water power projects.
Prerequisite: E. M. 101. 2 credits; 2nd semester (Carrel)

151—WATER SUPPLY AND WATER WORKS. Sources of supply: rainfall, surface water, rivers, lakes and ground water. Theory of

filtration, purification, equipment and distribution. Problems in design and construction.

Prerequisite: E. M. 101. 2 credits; 2nd semester (Terrell)

152—SEWERS AND SEWAGE DISPOSAL. Sanitary and storm sewer systems; theory of design; method of disposal.

Prerequisite: E. M. 101. 2 credits; 2nd semester (Terrell)

153—DESIGN OF WATER WORKS AND SEWERS. Design of water supply system, storm and sanitary sewers and disposal plants. Specifications and estimates of cost. Drawing room four hours a week.

Prerequisites or concurrent: 1.3 credits; 2nd semester
C. E. 151, 152. (Terrell)

171—STRESSES. Analytical and graphical solution of stresses in framed structures. Class work three hours; drawing room four hours a week.

Prerequisite: Physics 2a. 4.3 credits; both semesters (Carrel)

172—TIMBER STRUCTURES. Design and detailing of timber structures. Class work one hour; drawing room four hours a week.

Prerequisite or concurrent: 1.2 credits; 2nd half 1st semester
C. E. 171. (Carrel)

173a—STEEL STRUCTURES. Design and detail of steel buildings and highway bridges. Lecture two hours; drawing room eight hours a week.

Prerequisite: C. E. 171. 2.3 credits; 1st half 2nd semester
(Carrel)

173b—STEEL STRUCTURES. Design and detail of steel railway bridges. Lecture two hours; drawing room four hours a week.

Prerequisite: C. E. 173a. 3.3 credits; 1st semester (Carrel)

181a—INDEPENDENT PROBLEMS. A complete solution with the necessary details, plans and specifications of a problem, selected by the student with the approval of the instructor, in one of the following fields:

(a) Reinforced concrete design, (b) Concrete research, (c) Structural steel, (d) Hydraulics, (e) Sanitary engineering, (f) Highway and railway engineering, (g) Geodetic surveying.

Conference, laboratory or drawing room three hours a week.

Prerequisite: Student must show that he is qualified to undertake the proposed problem. 1 credit; 1st semester
(Terrell and others)

181b—INDEPENDENT PROBLEMS. Continuation of 181a. Ten hours a week conference, laboratory or drawing room.

Prerequisite: C. E. 181a.

4 credits; 2nd semester

(Terrell and others)

202a—CONSTRUCTION. Advanced work in plain and reinforced concrete, theory, design and experimental work. Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Terrell)

202b—CONSTRUCTION. Continuation of 202a.

6 credits; 2nd semester (Terrell)

232a—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. Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Chambers)

232b—HIGHWAY ENGINEERING. Continuation of 232a.

6 credits; 2nd semester

242a—RAILROAD ENGINEERING. Advanced course in location, construction, maintenance, economical selection of lines, grade reduction, cost of operation, valuation, structures and their maintenance. Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Shaver)

242b—RAILROAD ENGINEERING. Continuation of 242a.

6 credits; 2nd semester (Shaver)

252a—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 and bacteriology should be taken in connection with this course.) Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Terrell)

252b—SANITARY ENGINEERING. Continuation of 252a.

6 credits; 2nd semester (Terrell)

262a—GEODETIC SURVEYING. Advanced course in geodetic calculations, development and use of formulas used by the United States Coast and Geodetic Survey. Modern methods of field practice. Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Terrell)

262b—GEODETIC SURVEYING. Continuation of 262a.

6 credits; 2nd semester (Terrell)

272a—STRUCTURAL ENGINEERING. Advanced course in theory of structures, mill buildings, railroad and highway bridges. The use of influence diagrams and detail drawings. Class work three hours; laboratory nine hours a week.

6 credits; 1st semester (Carrel)

272b—STRUCTURAL ENGINEERING. Continuation of 272a.

6 credits; 2nd semester (Carrel)

ELECTRICAL ENGINEERING

101—ELEMENTS OF ELECTRICAL ENGINEERING MACHINERY. A study in classroom and laboratory of the more common types of d. c. and a. c. electrical equipment and controls which are to be found in general use. Recitation two hours a week; laboratory three hours a week.

Prerequisite: *Physics 2b.*

3 credits; 1st semester (Bureau)

102—ELECTRICAL ENGINEERING MACHINERY. A study in the classroom of electric power applied to mining machinery and metallurgical processes.

Prerequisite: *E. E. 101.*

2 credits; 2nd semester (Bureau)

105—D. C. CIRCUITS AND MACHINERY. A study in classroom and laboratory of the fundamental laws of electrical and magnetic circuits with special attention to direct current equipment, such as generators, motors, batteries and control apparatus. Recitation three hours a week; laboratory three hours a week.

Prerequisite: *Physics 2b.*

4 credits; both semesters

(Wilkins, Watkins)

106—ALTERNATING CURRENTS. The fundamental theory of alternating current circuits and apparatus. Includes study of single phase and polyphase generators, motors and transformers, converters, etc. Recitation three hours; laboratory three hours a week.

Prerequisites: *E. E. 105,*

4 credits; 2nd semester

Math. 20a.

(Wilkins, Watkins)

107—INDUSTRIAL CONTROL. A study of the field of electrical engineering which is concerned with the control of electric motive equipment. It involves a study of the individual types of control equipment as well as the various circuits with which they are tied together into a unit of automatic functioning equipment. Recitation two hours; laboratory three hours a week.

Prerequisite: *E. E. 105*

3 credits; 2nd semester

or *E. E. 101.*

(Bureau, Moody)

108—INDUSTRIAL ELECTRONICS. A study of the application of thermionic and light sensitive tubes to industry in non-communication uses such as controlling processes, safe-guarding life and property, etc. Included will be light sensitive tubes in illumination control, smoke density recorders, etc., and power rectifiers of various types. The laboratory work will consist of designing, building and studying control circuits. Recitation two hours; laboratory three hours a week.

Prerequisite: Physics 2b.

3 credits; 1st semester
(Bureau, Moody)

109—ELECTRICAL POWER EQUIPMENT. A general study of the operation of the more common types of electrical power equipment. Attention is given to power resources, prime movers, generating equipment, switch gear, transformers, meters, reactors, relays, lightning arresters and distribution systems. Recitation four hours a week.

Prerequisite: E. E. 106.

4 credits; 1st semester (Freeman)

111a—ADVANCED ELECTRICAL LABORATORY. Advanced study of electrical machinery and equipment with special reference to alternating current apparatus. Laboratory six hours a week.

Prerequisite: E. E. 106.

2 credits; 1st semester
(Bureau, Moody)

111b—ADVANCED ELECTRICAL LABORATORY. Continuation of E. E. 111a. Laboratory three hours a week.

1 credit; 2nd semester (Bureau, Moody)

121—D. C. DESIGN. A study of design problems culminating in the design calculation for a generator or motor. Six hours a week.

Prerequisite: E. E. 105.

2 credits; 2nd semester (Wilkins)

122—TRANSFORMER DESIGN. Design of a distribution transformer. Two hours a week.

Prerequisite: E. E. 106.

0.7 credit; 2nd semester (Moody)

123—ELECTRICAL EQUIPMENT PROBLEMS. A problem course in miscellaneous design and application of electrical equipment. Economic comparisons as well as engineering considerations are factors studied in making selections in equipment. Four hours a week.

Prerequisite: E. E. 106.

1.3 credits; 1st semester
(Bureau, Wilkins)

131—COMMUNICATION ENGINEERING. A general survey of the field of electrical communication from the first Bell telephone to the modern dial telephone and the wireless phone; from the first Morse telegraph to the most modern form of automatic recording telegraph and the commercial wireless of today. Recitations three hours a week.

Prerequisite: E. E. 106.

3 credits; 2nd semester (Freeman)

136—ILLUMINATION ENGINEERING. Includes the science of seeing, a study of light sources, and photometry, fundamental principles of illumination as applied to home, public building, factory and commercial lighting. The course includes the solution of special problems in the planning and calculation of light distribution. Recitations two hours a week.

Prerequisite: Physics 2b. 2 credits; 2nd semester (Freeman)

141—ANALYTICAL ELECTRICAL ENGINEERING. A study of the complex notation and its use in the vector analysis of electrical machinery and circuit conditions. Recitations two hours a week.

Prerequisite: E. E. 106. 2 credits; 1st semester (Bureau)

151—ELECTRICAL ENGINEERING CONFERENCES. Round table discussion of modern trends and practices in electrical engineering. Basis of discussions is current literature on electrical subjects. Two hours a week.

Prerequisite: Senior standing. 1 credit; 2nd semester (Staff)

152—INDEPENDENT PROBLEMS. A problem, approved by the department, forms the background for the student's original study and research. Only students, the character of whose previous work warrants it, will be allowed to take this work. Twelve hours a week.

4 credits; 2nd semester (Staff)

205—ADVANCED INDUCTION MOTOR THEORY. A study of the theory underlying the characteristics of single phase and polyphase induction motors. Recitation three hours; laboratory three hours a week.

4 credits (Bureau)

206—ELECTRIC POWER TRANSMISSION. The theory underlying calculation and operation of long distance transmission circuits. Special attention to relay control. Recitation three hours; laboratory three hours a week.

4 credits (Bureau)

207—ELECTRIC POWER DISTRIBUTION. A study of theory underlying operation and control of various types of distribution network circuits. Recitation three hours; laboratory three hours a week.

4 credits (Bureau)

208—ELECTRIC TRACTION. An advanced study of electric power application to railways, cranes, elevators, etc. Recitation three hours; drawing room three hours a week.

4 credits (Bureau)

209a—TELEPHONE ENGINEERING. An advanced study of the theory and operation of modern telephone exchanges. Layouts and designs are made to meet different assumed conditions. Recitation three hours; laboratory and design three hours a week.

4 credits (Freeman)

209b—TELEPHONE ENGINEERING. Continuation of 209a. Recitation three hours; laboratory and design three hours a week.

4 credits (Freeman)

210—SYMMETRICAL COMPONENTS. A study of the symmetrical component method of analyzing unbalanced conditions on transmission lines and its use in solving relay applications. Recitation three hours; laboratory and design three hours a week.

4 credits (Bureau)

ENGINEERING MECHANICS

101—HYDRAULICS. Principles of hydraulics and hydrodynamic pressure. Flow of water through orifices, nozzles, pipes and open channels, over weirs, against stationary and moving vanes. Loss from friction and other sources. Recitation two hours a week.

Prerequisite: Physics 2a.

2 credits; both semesters

Prerequisite or concurrent: Math. 20b.

(Hawkins)

MECHANICAL ENGINEERING

101a—MECHANICAL DESIGN. Individual work on the design or construction of mechanical equipment; selection and layout of power plant or heating and ventilating equipment. Problems assigned according to the interests of the student. Ten hours a week.

