BULLETIN OF THE

University of Kentucky

CATALOG NUMBER

For 1935-36

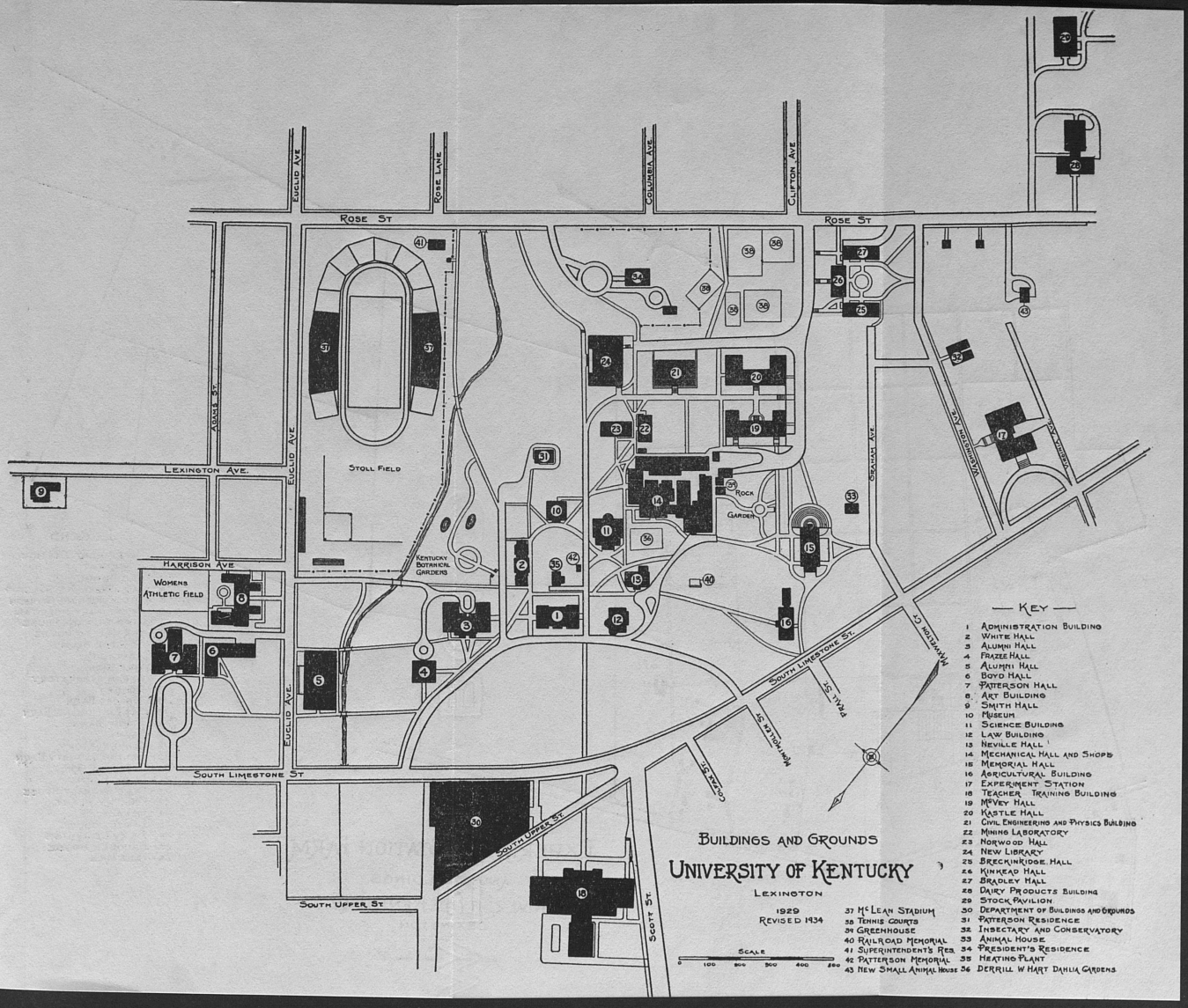
Announcements

1936-37

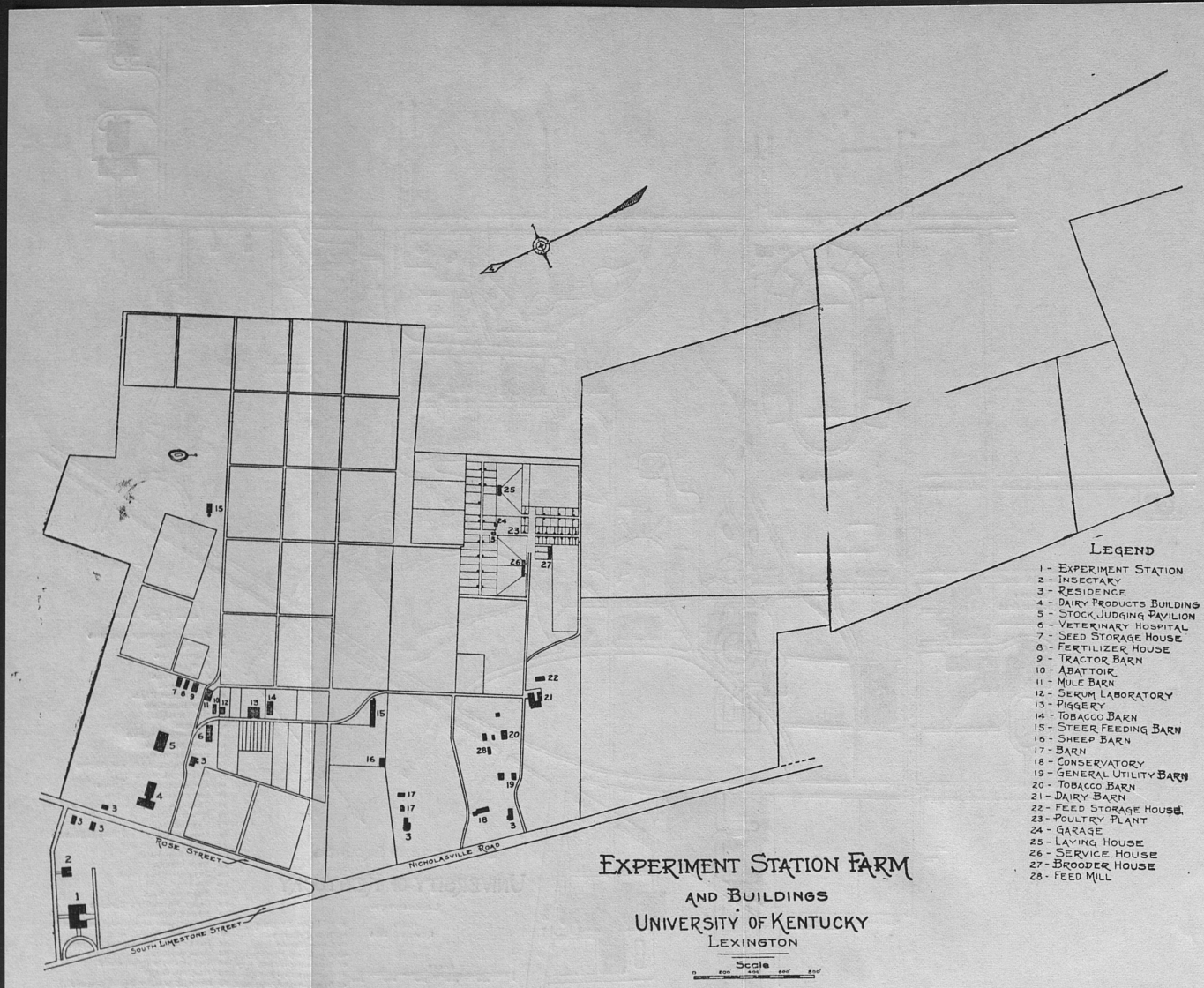
VOL. 28 JUNE No. 6

Published by the University of Kentucky, Lexington. Entered as Second-Class Matter at the Post Office, Lexington, Ky., under the Act of July 16, 1894.

Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized June 30, 1920.



Buildings and Grounds
University of Kentucky
Lexington
1929
Revised 1934
Key
1 Administration Building
2 White Hall
3 Alumni Hall
4 Frazee Hall
5 Alumni Hall
6 Boyd Hall
7 Patterson Hall
8 Art Building
9 Smith Hall
10 Museum
11 Science Building
12 Law Building
13 Neville Hall
14 Mechanical Hall and Shops
15 Memorial Hall
16 Agricultural Building
17 Experiment Station
18 Teacher Training Building
19 McVey Hall
20 Kastle Hall
21 Civil Engineering and Physics Building
22 Mining Laboratory
23 Norwood Hall
24 New Library
25 Breckinridge Hall
26 Kinkead Hall
27 Bradley Hall
28 Dairy Products Building
29 Stock Pavilion
30 Department of Buildings and Grounds
31 Patterson Residence
32 Insectary and Conservatory
33 Animal House
34 President's Residence
35 Heating Plant
36 Derrill W Hart Dahlia Gardens
37 McLean Stadium
38 Tennis Courts
39 Greenhouse
40 Railroad Memorial
41 Superintendent's Res.
42 Patterson Memorial
43 New Small Animal House
Scale
0 100 200 300 400 500
Rose St
Euclid Ave
Rose Lane
Columbia Ave
Clifton Ave
Adams St
Lexington Ave.
Harrison Ave
Womens Athletic Field
Stoll Field
Kentucky Botanical Gardens
Rock Garden
Graham Ave
Washington Ave
Virginia Ave
South Limestone St
South Upper St
Scott St
Cottage St
Montmollen St
Prall St
Maxwelton Ct



EXPERIMENT STATION FARM
AND BUILDINGS
UNIVERSITY OF KENTUCKY
LEXINGTON

LEGEND

1 - EXPERIMENT STATION
2 - INSECTARY
3 - RESIDENCE
4 - DAIRY PRODUCTS BUILDING
5 - STOCK JUDGING PAVILION
6 - VETERINARY HOSPITAL
7 - SEED STORAGE HOUSE
8 - FERTILIZER HOUSE
9 - TRACTOR BARN
10 - ABATTOIR
11 - MULE BARN
12 - SERUM LABORATORY
13 - PIGGERY
14 - TOBACCO BARN
15 - STEER FEEDING BARN
16 - SHEEP BARN
17 - BARN
18 - CONSERVATORY
19 - GENERAL UTILITY BARN
20 - TOBACCO BARN
21 - DAIRY BARN
22 - FEED STORAGE HOUSE
23 - POULTRY PLANT
24 - GARAGE
25 - LAYING HOUSE
26 - SERVICE HOUSE
27 - BROODER HOUSE
28 - FEED MILL

CATALOG NUMBER

OF THE

University of Kentucky

For 1935-36

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1936-37

LEXINGTON, KENTUCKY

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UNIVERSITY CALENDAR FOR 1936-37

FIRST SEMESTER

1936

September 14	Monday—Freshmen Registration
September 15, 16	Tuesday, Wednesday—Registration of upper classmen
September 17	Thursday—Class work begins
September 28	Monday—Last date on which a student may enter an organized class
October 12, 13	Monday, Tuesday—Period for filing application for degrees to be granted in 1937
November 26, 30	Thursday, 8 a. m. to Monday, 8 a. m. Thanksgiving Holiday
December 8	Tuesday—Meeting of Board of Trustees
December 18	Friday noon—Christmas holiday begins

1937

January 5	Tuesday, 8 a. m.—Christmas holiday ends
January 23, 30	Saturday to Saturday—Mid-year examinations
January 31	Sunday—Baccalaureate services
February 1	Monday—Mid-year commencement

SECOND SEMESTER

February 2, 3	Tuesday, Wednesday. Registration for second semester
February 4	Thursday—Instruction resumed
February 15	Monday—Last date on which a student may enter an organized class
February 22	Monday—Date for filing applications for degrees, by students who were not in college the first semester
March 25, 30	Thursday, 8 a. m. to Tuesday, 8 a. m., Easter holidays
April 13	Tuesday—Meeting of Board of Trustees
May 26	Wednesday afternoon—Military Field Day
May 27	Thursday, 9 a. m. Last date for reporting grades for candidates for degrees
May 27–June 3	Thursday to Thursday. Final examinations.
June 3	Thursday—Baccalaureate address
June 3	Thursday—Meeting of Board of Trustees
June 4	Friday—Seventieth Annual Commencement
June 7, 12	Monday to Saturday—Junior Club Week
June 14	Monday—Registration for first term of summer session
July 19	Monday—Registration for second term of summer session
August 6	Friday—Summer Commencement

Part I

OFFICERS OF ADMINISTRATION AND INSTRUCTION

BOARD OF TRUSTEES

1. EX OFFICIO MEMBERS

ALBERT B. CHANDLER, Governor
HARRY PETERS, Superintendent of Public Instruction
GARTH FERGUSON, Commissioner of Agriculture

2. FROM THE STATE BOARD OF AGRICULTURE

JOHN NEWCOMB, Bardstown
H. S. CLEVELAND, Franklinton
D. D. STEWART, Louisville

3. MEMBERS AT LARGE

RICHARD C. STOLL, Lexington, 1942
ROBERT G. GORDON, Louisville, 1942
JOE B. ANDREWS, Newport, 1940
R. MILLER HOLLAND, Owensboro, 1938
G. C. WELLS, Paintsville, 1938
JOHN S. COOPER, Somerset, 1940

4. ALUMNI MEMBERS

LOUIS HILLENMEYER, Lexington, 1942
JAMES PARK, Lexington, 1940
DR. GEORGE WILSON, 1938

OFFICERS OF THE BOARD

ALBERT B. CHANDLER, Chairman
RICHARD C. STOLL, Vice Chairman
D. H. PEAK, Secretary
JOHN SKAIN, Treasurer

EXECUTIVE COMMITTEE

RICHARD C. STOLL, Chairman
ROBERT G. GORDON
JOE B. ANDREWS
JAMES PARK
R. MILLER HOLLAND

ADMINISTRATIVE OFFICERS

GENERAL

FRANK LEROND MCVEY, B. A., Ph. D., LL. D., President

DAVID HOWARD PEAK, A. M., Business Agent

EZRA L GILLIS, A. B., Registrar and Secretary of the Senate

T. T. JONES, M. A., Ph. D., Dean of Men

SARAH GIBSON BLANDING, A. M., Dean of Women

MARGARET ISADORA KING, A. B., B. S., Librarian

MAURY J. CRUTCHER, B. M. E., Superintendent of Buildings and Grounds

THE COLLEGES

PAUL PRENTICE BOYD, M. A., Ph. D., Dean of the College of Arts and Sciences

THOMAS POE COOPER, B. S. in Agr., Dean of the College of Agriculture and Director of the Experiment Station

JAMES HIRAM GRAHAM, B. C. E., C. E., Dean of the College of Engineering

*ALVIN E. EVANS, M. A., Ph. D., Dean of the College of Law

FRANK MURRAY, A. B., LL. B., S. J. D., Acting Dean of the College of Law 1935-36

WILLIAM SEPTIMUS TAYLOR, A. M., Ph. D., Dean of the College of Education

EDWARD WIEST, A. M., Ph. D., Dean of the College of Commerce

WILLIAM DELRERT FUNKHOUSER, M. A., Ph. D., Dean of the Graduate School

---

JESSE E. ADAMS, A. M., Ph. D., Director of the Summer Session

LOUIS CLIFTON, M. A., Director of University Extension

---

* On leave 1935-36.