Prerequisites: E. M. 17,

3.3 credits; 1st semester

M. E. 104b.

(O'Banon, Jett, Anderson,

Porter, May)

101b—MECHANICAL DESIGN. Continuation of M. E. 101a. Problems assigned according to the interests and qualifications of the student. If the problem demands, experimental work in the laboratory may be substituted for drafting room work. Problems of research character shall, or may, be written up in the form of a thesis, at the discretion of the instructor in charge. Fifteen hours a week.

Prerequisite: M. E. 101a.

5 credits; 2nd semester

(O'Bannon, Jett, Anderson,
Porter, May)

102—ELEMENTS OF RECIPROCATING ENGINES. This course involves the solution of problems pertaining to the kinematics and dynamics of the reciprocating steam engine, internal combustion en-

gines and other machinery using the elements of crank, connecting rod and crosshead. Recitation two hours a week.

Prerequisites: E. M. 11, 13, 16. 2 credits; 2nd semester

Concurrent: E. M. 17. (Jett)

103—ELEMENTS OF HEAT-POWER ENGINEERING. Brief general course in heat-power engineering, including elementary principles of thermodynamics and power plant equipment. Intended for architectural, civil, mining and metallurgical engineers. Recitation two hours a week.

Prerequisite: Physics 2b. 2 credits; both semesters
(O'Bannon)

104a—ENGINEERING THERMODYNAMICS. Fundamental principles of thermodynamics, Carnot cycle, entropy, and thermodynamic equations for gases. To be followed by M. E. 104b. Recitation two hours a week.

Prerequisites: Physics 2a, 2 credits; 1st semester
Math. 20a. (O'Bannon)

104b—ENGINEERING THERMODYNAMICS. Thermodynamics of vapors; steam power plant cycles; reciprocating steam engines and turbines. Recitation two hours a week.

Prerequisite: M. E. 104a. 2 credits; 2nd semester
(O'Bannon)

105—STEAM POWER PLANT EQUIPMENT. Study of the characteristics and use of steam power plant equipment, including boilers, fuel burning equipment, economizers, feed water heaters, pumps, etc. Recitation two hours a week.

Prerequisite: M. E. 104b. 2 credits; 1st semester
(O'Bannon)

106a—HEATING AND VENTILATION. General course open to all engineers. Elementary heating calculations and description of various types of heating and ventilating systems. Recitation two hours a week.

Prerequisite: M. E. 104b 2 credits; 1st semester (May)
or M. E. 103.

106b—HEATING AND VENTILATION. Advanced course for mechanical engineers, with concentration on the thermodynamics of air conditioning, and the design, selection and layout of air conditioning equipment. Recitation two hours a week.

Prerequisites: M. E. 104b, 106a. 2 credits; 2nd semester
(May)

107—FLOW OF GASES. Derivation and use of formulas for the flow of steam and air through pipes and metering devices, using the thermodynamical method of analysis. Recitation two hours a week.
Prerequisites: M. E. 104b, 1 credit; 2nd half 1st semester
E. M. 14. (Porter)

108—INTERNAL COMBUSTION ENGINES. A study of internal combustion engine cycles, and the thermodynamic characteristics and performance of actual engines. Recitation three hours a week.
Prerequisite: M. E. 104b. 3 credits; 2nd semester (Porter)

109—REFRIGERATION. A study of the thermodynamics of refrigeration cycles, and the characteristics of refrigeration equipment. Recitation two hours a week.
Prerequisite: M. E. 104b. 2 credits; 2nd semester (May)

110—HEATING AND VENTILATING DESIGN. Brief course for architectural engineers, covering the selection and layout of heating and ventilating equipment. Drawing room four hours a week.
Prerequisite or concurrent: 1.3 credits; 2nd semester (May)
M. E. 106a.

111—ENGINEERING REPORTS. A study of the mechanical details of engineering reports; construction of charts and tables for the presentation of data; criticism of student laboratory reports; engineering specifications. Lecture and recitation two hours a week.
Concurrent: A junior or senior 2 credits; 1st semester
course in the Engineering (O'Bannon)
Laboratories.

112a—MECHANICAL LABORATORY. Practice in the calibration and use of mechanical laboratory instruments and apparatus. Lecture one hour; laboratory two hours a week.
Prerequisite or concurrent: 2 credits; 1st semester (Porter)
M. E. 104a.

112b—MECHANICAL LABORATORY. Continuation of M. E. 112a with the addition of tests on steam engines, turbines, pumps, air compressors, etc. Lecture one hour; laboratory two hours a week.
Prerequisite: M. E. 112a. 2 credits; 2nd semester
Concurrent: M. E. 104b. (Porter)

113a—MECHANICAL LABORATORY. Performance tests on heating, ventilating and power plant equipment. Lecture one hour; laboratory two hours a week.
Prerequisite or concurrent: 2 credits; 1st semester
M. E. 105, 106a. (Porter, May)

113b—MECHANICAL LABORATORY. Continuation of M. E. 113a with the addition of tests on refrigerating machines and internal combustion engines. Lecture one hour; laboratory two hours a week.

Prerequisites: M. E. 113a.

2 credits; 1st semester

Concurrent: M. E. 108, 109.

(Porter, May, Singer)

114—MECHANICAL LABORATORY. Short course for students taking M. E. 103, following the general outline of M. E. 112 and M. E. 113. Lecture one hour; laboratory two hours a week.

Prerequisite or concurrent: M. E. 103.

2 credits; 2nd semester

(Porter, May, Singer)

201a—AUTOMOTIVE ENGINEERING. An advanced course in the essentials of motor vehicle design, construction and operation. Drafting room, laboratory and lectures by appointment.

6 credits; 1st semester (C. H. Anderson)

210b—AUTOMOTIVE ENGINEERING. Continuation of 201a.

6 credits; 2nd semester (C. H. Anderson)

202a—HEAT-POWER PLANT ENGINEERING. Advanced work in the design, selection, layout and operation of heat-power plant equipment.

6 credits; 1st semester (O'Bannon, Porter)

202b—HEAT-POWER PLANT ENGINEERING. Continuation of 202a.

6 credits; 2nd semester (O'Bannon, Porter)

203a—HEATING, VENTILATING AND AIR CONDITIONING. Advanced work in the design, selection, layout and operation of heating, ventilating and air conditioning equipment.

6 credits; 1st semester (May)

203b—HEATING, VENTILATING AND AIR CONDITIONING. Continuation of 203a.

6 credits; 2nd semester (May)

204a—ADVANCED MACHINE DESIGN. The application of the principles of mechanics of materials, dynamics and kinematics to the design of complete machines. This involves a knowledge of shop practice and methods of construction.

6 credits; 1st semester (Jett)

204b—ADVANCED MACHINE DESIGN. Continuation of 204a.

6 credits; 2nd semester (Jett)

METALLURGICAL ENGINEERING

120—ASSAYING. This course comprises the determination of the constituents of ores and metallurgical products by means of fire methods, primary attention being given to the determination of the precious metals. Laboratory eight hours a week.

Prerequisites: Chem. 8, Met. 27. 2.7 credits; 1st semester
(Beebe)

121—FUEL AND METALLURGICAL LABORATORY. This course comprises the analytical determination of the constituents of ores and metallurgical products by both wet and dry methods as well as the determinative methods utilized in the analysis of coals and other fuels. Laboratory three hours a week.

Prerequisites: Chem. 8, Met. 27. 1 credit; 2nd semester
(Beebe)

130—METALLURGICAL CALCULATIONS: GENERAL AND NON-FERROUS. This course comprises a study of the calculations involved in the practical application of the principles of general metallurgy and of the metallurgy of copper, lead, aluminum and other non-ferrous metals. Recitations and problems three hours a week.

Prerequisites: Chem. 8, Met. 28. 3 credits; 1st semester
(Crouse)

131—METALLURGICAL CALCULATIONS: FERROUS. This course involves a consideration of the metallurgy of iron and steel from the standpoint of the calculations used in figuring charges, slags, heat efficiencies and similar factors. Recitations and problems two hours a week.

Prerequisites: Met. 29, Met. 130. 2 credits; 2nd semester
(Crouse)

140—THE SCIENCE OF METALS. This is a first course in physical metallurgy and involves a consideration of the correlation of the structure of metals and alloys to their physical properties together with the effects of mechanical work and heat. Lectures and recitations three hours a week.

Prerequisites: Physics 2b; Chem. 8; 3 credits; 2nd semester
Met. 26 or 27. (Crouse)

141—METALLOGRAPHY LABORATORY. This is primarily a laboratory course in the microscopic investigation of the structure of metals and alloys. Laboratory three hours a week.

Prerequisite: Met. 140. 1 credit; 1st semester (Crouse)

142—HEAT TREATMENT. This course comprises a study of the methods used and the principles involved in the heat treatment of

metals and alloys. Lectures and recitations two hours a week; laboratory two hours a week.

Prerequisites: Met. 29, Met. 141. 2.7 credits; 2nd semester
(Crouse)

160—ORE DRESSING. This course comprises a study of the principles and practice of ore concentration processes and other processes necessary in the preparation of mineral substances for refining or use. Lectures and recitations three hours a week.

Prerequisites: Physics 2b, Geol. 12, 3 credits; 1st semester
Min. 20, Met. 27. (Emrath)

161—FLOTATION. This course comprises a study of the principles involved in concentration of ores by flotation, with some discussion of the application of these principles in practice and the preparation of ores for such treatment. Lectures and recitations two hours a week.

Prerequisite: Met. 160. 2 credits; 2nd semester (Emrath)

162—ORE DRESSING LABORATORY. This course comprises laboratory investigation and practice in the use and design of the equipment employed in ore dressing, coal dressing and other mineral preparation processes. Laboratory two hours a week.

Prerequisite: Met. 160. 0.70 credit; 2nd semester (Emrath)

Courses Open Only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. These courses are offered to graduates and to such practicing engineers as may be qualified to pursue them. For major work, a candidate must hold a bachelor's degree in Metallurgical Engineering or its equivalent.

205—HEAT TREATMENT OF METALS AND ALLOYS. This is an advanced course in which the various factors involved in the heat treatment of metals and alloys are considered with special emphasis upon the particular metal or alloy on which the student wishes to specialize. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: Met. 142. 6 credits; either semester
(Crouse)

237—TECHNOLOGY OF ALLOYS. This course comprises a study of the principles and practices used in the production of alloys of various kinds with special stress upon any particular group of alloys that the student may choose. Reference reading and laboratory work

are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisites: Chem. 131b, 6 credits; either semester
Met. 141. (Crouse)

208—ADVANCED METALLOGRAPHY. This course comprises a detailed study of the structure of metals and alloys together with their preparation for study under the microscope. In addition instruction is given in the taking of microphotographs. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisites: Chem. 131b, 6 credits; either semester
Met. 141. (Crouse)

209—ADVANCED ORE DRESSING. This course comprises a study of the technique of ore dressing, plant design and gives an opportunity for original research in concentration problems. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisites: Met. 161, 162. 6 credits; either semester
(Emrath)

210—TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. This course comprises a detailed study of the principles and practices employed in the low temperature carbonization of carbonaceous materials such as bituminous and cannel coals. Reference reading and laboratory work are emphasized. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisite: Sufficient background in Physics, Chemistry and Metallurgy, this background to be determined by the Head of the Department after consultation with the student. 6 credits; either semester
(Crouse)

211—ELEMENTS OF OIL SHALE ENGINEERING. This course comprises an elementary study of the destructive distillation of oil shales for the production of oil, gas and by-products together with the history of the oil shale industry and the economic factors upon which the future development of the industry depends. Lectures and recitations two hours a week.