ALPHABETICAL LIST OF OFFICERS OF ADMINISTRATION AND INSTRUCTION AND EXPERIMENT STATION STAFF

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

ADAMS, ESTELLE, M. A.
Second Grade University Elementary School

ADAMS, JESSE E., A. M., Ph. D.
Professor of Philosophy of Education, Head of Department, Director of Summer Session

ALLEN, HARRY RAYMOND, M. A.
Chemist, Experiment Station

‡ALLEN, RICHARD SWEETNAM, M. S.
Associate Professor of Anatomy and Physiology, Head of Department

ALLEN, WILLIAM RAY, A. B., A. M., Ph. D.
Professor of Zoology

ALLISON, N. B., A. B., M. A.,
Instructor in Mathematics

AMBURGEY, LINVILLE V., B. S.
Microscopist, Experiment Station

†AMIS, EDWARD S., M. S.
Part-Time Instructor in Chemistry

ANDERSON, CHARLES HERBERT
Professor of Engineering Design

ANDERSON, ELIZABETH, B. S.
Home Economics, Versailles High School

ANDERSON, GRACE, A. B., M. A.
English, University High School

ANDERSON, WALTER SEWELL, M. A.
Professor of Genetics, in charge of Horse Husbandry, Experiment Station

‡ On leave 1936-37.
† Resigned June 30, 1936.

ARKLE, THOMAS MCKEE
Instructor in Wood Shop

ARMSTRONG, WATSON, B. S. in Agr., M. A.
Picadome High School

*ASHER, ESTON JACKSON, M. A.
Assistant Professor of Psychology

AVERILL, REBECCA GORDON, B. S., M. A.
Instructor in Physical Education

AVERITT, PAUL, B. S., M. S.
Instructor in Geology

AVERITT, SAXE DABNEY, M. S.
Chemist, Experiment Station

BAKER, ROBERT, B. S., M. S.
Instructor in Chemistry

BARBER, HAROLD
Head Herdsman, Experiment Station

BARKENBUS, CHARLES, B. S., Ph. D.
Professor of Organic Chemistry

BARRON, JOSEPH, M. A.
Assistant Professor of Art

BARKLEY, MARIE RODES, M. A.
Assistant Professor of Home Economics

BARKMAN, JOHN ORVILLE, B. S.
Assistant Professor of Dairy Manufactures, Field Agent in Dairy Manufactures, Agricultural Extension Division

‡BARNETT, BRINKLEY, B. M. E.
Assistant Professor of Electrical Engineering

BAUTE, EDWARD A., B. S.
Field Agent in Poultry Improvement, Experiment Station

BAYLESS, DUARD ELSWORTH, B. S. in Agr.,
Assistant in Farm Management, Experiment Station

BEALS, WENDELL EVERETT, M. A., C. P. A.
Assistant Professor of Accounting

---

* On leave 1935-36.
‡ On leave 1936-37.

BEAUMONT, HENRY, A. B., Ph. D.
Assistant Professor of Psychology, Executive Secretary, University Personnel Bureau

BECKLEY, FRANK MILWARD
Instructor in Machine Shop

BEDFORD, MATTHEW HUME, A. B., Ph. D.
Professor of Physical Chemistry

BEEBE, MORRIS WILSON, B. S., M. S.
Associate Professor of Metallurgical Engineering

BEST, HARRY, A. B., LL. B., Ph. D.
Professor of Sociology, Head of the Department

*BIGGE, ADOLPH E., M. A., Ph. D.
Professor of German, Head of Department

†BLACK, FORREST R., A. B., M. A., Ph. D., LL. B.
Professor of Law

BLANDING, SARAH GIBSON, M. A.
Dean of Women, Assistant Professor of Political Science

BOLES, STANLEY ATWOOD, A. M.
Graduate Manager Intercollegiate Athletics

BONDURANT, JOHN H., M. S.
Assistant in Farm Management, Experiment Station

BORTNER, CHARLES E., M. S.
Assistant in Agronomy, Experiment Station

BOYD, PAUL PRENTICE, A. B., M. A., Ph. D.
Dean College of Arts and Sciences, Head of Department of Mathematics and Astronomy, Professor of Mathematics

‡BOYDEN, RUTH, M. A.
Assistant in Home Economics, Experiment Station

BRADLEY, CLIFTON JAMES, M. S.
Assistant in Markets, Experiment Station

BRADY, GEORGE K., A. B., Ph. D.
Associate Professor of English

---

* On leave 1935-36.
† On leave 1935-36.
‡ On leave 1936–37.

BRAUER, ALFRED, M. A., Ph. D.
Associate Professor of Zoology

BREND, WILLIAM HUGO
Instructor in Machine Shop

BREWER, BRUCE E., Lieutenant Colonel in U. S. Army
Professor of Military Science and Tactics, Head of Department

BREWER, LAWRENCE CONDIT, B. S.
Assistant in Short Courses and Exhibits, Agricultural Extension Division

BROOKS, JESSE BYRON, B. S.
Instructor in Agricultural Engineering, Field Agent in Agricultural Engineering, Agricultural Extension Division

BROWN, HENRY CORLEY, B. S. in Agr.
Field Agent in Junior Club Work Agricultural Division

BROWN, LINWOOD ARNOLD, Pharm. D., Ph. C.
Head Department of Public Service Laboratories, Experiment Station

BROWN, MARION C., M. A.
Assistant Professor of Mathematics

BUDD, RUTH, B. S. in L. S.
Assistant Professor of Library Science

BRYANT, THOMPSON RIPLEY, M. S.
Assistant Director of Agricultural Extension Division, Professor of Agricultural Extension

BUCKINGHAM, MARY B., A. B.
Part-Time Instructor in Sociology

BUCKNER, GARRETT DAVIS, Ph. D.
Chemist in charge of Animal Nutrition, Experiment Station

BUREAU, ERNEST ADOLPHE, B. S., Ph. B., E. E.
Professor of Electrical Engineering

BURNAM, ANITA, M. S.
Field Agent in 4-H Club Work, Agricultural Extension Division

BYERS, GEORGE BOYD, M. S.
Assistant in Farm Management, Experiment Station

CALDWELL, LOWRY MCREYNOLDS, B. S. in Agr.
Assistant Superintendent Western Kentucky Substation

CALDWELL, MORRIS GILMORE, A. B., M. A., Ph. D.
Assistant Professor of Sociology

CALFEE, ROBERT KLAIR, B. S.
Assistant in Chemistry, Experiment Station

†CALLIHAN, ANNE WORTHINGTON, A. B.
Assistant Professor of Art

CANADAY, EMMETT JOHN, A. B., M. A.
Instructor in Mathematics

CAPURSO, ALEXANDER, B. S. in Music, M. A.
Music, University School

CARD, DANA GEORGE, M. S.
Assistant Professor of Agricultural Economics, Assistant in Markets, Experiment Station

CARPENTER, CECIL C., B. S., M. S., Ph. D.
Assistant Professor of Economics

CARRELL, WILLIAM JOSEPH, C. E.
Professor of Structural Engineering

CARTER, LUCIAN HUGH, M. A., Ph. D.
Associate Professor of Economics

CATON, STANLEY, B. S.
Field Agent in Poultry, Agricultural Extension Division

CASS, NORMA, A. B., B. S. in L. S., M. A.
Reference Librarian, Part-Time Instructor in Library Science

CHAMBERLAIN, LEO MARTIN, A. M., Ph. D.
Professor of Educational Administration, Head of Department, Director Bureau of School Service

CHAMBERS, ALVIN LEE, C. E.
Assistant Professor of Testing Materials

CHAMBERS, JOHN SHARPE, B. S., M. S., M. D.
Head Department of Hygiene and Public Health, Director of Dispensary

† On leave 1396-37.

CLARK, THOMAS D., A. B., A. M., Ph. D.
Assistant Professor of History

CLIFTON, LOUIS, A. B., A. M.
Assistant Director of University Extension

CLYDE, PAUL H., A. B., A. M., Ph. D.
Professor of History

COHEN, LEON W., A. B., A. M., Ph. D.
Associate Professor of Mathematics

*COLE, ESTHER, Ph. D.
Associate Professor of Political Science

COLEMAN, EVELYN
Hygiene and Physical Education, University School

**CONRAD, WILLIAM K., B. S. in M. E.
Instructor in Machine Design

CONROY, KATHERINE, A. B., M. A.
Sixth Grade Critic Teacher

COOPER, THOMAS POE, B. S.
Dean College of Agriculture, Director of Experiment Station, Director Agricultural Extension Division

COPELAND, JOHN E., B. S., Major Inf., U. S. Army
Assistant Professor of Military Science

CRAWFORD, ALBERT BYRON, A. B., M. A., Ph. D.
Assistant, Bureau of School Service

†CRISWELL, HOWARD D., 1st Lieutenant Inf. (D. O. L.)
Assistant Professor of Military Science

CROFT, LYSLE W., A. B., M. A.,
Part-Time Instructor in Psychology

CROUSE, CHARLES STEVENS, E. M.
Professor of Metallurgy, Head of the Department of Mining and Metallurgical Engineering

CRUTCHER, MAURY JULLIAN, B. M. E.
Superintendent of Buildings and Grounds

---

* Resigned June 30, 1936.
** On leave 1936-37.
† Transferred June, 1936.

CULLIS, LELA
Instructor in Applied Music (Organ)

CUNOV, HARVEY FREDERICK, B. S. C.
Assistant Bacteriologist, Experiment Station

CURTIS, HENRY ERNEST, M. S.
Head Department of Fertilizer Control, Experiment Station

DANIEL, ETHELEEN, B. S., M. A.
Fifth Grade University Elementary School

DANTZLER, LEHRE LIVINGSTON, A. M., Litt. D.
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DANTZLER, MARY
Instructor in Applied Music (Voice)

DAVENPORT, IRIS, M. A.
Field Agent in Home Economics, Agricultural Extension Division

DAVIS, JOSEPH MORTON, M. A.
Professor of Mathematics, Emeritus

DEEN, ENCIL, B. S. in Agr.
Seed Inspector, Experiment Station

DEEPHOUSE, LAURA, B. S., M. S.
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DIDLAKE, MARY LEGRAND, M. S.
Associate Entomologist and Botanist, Experiment Station

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Associate Professor of Psychology

DIMOCK, WILLIAM WALLACE, B. S., D. V. M.
Professor of Veterinary Science, Head Department of Animal Pathology, Experiment Station

DOWNING, HAROLD HARDESTY, B. C. E., S. M., Ph. D.
Professor of Mathematics (in charge of Astronomy)

DOYLE, GEORGE FERGISON, A. B., M. D., F. A. C. S.
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DUNCAN, MAY K., M. A.
Associate Professor of Elementary Education, Head of Department

DUNN, MARVIN, B. S
Technician, University Dispensary

EBLEN, AMOS HALL, A. B., LL. B., S. J. D.
Professor of Law

*EDDY, CLIFFORD O., Ph. D.
Associate Entomologist, Experiment Station

EDWARDS, PHILIP RARICK, Ph. D.
Bacteriologist, Experiment Station

ELLIOTT, NORRIS RAYMOND, B. S.
Professor of Landscape Architecture and Floriculture, Field Agent in Horticulture, Agricultural Extension Division

ELY, FORDYCE, M. S.
Professor of Dairy Husbandry, in charge of Dairying, Experiment Station

EMMERT, EMERY MYERS, M. S., Ph. D.
Assistant Professor of Horticulture and Assistant in Horticulture, Experiment Station

EMRATH, PHILIP CASSILY, E. M.
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ERICKSON, STATIE ESTELLE, Ph. D.
Professor of Home Economics, Head of Department of Home Economics, Experiment Station

**EVANS, ALVIN E., M. A., Ph. D., J. D.
Professor of Law, Dean of the College of Law

FALLIS, ROBERT WHITE
Assistant Bacteriologist, Experiment Station

FARQUHAR, EDWARD FRANKLIN, M. A.
Professor of Literature

FARRINGTON, OLIN, M. S.
Assistant in Markets, Experiment Station

†FARRIS, ELGAN BROOKS, C. E.
Instructor in Engineering, Drawing and Surveying

---

* Resigned March 15, 1936.
** On leave 1935-36.
† On leave 1936-37.

FELTNER, JAMES MICHAEL
Field Agent in 4-H Club Work, Extension Division

FERGUS, ERNEST NEWTON, Ph. D.
Associate Professor of Farm Crops, in charge of Forage Crops, Experiment Station

FISH, ERNEST ELLSWORTH, M. S.
Field Agent in 4-H Club Work, Agricultural Extension Division

FISK, EDWARD W.
Assistant Professor of Art

FITHIAN, GEORGE WHITE, A. B.
Instructor in English

FITSCHEN, FRED W.
Inspector of Feeds and Fertilizers, Experiment Station

FLYNN, CLARENCE F.
Assistant in Heating and Ventilating Laboratory

FORSEE, WILLIAM THOMAS, JR., Ph. D.,
Assistant Chemist, Experiment Station

FOSTER, JAMES DOUGLAS, M. S.
Inspector in Charge of Creamery License Section, Experiment Station

*FOWLER, FRANK CHARLES, A. B., A. M.
Associate Professor of English, Director of Guignol Theatre

FOX, BERNICE, M. A.
Part-Time Instructor in English, 1935–1936

FREEMAN, JOE FRANK, M. S.
Assistant Agronomist, Experiment Station

FREEMAN, WILLIAM EDWIN, A. B., E. E.
Assistant Dean of the College of Engineering, Head of Department of Electrical Engineering

FUNKHOUSER, WILLIAM DELBERT, A. B., M. A., Ph. D., Sc. D.
Professor of Zoology, Professor of Anthropology, Head Department of Zoology, Dean of the Graduate School

---

* On leave first semester 1936-37.