Prerequisite: A sufficient background of Physics, Chemistry and Geology. 2 credits; either semester
(Crouse)

212—OIL SHALE TECHNOLOGY. This course involves a detailed study of the principles employed and the methods used in the production of oil from shale. Reference reading and laboratory work are

emphasized. It is desirable that the student have some knowledge of physical and organic chemistry. Lectures and recitations two hours a week; laboratory eight hours a week.

Prerequisites: Sufficient background in Chemistry and Physics; Min. 20; Met. 27. 6 credits; either semester (Crouse)

MINING ENGINEERING

100—MINING OF UNSTRATIFIED MINERAL DEPOSITS. This course comprises a study of the methods used and the equipment involved in the mining and extraction of unstratified mineral deposits and relates particularly to the mining of metals. Lectures and recitation three hours a week.

Prerequisite: Min. 20. 3 credits; 1st semester (Emrath)

110—MINING OF STRATIFIED MINERAL DEPOSITS. This course comprises a study of the methods used and equipment involved in the mining of coal and other stratified mineral deposits. Lectures and recitations two hours a week.

Prerequisite: Min. 20. 2 credits; 2nd semester (Emrath)

111—MINE VENTILATION. This course comprises a study of the principles involved in the ventilation of underground mine workings and of the design of mechanical equipment for such purposes. Lectures and recitations three hours a week.

Prerequisites: Phys. 3b, Min. 20. 3 credits; 2nd semester (Emrath)

120—MINING GEOLOGY AND PROSPECTING. This course involves a study of the principles of economic geology, especial emphasis being placed upon the features of interest to the engineer in the economics of mine development and valuation. Lectures and recitations three hours a week.

Prerequisites: Geology 12 or its equivalent; Min. 20. 3 credits; 1st semester (Emrath)

121—OIL FIELD ENGINEERING. This course comprises a study of the methods and general practice usually employed in the prospecting, developing and organizing of petroleum properties for production purposes. Lectures and recitations two hours a week.

Prerequisite: None. 2 credits; 2nd semester (Emrath)

203—MINE ORGANIZATION. This course comprises a detailed study of the structure and function of a mining enterprise from both the financial and the engineering standpoints. Lectures and recitations three hours a week.

3 credits; either semester (Emrath)

206—EXPLOSIVE ENGINEERING. This course comprises a study of the principles involved in the use of explosives in large scale mining and quarrying practice. Lectures and recitations two hours a week.

2 credits; either semester (Emrath)

207—ADVANCED PROSPECTING. This course comprises a detailed study of the principles involved in the geophysical investigation of the minerals of the earth's crust. Lectures and recitations two hours a week.

2 credits; either semester (Emrath)

208—COAL DUST INVESTIGATION. This course is essentially research in the design and utilization of a laboratory scale gallery for the investigation of the explosive qualities of native bituminous coals. Laboratory twelve hours a week.

4 credits; either semester (Emrath)

209—ADVANCED MINE ENGINEERING. This course comprises a detailed study of the procedure and methods used in collecting and recording data and engineering information involved in the systematic development and exploitation of a mining property. Lectures and recitations three hours a week; drawing and mapping eight hours a week.

7 credits; either 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, 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)

115b—INDEPENDENT WORK. Continuation of 115a.

3 credits; 2nd semester (Rannells)

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, 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)

139a—HISTORY OF MODERN ART. Lectures, conferences and reports.

3 credits; 1st semester (Barron)

139b—HISTORY OF MODERN ART. Lectures, conferences and reports.

3 credits; 2nd semester (Barron)

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)

145a—HISTORY OF ARCHITECTURE. Architectural styles and periods including the several factors influencing their development. Lectures and reports. One hour per week.

1 credit; 1st semester (Barron)

145b—HISTORY OF ARCHITECTURE. Continuation of 145a. One hour per week.

1 credit; 2nd semester (Barron)

146a—HISTORY OF ARCHITECTURE. Analytical study of architectural styles; comparisons of outstanding examples for each period and style. Recitations and weekly problems. Concurrent with lecture course Art 145a. Two hours per week.

2 credits; 1st semester (Barron)

146b—HISTORY OF ARCHITECTURE. Continuation of 146a. Concurrent with lecture course Art 145b. Two hours per week.

2 credits; 2nd semester (Barron)

159a—INTERMEDIATE PAINTING. Still life and outdoor painting in oil and water-color mediums. A study of pictorial means and requirements. Composition problems and nine studio hours a week.

Prerequisite: 12 credits in Drawing and Painting, or approval of Department Head based on actual examples of work accomplished.

3 credits; 1st semester (Fisk)

159b—INTERMEDIATE PAINTING. Continuation of 159a.

3 credits; 2nd semester (Fisk)

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.

Prerequisite: 15 credits in Drawing and Painting, or approval of Department Head based on actual examples of creative work accomplished.

5 credits; 1st semester (Fisk)

167b—ADVANCED PAINTING. Continuation of 167a.

5 credits; 2nd semester (Fisk)

142a—DIRECTED TRAVEL AND STUDY IN EUROPE. A survey of European art. Lectures, readings, notebooks—day by day preparation for the study of original works of art on the tour. This work begins on shipboard.

3 credits; summer (Rannells)

142b—DIRECTED TRAVEL AND STUDY IN EUROPE. Study of actual buildings, monuments, paintings and related arts in European art centers. Tour, lectures, notebooks, term report.

3 credits; summer (Rannells)

MUSIC

110a-d—INDEPENDENT WORK IN MUSIC.

3 credits per semester (Lampert)

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)

264—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 semester (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)

221a-221b—EQUITY I and II. Chafee and Simson'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 consideration, 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)

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)

125b—OFFICE PRACTICE. Preparation of legal documents.

2 credits; 2nd semester (Randall)

260a-260b—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,
2 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)

266—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, Statute 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)

265—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)

267—ADMINISTRATIVE LAW. Freund's Cases. 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. Holdbrook 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)

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)

249—MUNICIPAL CORPORATIONS. Tooke's Cases. Incorporation 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)

250—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)

253—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)

276—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)

277—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)

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)

James
Fanni
Willam
J. Edw
Susan

Charles
Rosalie
Miriam
Hazel
Susan
August
Jacob
Mary

Ray M

Howard

Mary

Helen

GRADUATE STUDENTS

FELLOWS

James Sutherland Calvin	Hickman
Fannie Herman	Winchester
Willard N. Hogan	Lexington
J. Edwin Partington	Paoli, Indiana
Susan Jane Turner	Versailles

SCHOLARS

Charles Peerman Ashford	Georgetown
Rosalind Crass	Murray
Miriam E. Faust	Hubbard, Iowa
Hazel Shafer Johnson	Oneonta, New York
Susan Elisabeth Mullins	Wingo
Auguston Alvin Page	Edmonton
Jacob William Snyder	Owensboro
Mary Elizabeth Williams	Ashland

OFFICERS OF GRADUATE CLUB

PRESIDENT

Ray Martin Bertram	Monticello
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VICE-PRESIDENT

Howard Mercer Fitch	Lexington
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SECRETARY

Mary Elizabeth Williams	Ashland
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TREASURER

Helen Frances Jones	Lexington
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REGISTER OF GRADUATE STUDENTS 1935-1936

Name	Major	Address
Ackerman, Frank Edwin	Education	Insull
Adams, Ruth	History	Paintsville
Ader, Olin Blair	Mathematics	Lexington
Adkins, Robert T., Jr.	Education	Mt. Olivet
Akin, Paris B.	Education	Winchester
Alderdice, H. B.	Education	Smithland
Alderson, Frances	English	Alderson, W. Virginia
Alexander, Irene	Education	Paris
Alexander, Ralph M.	English	Bybee
Alexander, Sue Paxton	Psychology	Ashland
Allcock, Oliver Curtis	Agriculture	Melber
Allen, Edyth Lyle	Anatomy and Physiology	Phil
Allen, James Forrest	Chemistry	Liberty
Allen, James R.	Education	Louisville
Allen, Ruby V.	Unclassified	Ravenswood, W. Va.
Allen, Wayne Edwin	Commerce	Ashland
Allender, Eleanor D.	Education	Lexington
Allie, Delbert Cecil	Education	Ashland
Allison, Mrs. E. E.	Home Economics	Millersburg
Allison, Edith Alicia	English	Paris
Alms, Ruth Moffitt	Education	Lexington
Amis, Cora M.	English	Himyar
Amis, Nora Lee	Philosophy	Himyar
Ammerman, Mary Jane	History	Cynthiana
Anderson, Pearl	Education	Lexington
Anderson, Ross C.	Commerce	Booneville
Anderson, Wallace E.	Physics	Lexington
Andrew, George W.	Unclassified	Pine Ridge
Angle, Sadie Eloise	Sociology	Woodburn
Archer, Maurice L.	Education	Sandy Hook
Arnett, Cromer H.	Agriculture	Kevil
Arnett, Kenneth E.	Hygiene	Salysersville
Arnett, Maralea	English	Corydon
Arnett, T. C.	Education	Lynn Grove
Arnold, Ansel B.	Education	Butler
Arnold, Marguerite G.	Education	Louisville
Arterberry, Terry L.	Education	Kettle Island
Ashby, Leo	History	Bowling Green
Asher, Mary Patience	Psychology	Lexington
Ashford, Charles P.	Romance Language	Georgetown
Atkinson, Stella C.	Ancient Languages	Irvine

Name	Major	Address
Austin, George W.	Engineering	Lebanon
Auvil, Audrey Varden	English	Iaeger, W. Virginia
Avant, Edith Virginia	Education	Danville
Avant, Opal Cox	English	Mayfield
Babb, William T.	Education	Mt. Sterling
Bacon, James Richard	Physical Education	Barbourville
Baggerly, Elizabeth	Education	Louisville
Bailey, Dixie Marie	Education	Hindman
Bailey, John Herbert	Zoology	Ashland
Baker, Marion E.	Sociology	Nicholasville
Baker, Maurice D.	Agriculture	Waynesburg
Baker, Minnie Clay	Education	Lexington
Baker, Nora L.	Education	Perryville
Baker, W. Maurice	Education	Betsy Lane
Baldwin, John S.	Education	Cadiz
Ballou, Roscoe P.	Political Science	Whitley City
Barger, Viva	Education	Pembroke
Barker, Earl P.	Unclassified	Wilmore
Barker, O. W.	Education	Bandana
Barker, Powell E.	Education	Georgetown
Barnes, Bernie Carl	Economics	Arlington, Texas
Barnes, Catherine Marie	Education	Lexington
Bartholomew, Paul C.	Political Science	South Bend, Ind.
Batsel, Paul Wayne	Education	Bremen
Baughman, Robert T.	Physical Education	Stanford
Baute, Edward Arthur	Animal Husbandry	Lexington
Baute, Elizabeth C.	History	Lebanon
Beaty, Mrs. Elizabeth	Education	Carlisle
Belew, Marion J.	Education	Corinth
Bell, Ira	Education	Monticello
Bell, Orpah Scott	Education	Paris
Bell, Raymond Frank	Physics	Smithers, W. Va.
Benge, William M.	Education	Gregory
Bennett, Jane	Education	Georgetown
Bennett, Reginald V.	Mathematics	Winchester
Bennett, William A.	Political Science	Cynthiana
Benton, Raymond	Education	Caney
Berry, Armon C.	Agriculture	Simpsonville
Berry, Rita B.	Education	Welch, W. Va.
Bertram, Charles O.	Education	Windy
Bertram, Ray Martin	English	Monticello
Betz, Albert L.	Education	Lexington
Bevarly, Raymond W.	Education	Worthville
Binford, J. Ray	Physical Education	Cynthiana
Birge, Grace P.	Anat. and Phys.	Burdett, N. Y.