GABBARD, JAMES LAWRENCE, B. S., M. S.
Instructor in Chemistry

GALLAWAY, WILLIAM FRANCIS, M. A., Ph. D.
Assistant Professor of English

GALLOWAY, ZACHARY LEE, M. S.
Instructor in Farm Economics, Assistant in Farm Management, Experiment Station

GARDNER, JOHN, M. A.
Field Agent in Horticulture, Agricultural Extension Division

GARMAN, HARRISON, D. S.
Professor of Entomology, Emeritus

GARSIDE, MATTHEW STANLEY, B. S.
Field Agent in Junior 4-H Club Work, Agricultural Extension Division

GAULT, LELAH VAUGHN, B. S.
Assistant Chemist, Experiment Station

†GAY, ELIZABETH, M. A.
Assistant Professor of English

GILLIS, EZRA L, A. B.
Registrar, Secretary of the Senate

GOOD, EDWIN STANTON, M. S.
Professor of Animal Husbandry, Head Department of Animal Husbandry, Chairman Animal Industry Group, Experiment Station

GRADDY, IVAN CLAY, B. S. in Agr., M. S. in Agr.
Assistant State Agent, Agricultural Extension Division

GRAHAM, JAMES HIRAM, B. C. E., C. E.
Dean of the College of Engineering

GRANT, RUSSELL PORTER, B. S.
Assistant Varsity Football Coach

GREEN, TODD HERON, B. S.
Assistant Bacteriologist, Public Service Laboratories, Experiment Station

† Resigned July 1, 1936.

GREHAN, ENOCH BACON, A. B.
Professor of Journalism, Head of Department

GRIFFIN, GERALD, A. B.
Publicity Athletic Department

GRUNDMEIER, EDITH, M. S.
Assistant Professor of Home Economics

HAAK, PEARL, B. S.
Assistant State Home Demonstration Agent, Agricultural Extension Division

HACKENSMITH, CHARLES WILLIAM, B. S., M. A.
Instructor in Physical Education, Intramural Director

HAGMAN, IDA C., B. S., M. A.
Extension Specialist in Home Management, Agricultural Extension Division

HAHN, THOMAS MARSHALL, M. S., Ph. D.
Associate Professor of Physics

HAINES, MRS. RUTH, M. A.
Instructor in Public School Art and Elementary Education

HALL, ELLERY LEWIS, M. A.
Assistant Professor of History

HAMILTON, WILLIAM BROOKS, B. S. A., M. Sc., Ph. D.
Bacteriologist, Assistant Professor of Hygiene

HAMMONDS, CARSIE, B. S. in Agr., M. S., Ph. D.
Professor of Agricultural Education, Head of Department

HANSEN, WILLIAM HOWARD, LL. B., A. B.
Assistant Professor of Physical Education

HARMS, AMANDA HELEN, B. S.
Assistant in Animal Nutrition, Experiment Station

HARRIS, CHARLES EDGAR, B. S.
Field Agent in Poultry, Agricultural Extension Division

HARRIS, GEORGE MORELAND, B. S., M. S.
Extension Dairyman, Agricultural Extension Division

HARRIS, WILLIAM JEFFERSON, M. S.
Assistant Professor of Animal Husbandry; Assistant in Animal Husbandry, Experiment Station

*HAUN, ROBERT D., B. A., M. A., C. P. A.
Associate Professor of Accounting

HAWKINS, ROBERT DAWSON, M. E.
Professor of Hydraulic Engineering

HEGEMAN, DANIEL V., Ph. D.
Assistant Professor of German, Acting Head of Department, 1935-36

‡HEINZ, WILBUR AUGUST, A. B., M. S.
Assistant Professor of Hygiene

HERNANDEZ, J. EDUARDO, B. A., M. A.
Part-Time Instructor in Romance Languages

HERMAN, FANNIE, A. B.
Speech and Dramatics, University High School

HILL, HENRY HARRINGTON, Ph. D.
Lecturer, College of Education

HOLMES, HENRY BERT, M. A.
Assistant Professor of Romance Languages

HOLMES, SARAH BENNETT, A. B.
Assistant Dean of Women

HOOVER, LUCRETIA MAYE, M. S.
Instructor in Home Economics, Director of University Commons

HORINE, JOHN SHERMAN, M. E.
Associate Professor of Engineering Drawing

HORLACHER, LEVI JACKSON, M. S.
Professor of Animal Husbandry; Assistant to Dean, College of Agriculture

HORSFIELD, MARGARET BENNETT, M. A., Diplome d'Etudes Francaises de l'Universite de Montpellier, 1928
Assistant Professor of Romance Languages

HOWARD, NOEL JUDSON, B. S.
Inspector Creamery License Section, Experiment Station

* On leave 1936-37.
‡ On leave 1935-36.

HULL, FLOYD EDGAR, D. V. M.
Assistant Professor of Veterinary Science, Assistant Veterinarian, Experiment Station

HUMPHREY, JAMES ELLISON, B. S.
Field Agent in Poultry, Extension Division

HUNT, RUSSELL AUBREY, M. S.
Field Agent in Tobacco, Agricultural Extension Division

IMLAY, FLORENCE, M. A.
Field Agent in Home Economics, Agricultural Extension Division

INSKO, WYATT MARION, JR., M. S.
Assistant in Poultry Experiment Station

JENKINS, EMERSON D., A. B., M. A., Ph. D.
Instructor in Mathematics

JENNINGS, WALTER WILSON, M. A., Ph. D.
Professor of Economics

JETT, CARTER COLEMAN, M. E.
Professor of Machine Design

JEWETT, HOWARD HERMAN, M. A.
Research Assistant Entomologist and Botanist, Experiment Station

JOHN, FRITZ, Ph. D.
Assistant Professor of Mathematics

JOHNSON, EDWIN, M. A.
Field Agent in Markets, Agricultural Extension Division

JOHNSON, EDWARD MARSHALL, M. S., Ph. D.
Assistant Plant Pathologist, Experiment Station

JOHNSON, JAMES RICHARD, B. M. E.
Professor of Applied Mechanics, Head of the Department of Engineering Mechanics

JONES, CARL WILFRED, B. S.
Field Agent in 4-H Club Work, Agricultural Extension Division

JONES, ROGER WALTER
Superintendent, Robinson Experiment Substation

JONES, SADOCIE CONNELLEE, M. S.
Field Agent in Agronomy, Agricultural Extension Division

JONES, THEODORE TOLMAN, A. B., A. M., Ph. D.
Professor of Ancient Languages, Head of the Department; Dean of Men

KARRAKER, PERRY ELMER, M. A.
Associate Professor of Soils, Agronomist in Soil Technology, Experiment Station

KEFFER, LEROY, A. B., M. S.
Science, University Junior High School

†KELLER, WAYNE HICKS, A. B., M. S.
Instructor in Chemistry

*KELLEY, ABNER WELLINGTON, M. A., Ph. D.
Assistant Professor of English

KELLEY, JAMES BYRON, B. S. in A. E., B. S. in M. E.
Professor of Agricultural Engineering

KEMPER, DURRIN COLLINS, B. S., M. A.
Science, University High School

KENDALL, THOMAS A., B. S. in M. E.
Laboratory Assistant, Mining and Metallurgical Laboratory

KENNARD, CLIFFORD DEBOCK
Instructor in Foundry

KENNEY, RALPH, B. S.
Field Agent in Agronomy, Agricultural Extension Division

KETTENAKER, JOHN RALPH
Instructor in Pattern Making

KILPATRICK, ELMER JAMES, M. S.
Assistant State Agent, Agricultural Extension Division

KING, MARGARET ISADORA, *A. B.*
Librarian, Part-Time Instructor in Library Science

KING MILDRED, A. B.
Kindergarten, University, Elementary School

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† On leave 1935-36, 1936-37.
* Resigned July 1, 1936.

KINKER, ELMER O
Staff Sergeant, Instructor in Military Science

KINNEY, EDMUND J., B. S.
Professor of Farm Crops; Agronomist in Charge of Tobacco and Cereal Investigation, Experiment Station

KNAPP, CHARLES MERRIAM, A. B., Ph. D.
Associate Professor of History

KNIGHT, GRANT COCHRAN, A. M.
Associate Professor of English

KOPPIUS, OTTO TOWNSEND, B. S., Ph. D.
Professor of Physics

KREWSON, CHARLES FLEMING, B. S., M. S.
Instructor in Chemistry

†KUIPER, JOHN, M. A.
Professor of Philosophy, Head of Department

LACEY, EDITH, M. A.
Field Agent in Home Economics, Agricultural Extension Division

LAMPERT, MRS. C. A.
Instructor in Applied Music (Piano)

LAMPERT, CARL ALBERT, B. M.
Professor of Music, Head of the Department

LATIMER, CLAIBORNE GREEN, B. S., Ph. D.
Professor of Mathematics

LAWRENCE, ARMON JAY, A. B., M. A.
Associate Professor of Economics

LESTOURGEON, FLORA ELIZABETH, B. A., Ph. D.
Associate Professor of Mathematics

LEWIS, CHESTER ARTHUR, B. S.
Assistant Editor, Agricultural Extension Division

LEWIS, JOHN, A. B., B. S. in Music
Instructor in Music, Director University Band

LEWIS, MILDRED, B. S. in Music
Part-Time Instructor in Music

---

† On leave 1936-37.

LICKERT, RAYMOND HENRY, B. S. in Agr.
Assistant State Agent, Agricultural Extension Division

LIGON, MOSES EDWARD, A. M., LL. D.
Professor of Secondary Education, Head of the Department; Director of Placement Bureau

LINK, HAROLD FOREST, M. S.
Assistant State Agent, Agricultural Extension Division

LOGAN, LULIE ELIZABETH, A. B.
Assistant State Home Demonstration Agent, Agricultural Extension Division

LOWRY, SAMUEL JECHONIAS, B. S.
Superintendent Western Kentucky Experiment Substation

LUCAS, BURTON L., Major Inf., U. S. Army
Assistant Professor of Military Science

*LUNDE, ROBERT GERHARD, A. B., M. A.
Assistant Professor of History

LYONS, MALCOM WILLIAM, M. S.
Assistant Chemist, Experiment Station

MCBEE, JAMES GREEN
Instructor in Forge Shop

MCFARLAN, ARTHUR CRANE, A. B., Ph. D.
Professor of Geology, Head of the Department

MCFARLAND, FRANK T., Ph. D.
Professor of Botany, Head of the Department

MCGEE, PHILIP DIXON, B. S. in Commerce
Instructor in Secretarial Science

MCHARGUE, JAMES SPENCER, Ph. D.,
Chemist; Head of Department of Chemistry, Experiment Station

MCINTEER, BERTHUS BOSTON, B. S., M. S., Ph. D.
Associate Professor of Botany

MCINTYRE, ROBSON DUNCAN, B. S., M. S. in Commerce
Professor of Marketing and Salesmanship

---

* On leave 1935-36.

McKENNEY, GARNETT JENNINGS, B. S.
Field Agent in Junior 4-H Club Work, Agricultural Extension Division

McKITRICK, JOHN LESLIE, B. S.,
Field Agent in Agricultural Engineering and Soil Management, Agricultural Extension Division

McLAUGHLIN, MARGUERITE, A. B.
Assistant Professor of Journalism

McVICKER, JAS. R., A. B., A. M., LL. B., S. J. D.
Professor of Law

MAGILL, WILBUR WILLIAM, B. S.
Field Agent in Horticulture, Agricultural Extension Division

MAHAN, CHARLES ALFRED, M. S.
State Agent, Agricultural Extension Division

MANN, FRANK
Athletic Trainer

MANNING, JOHN WALKER, A. B., M. A., Ph. D.
Professor of Political Science; Director, Bureau Government Research

MARRS, ALICE LUCILLE, A. B.
Seed Analyst, Experiment Station

*MARTIN, FRANCES K., A. M.
Kindergarten Critic Teacher

MARTIN, JAMES HENDERSON, Ph. G.
Assistant Chemist, Experiment Station

‡MARTIN, JAMES WALTER, A. B., A. M.
Professor of Economics, Director of Bureau of Business Research

MARTIN, JOSEPH HOLMES, M. S., Ph. D.
Professor of Poultry Husbandry, in Charge of Poultry Husbandry, Experiment Station

MASON, R. BURGESS, B. S. in Ind. Chem., M. S., Ph. D.
Instructor in Chemistry

---

* Resigned June 30, 1936.
‡ On leave 1935–36.

MATEWS, ROBERT,
Inspector Feeds and Fertilizer, Experiment Station

MAXSON, RALPH NELSON, B. S., Ph. D.
Professor of Inorganic Chemistry, Head of the Department

MAXWELL, E. S., M. D.
Part-Time Assistant Professor of Bacteriology

MAY, AUGUSTUS NOAH, B. Ped., B. S.
Professor of Industrial Education, Head of the Department; State Supervisor of Trade and Industrial Education

MAY, JAMES WARREN, M. E.
Assistant Professor of Heating and Ventilating Engineering

MEADER, ARTHUR LLOYD, B. A.
Assistant Chemist, Experiment Station

MEECE, LEONARD E., A. B., M. A.
Assistant, Bureau of School Service

MELCHER, COLUMBUS RUDOLPH, A. B., M. A., LL. B., LL. D.
Professor of German Language and Literature, Emeritus

MELCHER, RUTH, Ph. D.
Instructor in Home Economics

MERIWETHER, HUGH MATHEW, C. E.
Special Lecturer on Architecture

METZGER, HERBERT T., D. V. M.
Assistant Animal Pathologist, Experiment Station

MILLER, HAROLD FRANKLIN, B. S. in Agr.
Assistant to Agronomist, Experiment Station

MILLER, LEONARD, B. S.
Part-Time Instructor in Physical Education

MILLER, RICHARD CLARENCE, M. S.
Field Agent in Animal Husbandry, Agricultural Extension Division

MINER, JAMES BURT, B. S., LL. B., M. S., Ph. D.
Professor of Psychology, Head of the Department; Director of University Personnel Bureau

MITCHELL, JOHN RICHARD, A. B.
Assistant Professor of Chemistry

MITCHELL, JOHN STAPP, M. A.
Mathematics, University High School

MOCK, CLIFTON O'NEAL, B. S. in M. E.
Instructor in Drawing Engineering

MONROE, ZELMA, B. A., B. S.
Assistant State Home Demonstration Agent, Agricultural Extension Division

MOODY, FRANK M., B. S. in M. E.
Assistant in Electrical Engineering Laboratory

†MORELAND, ROY, A. B., LL. B., J. D.
Professor of Law

MORRISON, HENRY BARTLETT, M. S.
Assistant Professor of Dairying

MORSE, HELEN IDE, B. S., M. A.
Music, University School

MORTON, BETSY, M. A.
Commercial Subjects, University High School

MORTON, MARGARET, A. B.
Seed Analyst, Experiment Station

MOSELEY, FRANK O'REAR
Assistant Freshman Football Coach

MUMFORD, MARY, A. B., M. S.
Assistant Professor of Home Economics

**MURRAY, FRANK, A. B., LL. B., S. J. D.
Professor of Law

NEAL, LOIS, M. A.
Part-Time Instructor in English

NEWBURY, EDWARD, M. A.
Instructor in Psychology

NICHOLLS, WILLIAM DURRETT, M. S., Ph. D.
Professor of Farm Management; Head of Department of Farm Economics, Experiment Station

NOE, JAMES THOMAS COTTON, A. M., Litt. D.
Professor of Education, Emeritus

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† On leave 1936-37.
** Acting Dean 1935-36.