Name	Major	Address
Bishop, David Kirby	Education	Louisville
Bishop, Dorothy	English	Berry
Black, Marshall	History	Harrodsburg
Black, Whipple T.	Chemistry	Dawson Springs
Blackerby, Justin C.	Education	Pendleton
Bland, Mary Kendrick	Home Economics	Sonora
Board, William Polk	Education	Danville
Boatright, Winifred A.	Education	Lexington
Bodkin, Sally Jo	History	Paris
Boggess, Clara Lee	English	Greenville
Boggs, Eli C.	Anatomy and Physiology	Hazard
Bolin, Patti	Education	Clinton
Bolling, Sara C.	Commerce	Danville
Bond, Charles Verne	History	Catlettsburg
Boneta, Anibal V.	Anat. and Phys.	Porto Rico, P. R.
Booth, Gladys C.	Sociology	Carlisle
Borders, Nell Ruth	Sociology	Elkton
Boucher, James Joseph	English	Williamstown
Boucher, Virginia E.	English	Williamstown
Bourn, Richard L.	Education	Somerset
Bower, Clayton H.	Economics	Chicago, Illinois
Eowers, Linwood M.	Anat. and Phys.	Lexington
Bowman, Leila Hart	Education	Mt. Vernon
Bowmer, Nina Alice	Commerce	Phil
Bowne, Elizabeth J.	Sociology	Cloverport
Boyd, Bettie	History	Lexington
Boyd, Eugene	Bacteriology	Murray
Boyd, Fred	Education	Parksville
Boyd, Mrs. Viola D.	Education	Parksville
Boyers, Cecil	Education	Boyd
Bradley, Frances F.	English	Danville
Bradley, Mary Louise	Anat. and Phys.	Lexington
Bradley, Virginia A.	Ancient Languages	Danville
Bradshaw, Wilber V.	Public Health	Victoria, Virginia
Brannon, Mary Jean	English	Maysville
Brend, Mary Agnes	Anat. and Phys.	Lexington
Bridges, Ulva Gene	Anat. and Phys.	Georgetown
Britt, Edward	Commerce	Lexington
Broadbudd, Louise C.	History	Irvine
Broderick, Winifred D.	Education	Louisville
Brom, Roman T.	Education	Louisville
Broughton, Lillian	Education	Pineville
Brown, Jeanette L.	Education	Lexington
Brown, Ralph R.	Psychology	Lexington
Brown, Thelma E.	Psychology	Lexington
Brownina, Helen L.	Home Economics	Earlington

Name	Major	Address
Bruce, James Charles	Education	Louisville
Brummett, F. Mildred	Education	Harrodsburg
Bryan, Mrs. J. Preston	Education	Nicholasville
Bryant, Nathan D.	Agriculture	Scottsville
Budden, Charles J.	Anat. and Phys.	Louisville
Bullock, Elizabeth L.	Library Science	Maysville
Bullock, Lela M.	Ancient Languages	Berwyn, Ill.
Burberry, Gene	English	Georgetown
Burdick, George W.	Education	Lexington
Bureau, Elise A.	Mathematics	Lexington
Burk, Joseph C.	Philosophy	Lexington
Burke, Vivian	Education	Lexington
Burnett, Robert E.	Education	London
Burton, W. E.	Unclassified	Corbin
Bush, Ethel Porter	Home Economics	Greenup
Byrd, Minnie May	Unclassified	Pine Ridge
Byrn, Margaret N.	Education	Bowling Green
Caldwell, Hallie F.	Home Economics	Southgate
Caldwell, Katherine	Education	Lexington
Caldwell, Mary Lee	Philosophy	Newport
Caldwell, William M.	Physics	Campbellsville
Calico, Clara H.	Education	Lancaster
Calvin, James S.	Psychology	Hickman
Campbell, G. W.	Education	Corbin
Campbell, Louise O'Neill	English	Pittsburgh, Penn.
Campbell, William A.	Education	Lexington
Caplan, Harold E.	History	Ellwood City, Penn.
Capurso, Alexander A.	Psychology	Philadelphia, Penn.
Carden, Robert W.	Bacteriology	Greenville
Carey, Fred M.	Education	Kenova, W. Va.
Carigan, Joan	English	Liberty
Carlock, Everel M.	Education	Whitley City
Carman, Armiel	Education	Lexington
Carruth, Willis L.	Chemistry	Wilmore
Carter, Hortense	Education	Louisa
Cassell, Flora L.	Education	Harrodsburg
Catron, Thomas	Education	Corbin
Cawood, Thelma G.	Unclassified	Winchester
Cawthorne, Donald B.	Anat. and Phys.	Pineville
Cella, Raymond	Commerce	Lexington
Chalkley, Thomas S.	Unclassified	Fort Mitchell
Chamberlain, Mary F.	History	Wilmore
Chambers, Emma P.	History	Lexington
Chambers, Henry S.	Education	Hardyville
Chambers, Tullus	Education	Benton
Champion, Mrs. Lois P.	Home Economics	London

Name	Major	Address
Chapman, Lucile	History	Ashland
Chapman, Morris W.	Education	Woodburn
Chapman, R. Wiley	Zoology	Woodburn
Chapman, Wallace M.	Public Health	Ontario, Calif.
Charmoli, Louis J.	Physical Education	Louisville
Chatfield, Harriet S.	English	Catlettsburg
Chavis, Alexander	Physics	Jefferson City, Tenn.
Cherry, Ralph	Education	Harrodsburg
Chrisman, Hazel Lee	English	Richmond
Christopher, Maurice P.	Education	Somerset
Chumbler, Roy O.	Unclassified	Lexington
Clark, Augustus H., Jr.	Physical Education	Macon, Ga.
Clark, Buford Thomas	Physical Education	Corbin
Clark, Minor E.	Zoology	Waddy
Clarke, Blanche I.	Home Economics	Louisville
Clarke, David S.	Farm Economics	Lexington
Clarke, James H.	Markets	Millersburg
Clay, Louise C.	Library Science	Paris
Clay, Maurice A.	Physical Education	Waldron, Ind.
Clayton, Margaret E.	Sociology	Columbia
Cleek, Dorothy M.	Education	Lexington
Cleveland, Margaret	Education	Paris
Clifford, Owen L.	Commerce	Bedford
Cobb, John B.	Education	Crestwood
Coblin, Dorothy L.	Education	Frankfort
Coblin, Lois W.	English	Frankfort
Cocanougher, Hubert A.	Education	Perryville
Cocanougher, Robert E.	Education	Junction City
Coffman, O. B.	Education	Lexington
Cogswell, May Frances	Psychology	Lexington
Cole, Charles T.	History	Albany
Cole, Frances	English	Paducah
Colegrove, Anna E.	Latin	Ashland
Collett, Lawrence D.	Philosophy	Crab Orchard
Collins, Bernhard B.	Political Science	Lexington
Colliver, J. Dryden	Chemistry	Bethel
Colson, David G.	Education	Manchester
Combs, Mrs. Jane R.	Education	Langley
Combs, Ruby	English	Beattyville
Combs, Stanley A.	Education	Langley
Congleton, Ethel V.	Romance Languages	Lexington
Congleton, Mrs. Mary A.	English	Richmond
Congleton, Ruth E.	English	Taylorsville
Conner, Mrs. Laura D.	Education	Lexington
Conrad, Ann M.	Latin	Dry Ridge
Cook, Frances A.	English	Lexington

Name	Major	Address
Cooke, Ansel E.	Mathematics	Georgetown
Cooke, Mary B.	Sociology	Bowling Green
Cooper, Agnes B.	English	Lexington
Cooper, James B.	Agriculture	Lexington
Coots, Lucille	Sociology	Taylorsville
Copeland, Anna V.	Education	Englewood, Tenn.
Coppock, Maurice E.	Agriculture	Campbellsville
Cornwell, Mrs. Imogene	English	Rothwell
Corum, Ruth	Home Economics	Corbin
Couch, Virgil L.	Psychology	Lexington
Coursey, James L.	Chemistry	Elkton
Cowan, Julia Lucile	Education	Henderson
Cowgell, Corinne	English	Owensboro
Cox, Byrl B.	Education	Clendenin, W. Va.
Cox, Floyd	Education	Marrowbone
Cox, Fred W.	Education	Dorton
Cox, Julian D.	Anat. and Phys.	Irvine
Cox, Nina Bess	English	Mt. Vernon
Cox, Ruth	History	Clendenin, W. Va.
Craig, Frank H.	Education	Hitchins
Craig, Sam B.	Psychology	Stanford
Crain, Sarah P.	English	Flemingsburg
Crass, Rosalind	Education	Murray
Crawford, Thomas C.	Education	Perryville
Creech, Ruby Pauline	English	Middleburg
Crenshaw, J. Linwood	Agriculture	Herndon
Croft, Lysle W.	Psychology	Lexington
Cropper, Mary Bess	Library Science	Burlington
Crosby, Irvine H.	Education	Simpsonville
Crouch, Lois A.	Ancient Languages	Louisville
Cruickshank, Jean A.	Political Science	Lexington
Crump, Mary F.	Education	Lexington
Crutcher, G. L.	Education	Lexington
Crutcher, Margaret H.	Unclassified	Frankfort
Cullis, Mary Irene	Unclassified	Lexington
Cundiff, Paul A.	English	Somerset
Currie, John W.	Zoology	Winchester
Curry, Bronston L.	Education	Bowling Green
Cyrus, Mason G.	Education	Kenova, W. Va.
Dagley, Cynthia R.	Unclassified	Lexington
Dagley, Iva	Romance Languages	Lexington
Dale, Helene B.	Sociology	Carlisle
Dalzell, Fan Lee	Political Science	Lexington
Daniel, Charles B.	Physical Education	Shelbyville
Daniel, Eddie F.	Education	Grayson
Daniel, John H.	Physics	Darlington, S. C.

Name	Major	Address
Dare, Lee A.	Public Health	Covington
Daugherty, Mrs. Ray	English	Neosho, Missouri
Davidson, Mrs. Alma B.	Education	Jenkins
Davis, Mrs. Annette M. Z.	Library Science	Lexington
Davis, Cecile H.	English	Lexington
Davis, Guthrie S.	Education	Redwine
Davis, H. L.	Commerce	Lexington
Davis, Hugh L.	Agriculture	Harrodsburg
Davis, John Stark	Education	Smith's Grove
Davis, Robert Edward	Education	Science Hill
Dean, Charles W., Jr.	Education	Gary, W. Virginia
Denes, Nicholas G.	Education	Corbin
Derickson, Elise M.	Latin	Mt. Sterling
Devary, Evyline	English	Winchester
Devine, Helen M.	Sociology	Lexington
DeWitt, Lee H.	Physical Education	Louisville
Dingus, Elizabeth K.	English	Lexington
Diseker, Virginia M.	English	Rockholds
Dishman, Jesse M.	Public Health	Greensburg
Distler, James	Mathematics	Paducah
Doane, W. F.	Education	London
Donaldson, Fletcher W.	Mathematics	Paris
Dorris, Donald H.	Political Science	Richmond
Dotson, John H.	Education	Maysville
Douthitt, Slayden W.	English	Mayfield
Dowell, Ed N.	Education	Mayfield
Dowell, Mrs. Ed N.	Education	Mayfield
Downing, James Coons	Unclassified	Lexington
Drake, Lois B.	History	Danville
Drennan, James S.	Education	May's Lick
Dudley, Hal E.	Education	Henderson
Dudley, Rebecca R.	Sociology	Pembroke
Duerson, Nelle W.	Romance Languages	Lexington
Dugan, Ann	Education	Warsaw
Dunn, Paul Marvin	Chemistry	Lexington
Durrett, John William	Farm Economics	Lexington
Duvall, William N.	Agriculture	Maysville
Dycus, Loy N.	Education	Smithland
Dycus, Willa S.	English	Smithland
Eaddy, Edward Allen	Unclassified	Johnsonville, S. C.
Easley, Willie K.	Education	Stamping Ground
East, Lucy Sloan	English	Mill Springs
Eaves, James C.	Mathematics	Hillside
Edwards, Mrs. Nannie	Unclassified	Lexington
Edwards, Ralph G.	Education	Walton

Name	Major	Address
Elam, C. Dorothy	Art	Lexington
Elam, James A.	Commerce	Petersburg
Elkins, John E.	Education	Ashland
Ellington, Hannah	Psychology	Lexington
Elliott, Jo Martha	Home Economics	Danville
Ellis, George S.	Education	Booneville
Ellis, Herman Adam	Commerce	Hustonville
Ellis, Justus L.	Agriculture	Cunningham
Ellis, Marian	Sociology	Somerset
Emberger, Margaret D.	Commerce	Eddyville
England, G. H.	Education	Campbellsburg
Engle, Fred Allen	Education	Richmond
Engle, Myrtle Mae	Education	Princeton
Ervin, Dana R.	Education	East Bank, W. Va.
Ervin, J. Stuart	Education	Clendenin, W. Va.
Erwin, Cordelia	Home Economics	Murray
Estridge, Perle P.	Education	Wooton
Evans, Eva M.	Education	Lothair
Evans, Mary Beverly	Education	Lexington
Evans, Mary Elizabeth	French	Beattyville
Evans, Nancy Chenault	English	Richmond
Evans, Mrs. Ora Lee	Commerce	Lexington
Evans, William K.	Physics	Lexington
Evans, Wilson A.	Education	Berea
Ewan, Mrs. Julia R.	Education	Lexington
Fann, Thomas U.	Economics	Olympia
Faust, Miriam	Education	Beverly
Feeback, Tillie H.	Library Science	Carlisle
Fehrman, Ray Frank	Botany	Newport
File, Addison Lanier	Education	Beckley, W. Virginia
Finn, Willa Frances	Education	Butler
Fisher, Mary Frances	English	Henderson
Fitch, Howard M.	Engineering	Lexington
Flannery, Wilbur E.	Education	Jacobs
Ford, Carl G.	Education	Prestonsburg
Ford, Frances Ethel	Unclassified	Durant, Oklahoma
Ford, W. Clarence	Education	Louisville
Fort, Clara Margret	Physical Education	Frankfort
Foster, Malcolm L.	Education	Nicholasville
Foust, Geneva	Mathematics	Owensboro
Fowler, Marguerite D.	Commerce	Louisville
Fox, Kathleen	Art	Pippapass
Foxworth, Carolyn	Library Science	Lexington
Frame, Richard J.	Engineering	Carrollton
Frank, John P., Jr.	Unclassified	Danville
Franks, Bonnie Kate	History	Philadelphia, Miss.

Name	Major	Address
Freeman, Charles Y., Jr.	Physical Education	Lexington
Freer, Albert H.	Education	Burnside
Frisby, Monta V.	Education	Frankfort
Frishe, William C.	Chemistry	Covington
Fritzlan, A. David	Political Science	Wilmore
Fryman, Otta R.	Zoology	Carlisle
Fudold, Rosa J.	English	Paris
Gabbard, Eugene F.	Education	Booneville
Gabbard, James L.	Chemistry	Lexington
Galbraith, Milton A.	Education	Carlisle
Gambill, Earl Edward	Public Health	Blaine
Gardner, Ralph A.	Philosophy	Somerset
Garr, Mrs. Theressa R.	French	Anchorage
Garrett, Paul L.	Education	Versailles
Garrison, Frances A.	Music	Lawrenceburg
Gasser, Elisabeth N.	Education	Owensboro
Gay, Dorothy B.	English	Berea
Gibson, Nancy H.	Education	Harrodsburg
Gibson, William J.	Education	Murray
Gilb, Elmer T.	Physical Education	Lexington
Gilbert, Barbara L.	Education	Berea
Gilbreath, Harold B.	Commerce	Bowling Green
Giles, Nelva	Library Science	Lexington
Giles, Neva R.	Library Science	Lexington
Gilkerson, Mrs. Lura B.	Education	Lexington
Gillespie, Florence S.	Education	Ludlow
Gillock, Morgan E.	Political Science	Port Royal
Glasgow, Arney W.	Education	Corinth
Glass, Dan R.	Education	Wilmore
Glass, Mattie Mae	Library Science	Nicholasville
Glass, Rhoda V.	English	Lexington
Glasson, Elizabeth F.	Commerce	Wilmore
Gleason, George T.	Education	Waverly
Glenn, M. F.	Education	Stone
Godbey, Maria L.	Education	Lexington
Golden, James E.	Agriculture	Sedalia
Golden, Jewel Gladys	Commerce	Lexington
Goodykoontz, Leta M.	Unclassified	Lexington
Gosch, Eleanor V.	Education	Wichita, Kansas
Gosch, Glorene W.	Education	Wichita, Kansas
Gotherman, Edward E.	Education	Lexington
Gould, Frances E.	Education	Louisville
Grabruck, Walter H.	Education	Pineville
Graff, Roy L.	Education	Ennis
Graham, Charles C.	Education	Berea
Gray, John	Education	Wyett

Name	Major	Address
Gray, Nelle	Home Economics	Asheville, N. C.
Greathouse, Gladys M.	English	Wilmore
Greene, Cyrus E.	Agriculture	Owenton
Greer, Capt. Charles S.	Unclassified	Lexington
Grider, Russell F.	Unclassified	Willisburg
Griffin, Robert J.	Public Health	Campbellsville
Griffith, Fleming B.	Unclassified	Ravenna
Griggs, Edna E.	Education	Lexington
Grimes, Marion G.	Romance Languages	Stanford
Gruelle, Orie P.	Unclassified	Dry Ridge
Hackensmith, Charles W.	Physiology	Lexington
Hagan, Ralph T.	Education	Tompkinsville
Hager, Cornelius	Ancient Languages	Nicholasville
Haggard, Anna Elizabeth	English	Winchester
Haggard, Eunice	Education	Winchester
Hall, Basil D.	Commerce	Poole
Hall, Boone	Education	McDowell
Hall, Mrs. Christine B.	Sociology	LaGrange
Hall, May	English	Welch, W. Va.
Hall, Palmer L.	Education	McDowell
Hallman, Jesse	Education	Crofton
Hamilton, George D.	Education	Richmond
Hamilton, Hargis	Economics	Flat Gap
Hamilton, Helen H.	English	Paris
Hamilton, Lloyd E.	Education	Paintsville
Hamilton, Mary K.	Education	Georgetown
Hamilton, Mary Kay	Commerce	Paris
Hamilton, Nancy A.	English	Union City
Hammond, Annie	Commerce	Madisonville
Hammond, Charles W.	Chemistry	Vanceburg
Hammond, Eleanor D.	English	Elkton
Hammond, Nell Weatherly	Bacteriology	Madisonville
Hammonds, Colonel	Education	Lancaster
Hammonds, Mrs. Colonel	History	Lancaster
Hampton, Lisette W.	Education	Louisville
Harbison, Charles, Jr.	History	Lexington
Hardin, Margaret A.	Education	Hardinsburg
Harding, Clara J.	Education	Campbellsville
Hare, Mrs. Lucile B.	Education	Nicholasville
Hare, Miriam A.	Home Economics	Owensboro
Harned, Tone G., Jr.	Physical Education	Boston
Harney, Mrs. James W.	Education	Winchester
Harper, Elizabeth	Education	Oakville
Harper, Frances	Home Economics	Cynthiana
Harper, French A., Jr.	Chemistry	Harper, W. Va.
Harris, J. D.	Agriculture	Princeton