NOLLAU, LOUIS EDWARD, M. E.
Professor of Engineering Drawing, Head of the Department

NUTTER, JOHN WILLIAM
Superintendent of Dairy Farm, Experiment Station

O'BANNON, LESTER S., B. M. E.
Professor of Heat–Power Engineering, Head of the Department of Mechanical Engineering

OLNEY, ALBERT JACKSON, M. H., S. M.
Professor of Horticulture, Head of the Department, Experiment Station

OYLER, MERTON DALE, M. S. in Agr.
Instructor in Rural Life Studies; Assistant in Rural Life Studies, Experiment Station

PALMER, EDGAR ZAVITZ, A. B., Ph. D.
Associate Professor of Economics, Acting Director of the Bureau of Business Research

PARDUE, LOUIS ARTHUR, A. B., M. S., Ph. D.
Associate Professor of Physics

*PARKER, ETHEL LEE, M. A.
Professor of Home Economics Education

PATRICK, WELLINGTON, A. B., A. M., Ph. D.
Professor of History of Education

PEAK, DAVID HOWARD, LL. B., A. M.
Business Agent

PECK, ANNA BROWNING, A. M.
Social Science, University High School

PECK, JOSEPH Y.
Assistant, Johnston Solar Laboratory

PEERSON, NELLE, A. B., M. A.
First Grade, University Elementary School

PENCE, MERRY LEWIS, M. S.
Professor of Physics, Emeritus

‡PENCE, SALLIE ELIZABETH, M. A.
Instructor in Mathematics

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* On leave 1935-36.
‡ On leave 1935-36.

PERKINS, FRED, Sergt.
Instructor in Military Science and Tactics

PETER, ALFRED MEREDITH, M. S., Sc. D.
Professor of Soil Technology, Emeritus

PHILLIPS, CARROLL DAVID, M. S.
Assistant in Marketing, Experiment Station

PIGMAN, ARNOLD LEE, A. B.
Instructor in Wood Shop

PITTMAN, WILLIAM H., A. B., LL. B.
Acting Professor of Law

PINNEY, OLIVER H., M. D.
Associate Professor of Hygiene and Physician in Dispensary

PLUMMER, NIEL, A. B., M. A.
Assistant Professor of Journalism

POLK, TASKER PETER, D. V. S.
Field Agent in Veterinary Science, Agricultural Extension Division

PORTER, RICHMOND CLAY, B. S. in M. E., M. E.,
Assistant Professor of Heat-Power Engineering

PORTMANN, VICTOR R., B. J.
Assistant Professor of Journalism

POTTER, MERWIN ELWOOD, B. S., M. A.
Professor of Physical Education, Head of the Department

POUNDSTONE, BRUCE, M. S.
Field Agent, Farm Management, Agricultural Extension Division

PRIBBLE, BIRKETT LEE, A. B.
Assistant Instructor, Football

PRICE, HUGH BRUCE, Ph. D.
Professor of Agricultural Economics, Head of the Department of Markets and Rural Finance, Experiment Station

PRICE, WALTER ALLEN, M. S.
Professor of Entomology; Head of the Department of Entomology and Botany, Experiment Station

PROCTOR, ROY ESTES, M. S.
Extension Economist, Farm Management, Agricultural Extension Division

PRYOR, JOSEPH WILLIAM, M. D.
Professor of Anatomy and Physiology, Emeritus

RAMSAY, BERTRAND PETTUS, A. B., M. S.
Instructor in Physics

RANDALL, FRANK HALL, A. B., LL. B., S. J. D.
Professor of Law

RANDOLPH, GEORGE N., Major Inf., U. S. Army
Assistant Professor of Military Science

RANNELLS, EDWARD WARDER, B. A.
Professor of Art, Head of the Department

RATLIFF, MARGARET M., A. B., M. A.
Instructor in Psychology

†REES, ELIJAH LAYTHAM, C. E., A. M.
Professor of Mathematics

RHOADS, MCHENRY, A. M., Ph. M., LL. D.
Professor of Education, Emeritus

RHOADS, WAYLAND, B. S. in Agr., M. S.
Field Agent in Animal Husbandry, Agricultural Extension Division

*RICE, JOHN HUGHES
Assistant in Steam Laboratory

RICHARDSON, JOHN SHELBY, Mus. B.
Instructor in Applied Music (Piano)

RITCHER, PAUL OSBORN, A. B., A. M., Ph. D.
Assistant Entomologist, Experiment Station

ROBERTS, GEORGE, M. S.
Professor of Agronomy; Assistant Dean, College of Agriculture; Head of the Department of Agronomy, Experiment Station

ROBERTS, JOHN BISSELL, M. S.
Assistant in Markets, Experiment Station

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† On leave 1935-36, 1936-37.
* Died May 6, 1936.

ROBERTS, WILLIAM LEWIS, A. B., A. M., J. D., S. J. D.
Professor of Law

ROBINSON, LEWIS CASS, M. S., Ph. D.
Associate Professor of Geology

*ROGERS, KATHERINE, B. S., M. A.
Home Economics, University High School

ROSS, CLAY CAMPBELL, A. B., Ph. D.
Professor of Educational Psychology, Head of the Department

ROUSE, WILLIAM LEONARD, M. S. in Agr.
Assistant in Farm Management, Experiment Station

RUPP, ADOLPH F., A. B., M. A.
Coach of Varsity Basketball

RYLAND, HOBART, B. A., M. A., Docteur de l'Universite'
Professor of Romance Languages, Head of the Department

SAUNIER, STEPHEN THADDEUS
Instructor in Forge Shop, Assistant Superintendent of Shops

†SCHEIBLA, HARRY DANIELS, Captain, U. S. Army
Assistant Professor of Military Science and Tactics

SCHERAGO, MORRIS, B. S., D. V. M.
Professor of Bacteriology, Head of the Department

SCHICK, BLAINE WILMER, A. B., M. A.
Assistant Professor of Romance Languages

SCUDDER, IRVINE C., Major U. S. Army
Assistant Professor of Military Science

SELLARDS, HENRY GRADY, B. S.
Field Agent in Animal Husbandry, Agricultural Extension Division

SEMMONS, MILDRED, B. S., M. A. in L. S.
Associate Professor of Library Science, Head of Department

‡SERVER, ALBERTA WILSON, M. A., Diploma de Suficiencia, Centro de Estudios, historicos de Madrid
Assistant Professor of Romance Languages

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* On leave 1936-37.
† Transferred June, 1936.
‡ On leave 1936-37.