Name	Major	Address
Harris, Lelia J.	Education	Richmond
Harris, O. H.	Education	Winchester
Harris, Mrs. O. H.	Education	Winchester
Harrison, Bruce E.	Education	Utica
Harrison, Lena M.	Education	Trinity
Hart, Elmer Bayse	Unclassified	Bardstown
Haselden, Jane	Education	Lancaster
Hastie, Edna Maybelle	History	Mt. Sterling
Hatfield, Elsie	French	Lancaster
Havens, Athol V.	Psychology	Berea
Hay, Margaret H.	Education	Lookout
Heaberlin, Elmer H.	Political Science	Wurtland
Headley, Hal P.	Mathematics	Lexington
Hearin, Marshall E.	Education	Calhoun
Hearn, Spicie Belle	Education	Midway
Heffernan, Mary E.	Physical Education	Louisville
Henninger, John Milton	Bacteriology	Roff
Henry, Nellye P.	Education	Versailles
Henry, Roemol	History	Lexington
Henshaw, R. Morton	Agriculture	Henshaw
Hensley, Ernest L.	Economics	Oneida
Henson, C. T.	Education	Ewing
Henson, Ellery	Education	Frankfort
Herman, Fannie	German	Winchester
Hernandez, J. Eduardo	Psychology	Winchester
Herr, Ben Buckner	Unclassified	Lexington
Hesmer, Theodore C.	Physical Education	Louisville
Hewes, Chester A.	Chemistry	Wilmore
Hicks, Carl Alexander	History	Catlettsburg
Hicks, Clarissa	Education	Hindman
Hicks, Henrietta G.	Psychology	Lexington
Hill, Mabelle G.	Home Economics	Waco
Hinkle, Elizabeth W.	Education	Louisville
Hinsdale, Reuben C.	Education	Covington
Hirsch, B. Louise	Education	Chillicothe, Ohio
Hirsch, Jack	Geology	Henderson
Hiteman, Elsie F.	Ancient Languages	Morning View
Hiteman, Sallie A.	Education	Lexington
Hoagland, Marjorie F.	Sociology	Lexington
Hogan, Herbert	Commerce	Richmond
Holladay, Lelia G.	Home Economics	Covington
Holbrook, Elizabeth	English	Owenton
Holbrook, French	Unclassified	Bays
Holbrook, Ruth M.	Zoology	Morehead
Holman, Charlotte S.	Political Science	Lexington
Holtzclaw, Wilbert W.	Unclassified	Lancaster

Name	Major	Address
Hooks, Nall Trafford	Education	Independence
Hoover, Vivian	Unclassified	White Rock, S. D.
Horn, Clarence A.	Education	Princeton
Hoskins, Denver	History	Bush
Howard, Hugh A.	History	Corbin
Howard, Joe C.	Unclassified	Oakland
Howard, Joseph M.	Unclassified	Winchester
Howard, Wendell E.	Education	Tollesboro
Howe, Lenora A.	Education	Carrollton
Howes, Mary M.	Economics	Lexington
Howton, Mrs. Bertie V.	Home Economics	Hebbardsville
Howton, Ernest A.	Education	May's Lick
Hubard, Stephen S.	Chemistry	Lexington
Huff, Talmage	Education	Harlan
Huff, William H.	Education	Somerset
Huffman, Roy S.	Education	Hyden
Hughes, Beulah S.	English	Lexington
Hughes, Charles T.	Physical Education	Richmond
Hughes, Joe B.	Education	Lexington
Hughes, Myrtle	English	Yeager
Hughes, William B.	Agriculture	Mt. Olivet
Humble, Ruba E.	Education	Jamestown
Hume, Ben	Commerce	Taylorsville
Humphreys, Margaret B.	English	Lexington
Hunt, John Scott	Chemistry	Lexington
Hunt, Mary Julia	Unclassified	Lexington
Hunter, Elizabeth A.	English	Maysville
Hutchinson, Lee Pressley	Mathematics	Lexington
Hutchinson, Rebecca L.	Psychology	Maysville
Hyden, Mayme S.	Education	West Irvine
Imes, Flo	English	Almo
Inman, Flora B.	English	Williamsburg
Innings, Christine H.	Unclassified	Straight Creek
Ireland, Stella T.	Education	Lexington
Irvin, Mary L.	Library Science	Lexington
Isaacs, Pina Mae	Education	Winchester
Isgrig, Naomi D.	Sociology	Paris
Ison, Elizabeth B.	Education	Wilmore
Jackson, Mrs. Elsy B.	Latin	Hopkinsville
Jackson, Hamilton S.	Unclassified	Philpot
Jackson, Vester A.	Education	Clinton
Jackson, William H.	Unclassified	Louisa
Jacobs, Richard T.	Education	Cynthiana
Jacobs, Thelma F.	Sociology	Lexington
Jarvis, Mrs. Myrtle S.	Education	Barbourville
Jarvis, Taylor J.	Education	Barbourville

Name	Major	Address
Jarvis, Zella P.	Education	Barbourville
Jesse, Edwin G.	Agriculture	Nicholasville
Jesse, William H.	English	Nicholasville
Johnson, Elizabeth W.	Education	Lexington
Johnson, Ellen Mildred	Latin	Huntington, W. Va.
Johnson, Ellis	Physical Education	Ashland
Johnson, Mrs. Hazel S.	Art	Oneonta, New York
Johnson, Howard	Education	Ravenswood, W. Va.
Johnson, Lillian Baker	English	Lexington
Johnson, Robert F.	Education	Moreland
Johnston, Calista	Sociology	Hickman
Johnston, Dorothy I.	English	Union, W. Virginia
Johnstone, Kermit T.	Public Health	—
Jolly, Elizabeth	Bacteriology	Lexington
Jolly, Norris E.	Education	Glasgow
Jolly, William C.	Education	Fort Thomas
Jones, Ann Marion	Economics	Lexington
Jones, Helen Frances	English	Lexington
Jones, Jessie E.	Education	Buechel
Jones, John A.	Education	Campbellsville
Jones, Lillian B.	Latin	Williamsburg
Jones, Mabel P.	English	Lexington
Jones, Mary Ethel	Latin	Bowling Green
Jones, Minnie L.	History	Wallis Creek
Justice, Merle G.	History	Pikeville
Karraker, William J.	Education	Lexington
Kaut, Ruth	Library Science	Greenup
Kaut, Thelma N.	Education	Riverton
Keeling, H. Heflin	English	Shelbyville
Keene, Pluma Dell	Commerce	Murfreesboro, Tenn.
Kegley, B. Herbert	Mathematics	Newfoundland
Kegley, Hattie	Education	Greenup
Keller, Francis W.	Education	Elwood City, Penn.
Kelley, Jack	Unclassified	Murray
Kelley, Nannie Belle	Latin	Lexington
Kellogg, Ruth C.	Mathematics	Montgomery, W. Va.
Kelly, Edna A.	Education	Holly Springs, Ga.
Kendall, Thomas A.	Engineering	Owensboro
Kennedy, Madge C.	History	Somerset
Kenyon, Jay B.	Unclassified	Wilmore
Kerr, W. B.	History	Bowling Green
Ketcham, Angie	Education	Barbourville
Key, Judith P.	Psychology	Maysville
Kilby, V. Robert	Unclassified	Wilmore
King, W. Ralph	Education	Stanford
Kinstler, Ella M.	Romance Languages	Louisa

Name	Major	Address
Kintner, Olis C.	Unclassified	Wilmore
Knox, B. D.	Education	Carlisle
Knox, David B.	Anth. and Arch.	Georgetown
Koiner, Henrietta	Phys. Education	Beckley, W. Va.
Kriegel, Bess Turley	Education	Lexington
Kunkel, Mabel	History	Richmond
Kurz, Rosallia	Physical Education	Louisville
Kyker, Wilmer B.	Education	St. Helens
Ladd, Royce W.	Education	Marion
Lancaster, Mabel	Education	Georgetown
Lancaster, Wilford A.	Mathematics	Butler
Land, Sarah M.	English	Lexington
Landwehr, Catherine M.	Sociology	Covington
Lane, Robert C.	Geology	Clinton
Latham, Ruby L.	Unclassified	Cincinnati, Ohio
Lawler, Oran P.	Education	Leitchfield
Lawson, Carl Edwin	Education	Corbin
Lea, Noel L.	Agriculture	Morgan
Leach, Sergius W.	Chemistry	Nicholasville
Leake, James C.	Education	Huntington, W. Va.
Lecky, Joseph L.	Agriculture	Calvert City
Ledford, Mrs. D. W.	Library Science	Hopkinsville
Leip, Laura E.	Sociology	Paducah
Leonard, Granville B.	Unclassified	Carlisle
Leonard, H. S.	Unclassified	Cofferville, Miss.
Lewis, Clyde C.	Education	Wrigley
Lewis, Jane S.	Education	Lexington
Lewis, Junius	Education	LaCenter
Lewis, Martha D.	Education	Finchville
Liles, Alton B. P.	Education	Louisville
Limburg, Charles C.	Unclassified	Lexington
Lindsay, Blanche L.	Education	Maysville
Littell, Edith	Education	Williamstown
Little, Ruth P.	English	Wilmore
Love, Alma E.	Education	Hopkinsville
Lowe, Mary Wallis	Home Economics	Lexington
Lowenthal, William	Zoology	Lexington
Lowry, Edith	Unclassified	Wilmore
Luck, Lydia R.	Education	Louisville
Luten, Elise	Commerce	Louisville
Lutes, Lloyd H.	Education	Falmouth
Lutes, Mrs. L. H.	Unclassified	Falmouth
Lytle, Mary Lenore	Mathematics	Elkins, W. Va.
McAnelly, Jesse Guy	Education	Oil Springs
McCann, Mamie	Education	Lexington
McCauley, Alice A.	English	Cynthiana

Name	Major	Address
McClain, Samuel S.	Education	Taylorsville
McClure, Guy F.	Education	Bedford
McConnell, Joseph L.	Unclassified	Cedar Falls, Iowa
McCord, Catherine B.	Unclassified	Milton
McCoun, Dazey Moore	Unclassified	Miami, Florida
McCoy, Daisy	Latin	Inez
McCoy, Ernest	Phys. Education	Oak Hill, W. Va.
McCoy, Lottie	Education	Harlan
McCoy, Thomas N.	Botany	Calvert City
McCray, Carl A.	Education	Berea
McCubbin, Lewis	Unclassified	Fullerton
McDaniel, Dentis	Education	Murray
McDowell, Lois	Home Economics	Princeton
McElroy, Oscar L.	Education	Eminence
McFarland, Mary Sue	Library Science	Glasgow
McGaughey, Robert H.	Horticulture	Hopkinsville
McGee, Philip Dixon	Commerce	Burkesville
McHargue, Lester	Economics	Mt. Vernon
McKenzie, Walter	Education	Martha
McKinney, David H.	Commerce	Richmond
McKinster, Reba A.	History	Blaine
McMahan, James W.	Education	Bedford
McMullin, Thomas E.	Psychology	Winchester
McMurtry, Mildred R.	Unclassified	Harrodsburg
McMurtry, Orion Waldo	Education	Harrodsburg
McNeill, Roy	Education	Cadiz
Mack, Mrs. Clinton O.	Mathematics	Jackson
Maddox, Noemi Wheeler	Home Economics	LaGrange
Magill, Anna Elizabeth	Home Economics	Salversville
Mahan, Boyd W.	Education	Petersburg
Maiden, Hazel V.	Education	Wilmore
Main, Ruth L.	Education	Barbourville
Major, Charles C., Jr.	Agriculture	Hopkinsville
Marrs, Virginia H.	Education	Lexington
Marshall, Sarah D.	Education	Winchester
Marstall, Elizabeth	Sociology	Henderson
Martin, Bettie Mae	Library Science	Richmond
Martin, Corinne L.	Romance Languages	Midway
Martin, Ernest D.	Unclassified	Lexington
Martin, Robert M.	Education	Covington
Mathews, Hamilton T.	Education	Williamstown
Mathews, Paul W.	Unclassified	Lexington
Mathews, Ruth E.	English	Lexington
Mathis, Charles B., Jr.	Education	Lexington
Mathis, Florrie T.	Education	Las Vegas, N. M.
Mathis, Metta	Education	Benton

Name	Major	Address
Mattingly, Capitola B.	Education	Lexington
Mauldin, Katie D.	Unclassified	Pontotoc, Miss.
Maury, Caroline F.	Unclassified	Louisville
May, Alton Parker	Education	Worthville
May, Frances	Unclassified	Carrollton
May, Naftel	English	Wilmore
May, Robert	Education	Danville
Mayfield, Hal P.	History	Marietta, S. Carolina
Mealer, June	Education	Barbourville
Melton, Jane	Home Economics	Kevil
Melton, Viola V.	Mathematics	Henderson
Mendenhall, Mary L.	Com'ce, Berkeley	Springs, W. Va.
Meriwether, Robert D.	Education	La Center
Merrell, Evelyn B.	Psychology	Lexington
Messamore, Ford	History	Cobden, Illinois
Messer, Mrs. George D.	Unclassified	Barbourville
Meuth, Beulah M.	Unclassified	Henderson
Midgett, Elwin W.	Commerce	Lebanon, Tennessee
Miller, Allen	Unclassified	Stanton
Miller, Daisy	Education	Hazel Green
Miller, E. M.	Education	Beverly
Miller, Frank	Unclassified	Clintonville
Miller, James W.	Unclassified	
Miller, Leonard	Physical Education	Lexington
Miller, Lillian E.	Unclassified	Lexington
Miller, Raymond H.	Sociology	Georgetown
Miller, Reed S.	Physical Education	Louisville
Miller, Mrs. Sally W.	Unclassified	Campbellsville
Mitchell, Mrs. Amanda	Education	Barbourville
Monroe, Charles W.	Public Health	Cincinnati, Ohio
Montague, Elizabeth	Education	Lexington
Montgomery, Henry E.	Unclassified	Bourne
Montgomery, Mary King	Education	Lexington
Montgomery, Wilbert C.	Agriculture	Whitesburg
Moody, Frank M.	Engineering	Lexington
Moon, Isaac D.	Education	Wilmore
Moore, Buell G.	Agriculture	Calvert City
Moore, Elvis Lee	Education	Logan, W. Va.
Moore, Herman	Commerce	Cow Creek
Moore, Josephine	Library Science	Danville
Moore, Lenore W.	Unclassified	Lexington
Moore, R. Sharon	Education	Morning View
Moore, Webb L.	History	San Marcos, Texas
Moores, Walter W.	History	Richmond
Morat, Aelise V.	Education	Louisville
Morgan, Alpha	Unclassified	Garrett

Name	Major	Address
Morgan, William G.	Unclassified	
Morris, Leon M.	Unclassified	Bandana
Morrison, Helen G.	Sociology	Wilmore
Morton, Samuel H.	Political Science	Owensboro
Moseley, Mary Inez	English	Maloneton
Moseñg, Lloyd R.	Education	Evarts
Motch, Margaret	Education	Winchester
Mullins, Susan E.	History	Wingo
Murrill, Virginia M.	English	Parkersburg, W. Va.
Myers, Anna M.	History	Richmond
Nash, Mary V.	English	Harlan
Nelson, Clara Mae	Education	Sadieville
Nelson, Henry E.	Education	Barbourville
Nesius, Ernest J.	Farm Economics	Lexington
Newbolt, William E.	Commerce	Berea
Newman, Mrs. Mildred	English	Scottsville
Nicholson, Horace	Farm Economics	Berry
Nickel, Lutie D.	Unclassified	Greenup
Northington, Lloyd A.	Education	Lanns
Oakes, Neuton	Economics	Oldtown
Offutt, Samuel T., Jr.	Unclassified	Calhoun
Ogg, Casper W.	Agriculture	Berea
Ohne, Ida Margaret	Ancient Languages	Ghent
Ohr, Joe W.	Physical Education	Irvine
Oliver, Joseph R.	Mathematics	Smithers, W. Va.
Oliver, Kenneth L.	History	Cayce
Omer, Mary I.	Education	Madisonville
Owen, Audrey	English	Gravel Switch
Owen, Loice	Education	Sacrament
Owen, Robert T.	Political Science	Gravel Switch
Owens, Mildred R.	English	Maysville
Owings, Florence H.	Education	Mt. Sterling
Page, Auguston A.	Education	Edmonton
Palmquist, Kenneth L.	Mathematics	Lexington
Parks, Cameron W.	Physical Education	Lexington
Parris, Charles H.	Education	Lexington
Parrish, Sarah K.	Education	Lexington
Partington, J. Edwin	Psychology	Lexington
Patton, Mrs. Eula S.	English	Ashland
Patton, James L.	Education	Salysersville
Payne, Eleanor M.	English	Paris
Peak, George W.	Economics	LaGrange
Pelphrey, Nell	Education	Lancaster
Peniston, Era W.	Music	Wilmore
Pennel, John Wickcliffe	Engineering	Louisville
Pennington, Ann F.	Education	Stanford

Name	Major	Address
Pennycuff, Henry G.	Agriculture	Bow
Perkins, Harry D.	Education	Versailles
Perkins, Nettie Belle	History	Wilmore
Peters, Ralph F.	Unclassified	Monticello
Peterson, Mrs. Aubrey	Education	Campbellsville
Pfanstiel, Everett E.	Education	Carlisle
Phillips, Charles W.	Education	Leadmine, W. Va.
Piatt, Augusta	Education	Birmingham, Ala.
Piatt, Henrietta	Home Economics, Birmingham, Ala.	
Picklesimer, James B.	Education	Ashland
Pirtle, John P.	Unclassified	Prospect
Poindexter, Ann Frances	Psychology	Georgetown
Poole, Mary E.	Romance Languages	Lexington
Poole, Mary W.	Education	Lexington
Porter, J. Sherman, Jr.	Political Science	Maysville
Potts, Helen M.	English	Huntington, W. Va.
Power, Hilda	Physiology	Flemingsburg
Poynter, Grace	Education	Paintsville
Prather, John I.	Zoology	Lexington
Prewitt, George H.	Unclassified	Lexington
Price, Robert E.	Unclassified	Graham
Pruett, Mary S.	Sociology	Campbellsville
Pruit, Goebel B.	Agriculture	Paint Lick
Pumphrey, Mrs. Ben	Education	Carlisle
Purdom, Christopher H.	Unclassified	Somerset
Purdy, Martha P.	Unclassified	Millersburg
Rader, Clifford R.	Political Science	Egypt
Ramey, Mrs. Clarice P.	History	Eubank
Ramsay, Bertrand P.	Physics	Lexington
Ranck, James G.	Philosophy	Wilmore
Ranck, Mrs. James G.	Art	Wilmore
Ransdell, Martha E.	Unclassified	Harrodsburg
Ransdell, Marvin S.	Public Health	Prestonsburg
Ransdell, Mary E.	History	Lexington
Ratliff, Mrs. Margaret M.	Psychology	Winchester
Rawlins, Vivian M.	Education	Donerail
Ray, Mrs. Willie C.	Unclassified	Shelbyville
Reasor, Marguerite	Psychology	Louisville
Redding, Clarence D.	Education	Beattyville
Redmon, Charles H.	Agriculture	Paris
Redmon, Virginia H.	Education	Pikeville
Reece, Alfred M.	Physical Education	Lexington
Reed, Curtis J.	Political Science	Fleming
Reed, John S.	Education	Carlisle
Reekie, Dudley A.	Public Health	Somerset
Regenstein, Clara A.	Home Economics	Richmond

Name	Major	Address
Reynolds, Robert S.	Marketing	Lexington
Reynolds, Robert W.	Political Science	Slaughters
Rice, Martin L.	Education	Royalton
Rice, M. Belle	Home Economics	Harlan
Richards, Ralph H.	Education	Huntington, W. Va.
Richardson, Amy Walker	Unclassified	Lexington
Richardson, James D.	Chemistry	Richmond
Richmond, Harry E.	Education	Cynthiana
Ricketts, Frances H.	History	Lexington
Riddle, Mrs. Annie M. B.	Home Economics	Whitesville
Riddle, Loretta B.	Sociology	Miami, Oklahoma
Ridgway, John M.	Education	Lexington
Rigsby, Fred E.	Education	Ashland
Risen, William M.	English	Williamstown
Ritchie, Kitty H.	Education	Viper
Roaden, Ova G.	Education	Alva
Roberts, Mildred C.	English	Berea
Robinson, Donna E.	Education	Newport
Robinson, Leonard H.	Education	Albany
Robinson, Sallie A.	Latin	Lexington
Rogers, Frances L.	Unclassified	Mt. Sterling
Rosenberg, James J.	Education	Lexington
Ross, Mrs. Eva E.	Sociology	Murray
Ross, Evelyn F.	Education	Richmond
Rouse, Julia A.	Education	Walton
Rowland, Hazel	Mathematics	Lexington
Rowland, Robert M.	Education	Frenchburg
Rupert, Joe F.	History	Catlettsburg
Russell, Arthur J.	Education	Olmstead
Russell, Katherine K.	Education	Morganfield
Sabel, Joe	Education	Stamping Ground
Saeger, Charles L.	Commerce	Cumberland, Md.
Salisbury, James W.	Unclassified	Prestonsburg
Salyer, Harold A.	Education	Buechel
Sams, Allen E.	Education	Clay City
Sams, Gertrude B.	Education	Lexington
Samuels, Tom C.	Bacteriology	Richmond
Sanders, Alice H.	Education	Danville
Sanders, Curtis M.	Unclassified	Nicholasville
Saunders, James M.	Physics	Lexington
Saunders, Mary W.	Political Science	Lexington
Schell, William A.	English	Lexington
Schmalz, Guenter G.	German	Bloomington, Illinois
Schooler, Cora H.	French	Lancaster
Schoonmaker, Anna Dell	English	Lexington
Scott, Edwin S.	English	Lexington

Name	Major	Address
Scott, Jess A.	Unclassified	Lexington
Scott, Mamie West	Unclassified	Irvine
Scott, Walter C.	Agriculture	Brandenburg
Scutchfield, Beecher L.	Anat. and Phys.	Prestonsburg
Seay, Mrs. Malinda N.	Education	Tallahassee, Fla.
Seidenman, Simon D.	History	Lexington
Seitz, Sara L.	Library Science	Catlettsburg
Shacklette, Hansford T.	Botany	Waverly
Shannon, James A.	Physical Education	Lexington
Sharon, Robert E.	Education	Independence
Sharpe, Foyster	Unclassified	Campton
Shattles, William C.	Education	Ashland
Shaw, Josephine	Unclassified	Clarksville, Tenn.
Shearer, Maurice C.	Education	Carlisle
Shearer, Walker I., Jr.	Unclassified	Lexington
Sheegog, Margaret E.	Physical Education	Hazard
Shelton, Asa Marshall	Mathematics	Winchester
Sheppard, John L.	Education	Paintsville
Shifley, Ella M.	English	Barbourville
Shifley, Glenn M.	Anatomy	Barbourville
Shifley, Mary V.	English	Barbourville
Shirley, Robert L.	Education	Danville
Shively, Bernie A.	Anat. and Phys.	Lexington
Shofstall, Nell D.	Mathematics	Campbellsville
Shoopman, Rosemary	English	Somerset
Short, Ezra J.	Education	Ledocio
Short, Molly	Home Economics	Winchester
Shouse, Mrs. Edith J.	Education	Danville
Shropshire, Mrs. W. H.	English	Paris
Shultz, Leslie G.	Mathematics	Horse Branch
Sigler, Edwin W.	Public Health	
Sikking, Katheryn	Education	Louisville
Simmons, Stella L.	Education	Shepherdsville
Simons, H. A.	Education	Madisonville
Simons, Royce E.	Education	Slaughters
Sims, James H.	Economics	Lexington
Sinclair, Winnie	Education	Campbellsville
Sisk, Lillian	Chemistry	Madisonville
Skinner, Thomas W.	Education	Dry Ridge
Sloan, Albert R.	Mathematics	Rutherford, Tenn.
Sloan, Marguerite	Education	Berea
Smallwood, C. C.	Education	Pikeville
Smith, Anna Mae	Education	Wasioto
Smith, Eva	Education	Frankfort
Smith, Francis Marion	History	Owensboro
Smith, Herbert K.	Unclassified	Kuttawa

Name
Tarry, F
Taylor, I
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Taylor, J
Taylor, L
Taylor, M
Tharp, L
Thomas,
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Threlkeld,
Throgmorton,
Thurman,
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Thurmond
Tibbals, R
Tilson, Ho
Towell, Re
Trader, Fe
Trammell,
Travelstead
Treadway,
Tribell, Ma
Trigg, Rob
Triplett, L
Trott, Will
Troxel, Lee
Tucker, Flo
Tucker, Ro
Tudor, Tab
Turley, Ma
Turner, Ear
Turner, Sus
Turner, Mrs
Tuttle, Sam
Tye, Mrs. J

Name	Major	Address
Tarry, Hazel	Latin	Murray
Taylor, Mrs. Elizabeth	Education	Midway
Taylor, George D.	Education	Williamstown
Taylor, George T.	Education	Central City
Taylor, Jennings B.	Unclassified	Lexington
Taylor, Leonard C.	Education	Owensboro
Taylor, Margaret D.	English	Lexington
Tharp, Louis C.	Education	Carrollton
Thomas, Ellen B.	Education	Georgetown
Thomas, Marian E.	Mathematics	Marion, Indiana
Thomasson, Mrs. Grace	Physical Education	Middlesboro
Thomasson, R. Case	Unclassified	Middlesboro
Thompson, Cecil A.	Agriculture	Buffalo
Thompson, Celeste R.	Agriculture	Lexington
Thompson, Eugene H., Jr.	French	Lexington
Thompson, George L.	Public Health	Calhoun
Thompson, Gladys B.	Unclassified	Buffalo
Thompson, Henry C., Jr.	Engineering	Lafayette, Ind.
Thompson, Lenore B.	Unclassified	Versailles
Thompson, Nancy E.	Education	Danville
Threlkeld, Mary A.	Mathematics	Lexington
Throgmorton, Mary L.	Education	Mayfield
Thurman, Newman R.	Unclassified	Lincoln Ridge
Thurman, Paul W.	Education	Lexington
Thurmond, Charles J.	Education	Danville
Tibbals, Richard O.	Chemistry	Somerset
Tilson, Howard G.	Agriculture	Lexington
Towell, Rev. Charles A.	English	Georgetown
Trader, Felix S.	Education	Robards
Trammell, Mildred	English	Pine Knot
Travelstead, Chester A.	Unclassified	Bowling Green
Treadway, J. Earl	History	London
Tribell, Maurice L.	Political Science	Middlesboro
Trigg, Robert S.	Education	Henderson
Triplett, Ishmael	Education	Prestonsburg
Trott, William D.	Unclassified	Lexington
Troxel, Leetha L.	French	Lexington
Tucker, Florence C.	English	Maysville
Tucker, Robert G., Jr.	Education	Bloomfield
Tudor, Tabitha	Commerce	Nicholasville
Turley, Mavis S.	Education	Mt. Sterling
Turner, Earl K.	Economics	Wooton
Turner, Susan Jane	English	Versailles
Turner, Mrs. Virgil O.	English	Lancaster
Tuttle, Samuel O.	Education	West Irvine
Tye, Mrs. J. J.	English	Barbourville

Name	Major	Address
Tyree, Mabel I.	English	Calvert City
Ueltschi, Ida E.	Education	Frankfort
Underwood, Florence B.	Education	Livia
Updyke, Edward	Education	Heidelberg
Van Meter, Mrs. Frances W.	History	Jackson
Van Winkle, Doris F.	Unclassified	Paint Lick
Van Winkle, Ivan C.	Physical Education	Vanceburg
Vanzant, Sallie J.	Latin	Edmonton
Vaughan, Joseph B.	Geology	Marion
Vaughan, Mary Bell	Education	Shelbyville
Vaughn, J. T.	Physical Education	Georgetown
Vice, Lucille	Education	Lexington
Vickers, John L.	Education	Rumsey
Vincent, James Opel	Education	Brownsville
Virgin, Vera	History	Oldtown
Waddle, Nancye A.	Library Science	Luretha
Wagers, Lawrence H.	Public Health	Manchester
Wagers, Lillian S.	Unclassified	Manchester
Waldrop, Claude C.	Unclassified	Owenton
Walker, Sally Margaret	Romance Languages	Lexington
Wall, Elizabeth F.	English	Holden, W. Virginia
Wall, Janie	Commerce	Elberton, Ga.
Wallingford, Elizabeth	English	Maysville
Wallis, Elizabeth W.	Hygiene	Lexington
Walston, J. H.	Unclassified	Murray
Walston, Milton E.	Unclassified	New Concord
Walters, Roy N.	Sociology	Berea
Walton, Erle W.	Education	Cynthiana
Walton, John W.	Ancient Languages	Manchester, O.
Ward, Edwin R.	Education	Providence
Ware, Gazelle G.	Unclassified	Beckley, W. Va.
Ware, William T.	Education	Morganfield
Waterman, Nelda M.	Political Science	Louisville
Watkins, Alice E.	Education	Louisville
Watkins, James Stephen	Engineering	Lexington
Watson, Ruby	Education	Lexington
Watson, Walter E.	Psychology	Valley Station
Weatherspoon, Homer B.	Geology	Clinton
Weber, Margaretta	Psychology	Anchorage
Webster, Arthur D.	Pol. Science	Beaver Falls, Penn.
Webster, Franklin	Education	Estill
Wedekind, Estelle M.	Education	Louisville
Welch, Robert N.	Geology	Lexington
Wells, Alice M.	Education	Paintsville
Wells, Susan Elizabeth	Unclassified	Owensboro
Wesley, L. G.	Education	Lexington

Name
Whalin, Cl
Wharton, M
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Wheeler, S
Whitehead,
Whittaker,
Whitworth,
Wild, Jack
Wilder, Ore
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Wiley, Ower
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Wooldridge, C
Worten, Emm

Name	Major	Address
Whalin, Clarence M.	Unclassified	Bowling Green
Wharton, Mary E.	Botany	Lexington
Wheeler, Ruth	English	Lexington
Wheeler, Samuel E.	Education	Livermore
Whitehead, Frederick	Unclassified	Winchester
Whittaker, Rawdy	Education	Cornishville
Whitworth, Dorothy May	English	Lexington
Wild, Jack W.	English	Lexington
Wilder, Oren B.	Political Science	Winchester
Wiley, Miller B.	Education	Barbourville
Wiley, Owen	Education	Barbourville
Wilkenson, F. D.	Education	Milton
Wilkey, John J.	Agriculture	Dawson Springs
Willfong, Margaret R.	English	Beckley, W. Virginia
Williams, Anna C.	Education	Mt. Sterling
Williams, Cratis D.	English	Blevins
Williams, Geneva	Education	Lexington
Williams, Henry O.	Agriculture	Henderson
Williams, Lucille S.	History	Lexington
Williams, Luzella P.	Unclassified	Lexington
Williams, Mary Elizabeth	Mathematics	Ashland
Williams, May	English	Lexington
Williams, Ollie T.	Education	Frankfort
Williams, P. A., II.	Education	Russell
Williams, Stella	English	Artemus
Williamson, Mary Ann	English	Athens, W. Virginia
Williamson, Mary Lois	Education	Lexington
Willis, Mrs. Dorcas W.	Unclassified	Paris
Willis, Mrs. Kyle A.	Education	Neibert, W. Virginia
Willoughby, William R.	Political Science	Carlisle
Willson, Emma Wylie	Anth. and Arch.	Lexington
Wilson, Edward	Education	Cadiz
Wilson, Lucile G.	Unclassified	Lexington
Wilson, Robert R.	Physical Education	Minerva
Wilson, Stephen S.	Education	Caneyville
Winder, Minnie C.	Education	Maysville
Windle, Helen A.	History	Huntington, W. Va.
Wineland, William C.	Physics	Frankfort
Winn, John B.	Unclassified	Lexington
Woford, Ernest	Physical Education	Danville
Wood, Lula C.	History	Maysville
Wood, Mary B.	English	Pineville
Wood, Mary Ellen	Library Science	Pleasureville
Woods, Catherine	Education	Cynthiana
Wooldridge, Charles B.	Commerce	Lexington
Worten, Emma Lou	Education	Smithland

Name	Major	Address
Worthington, Mary A.	Education	Lexington
Wright, Theodore M.	Education	Berea
Wright, William T.	Commerce	Louisville
Wyatt, Clarence H.	Education	Crawford
Yankey, Susan Spotts	Education	Campbellsville
Yates, Albert S.	Public Health	Grayson
York, John M.	English	Catlettsburg
Youmans, Charles V.	Mathematics	Bowling Green
Young, Lula B.	Education	Winchester
Young, Ollie M.	Botany	Lexington
Young, Virginia Keen	English	Lexington
Zimmerman, Ila S.	Education	Mt. Sterling

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