SHANNON, JASPER B., Ph. D.
Assistant Professor of Political Science

SHANNON, ROBERT SYLVESTA, M. A.
Instructor in English

SHAVER, ROBERT EZEKIEL, C. E.
Assistant Professor of Civil Engineering

SHEDD, OLIVER MARCH, M. S.
Research Chemist, Department of Chemistry, Experiment Station

SHERWOOD, THOMAS C., B. A., M. A., Ph. D.
Assistant Professor of Anatomy and Physiology, Acting Head of Department for 1936-37

SHIPMAN, MARTHA VIRGINIA, B. A.
Literature and Social Science, University Junior High School

SHIVELY, BERNIE, B. S., M. A.
Assistant Professor of Physical Education

SHORT, JOHN ANDERSON, LL. B., Master Sergt. U. S. Army
Instructor in Military Science

SINGER, DAVID NORTON
Instructor in Automotive Engineering

SMATHERS, JAMES B.,
Assistant Field Agent in Cream Grading, Experiment Station

SMITH, CLEO DAWSON, M. A.
Instructor in English

**SOUTH, DUDLEY EUGENE, M. A.
Assistant Professor of Mathematics and Astronomy

** SOUTH, FRANCES
Instructor in Applied Music (Voice)

SPEARS, HOWELL DAVIS, M. S.
Chemist, Feed Control, Experiment Station

SPICER, ROBERT W., M. E.
Instructor in Engineering Drawing

SPICKARD, RONELLA, M. S.
Associate Professor of Home Economics Education

** On leave 1936-37.

STEWART, OLUS JESSE, A. B., M. S., Ph. D.
Associate Professor of Chemistry

STOUT, FLORENCE OFFUTT
Professor of Physical Education

**STRICKLAND, HELEN, A. B., M. A.
Fourth Grade, University Elementary School

STRIPLIN, CHARLES F.
Assistant Trainer, Custodian Athletic Equipment

*STURGEON, NEWTON R.
Instructor in Foundry

SULLIVAN, RODMAN, A. B., A. M.
Associate Professor of Economics

SULZER, ELMER GRIFFITH, A. B.,
Director of Publicity Bureau

SUTHERLAND, WILLIAM ROBERT, A. B.
Assistant Professor of English

TAYLOR, ESTHER M.
Part-Time Instructor in Sociology

TAYLOR, JESSIE TERRY
Seed Analyst, Experiment Station

TAYLOR, WILLIAM SEPTIMUS, M. S., Ph. D.
Professor of Education, Dean of the College of Education

TERRELL, DANIEL VOIERS, C. E.
Professor of Civil Engineering, Head of the Department

TERRELL, GLANVILLE, A. B., Ph. D.
Professor of Philosophy, Emeritus

TERRELL, WILLIS GRANVILLE
Inspector of Feed and Fertilizer, Experiment Station

TERRY, GEORGE SILVESTER, M. A.
Bacteriologist, Public Service Laboratories, Experiment Station

THOMAS, FRANK CARLTON, A. B., M. D.
Part-Time Physician, University Dispensary

** On leave 1936-37.
* Died October 12, 1935.

THRELKELD, DOROTHY, B. S. in H. E.
Field Agent in Junior Club Work, Agricultural Extension Division

THURMAN, GORDON OWEN
Head of Department of Practical Mechanics, Superintendent of Shops

TILSON, HOWARD GILBERT, B. S. in Agr.
Nursery Inspector, Experiment Station

TODD, JARVIS, M. A.
Assistant Professor of Physics

TOLMAN, WILLIAM A., A. B., M. A.
Assistant Professor of Economics

TOPHAM, LAURA, A. B., M. A., C. E. F.
French, University School

TRIMBLE, ERNEST G., A. B., Ph. D.
Assistant Professor of Political Science

TRIPLETT, AUSTIN, Major U. S. Army
Assistant Professor of Military Science

TUCKER, THOMAS C.
Instructor in Wood Shop

TURNER, JOB DARBIN, B. Ped., LL. B.
Head of the Department of Feed Control, Experiment Station

TUTHILL, EDWARD, A. B., Ph. D.
Professor of History, Head of the Department

TUTTLE, FRANKLIN ELLIOTT, M. A., Ph. D.
Professor of Chemistry, Head of the Department, Emeritus

TWOMEY, TED ALOYSIUS, B. C. S.
Assistant Varsity Football Coach

VALLEAU, WILLIAM DORNEY, Ph. D.
Professor of Plant Pathology; Pathologist, Experiment Station

VANDENBOSCH, AMRY, Ph. D.
Professor of Political Science, Head of Department

VAUGHN, ERLE CLEVELAND, A. B.
Field Agent in Improved Seed Production, Agricultural Extension Division

VAUGHN, MARY BELLE, B. S., M. S.
Home Economics, Bryan Station High School

VENNES, L. A., M. S.
Field Agent in Markets, Agricultural Extension Division

*WADE, GERTRUDE, E. J., B. A., B. S., A. M.
Associate Professor of Home Economics

WALTMAN, CLAIR SMITH, M. S.
Assistant Professor of Horticulture; Assistant in Horticulture, Experiment Station

WARBURTON, F. W., A. B., Ph. D.
Associate Professor of Physics

WARD, WILLIAM S., A. B., M. A.
Instructor in English

WATKINS, ISAAC G.
Assistant in Electrical Laboratory

WATSON, WALTER E., B. S., M. A.
Part-Time Instructor in Psychology

WEAVER, RALPH HOLDER, M. S., Ph. D.
Associate Professor of Bacteriology

WEBB, LOUISE GRAY
Instructor in Engineering Drawing

WEBB, WILLIAM SNYDER, M. S.
Professor of Physics, Head of the Department; Professor of Archaeology; Head of the Department of Anthropology and Archaeology

WELCH, EARL GEORGE, B. S. in Agr. Eng.
Field Agent in Agricultural Engineering, Agricultural Extension Division

WELDON, MYRTLE, A. M.
State Leader of Home Demonstration Agents, Agricultural Extension Division

WEST, MARY LUCILLE, M. A.
Languages, University High School

WHITAKER, PAUL K., A. B., M. A.
Instructor in German

* Resigned.

WHITE, M. M., M. A., Ph. D.
Professor of Psychology

WHITE, HELEN MCMICHAEL, B. S.
Assistant State Home Demonstration Agent, Agricultural Division

WHITEHOUSE, JAMES WILLIAM, M. S.
State Leader 4-H Club Work, Agricultural Extension Division

WIEST, EDWARD, A. M., Ph. D.
Professor of Economics, Dean of the College of Commerce

WIGGINS, G. H., B. S.
Forester, Robinson Substation

WILFORD, EDWARD JAMES, M. S. in Agr.
Associate Professor of Animal Husbandry, in Charge Meats Laboratory; Assistant in Animal Husbandry, Experiment Station

*WILKINS, JAMES E., E. E.
Instructor in Electrical Engineering

WILLIAMS, JOHN DAVIS, A. B., M. A.
Associate Professor of Education, Director University High School and University Elementary School

WILLIAMSON, MARY LOIS, B. S., M. S.
Home Economics, University High School

WILLSON, LOUISE, A. B., M. A.
Third Grade, University Elementary School

WILSON, WILLIAM CLARK, B. S.
Assistant State Agent, Agricultural Extension Division

WOOD, LUCY GRAGG, A. B., B. S.
Librarian, University High School and University Elementary School; Part-Time Instructor in Library Science

WOODS, RALPH HICKS, M. A., Ph. D.
Associate Professor of Agricultural Education

WRATHER, STEPHEN ELVIS, M. S.
Assistant in Markets, Experiment Station

WYNNE, CHESTER ALLEN, LL. B.
Director of Athletics

---

* Resigned June 30, 1936.

YATES, LAWRENCE, M. A
Assistant Professor of English

**YOUNG, DAVID M., B. S., M. S.
Instructor in Geology, Curator, Museum

YOUNG, DAVID, W., B. S., M. S.
Assistant in Chemistry, Experiment Station

ZEMBROD, ALFRED CHARLES, M. A.
Professor of Romance Languages and Literature, Emeritus

** Resigned January 1, 1936.

ORGANIZATION OF THE ADMINISTRATIVE STAFF

THE COLLEGES

THE COLLEGE OF ARTS AND SCIENCES

PAUL PRENTICE BOYD, M. A., Ph. D., Dean
IDIE LEE TURNER, B. S., Secretary

THE COLLEGE OF AGRICULTURE

THOMAS POE COOPER, B. S. in Agr., Dean and Director
GEORGE ROBERTS, B. Ped., M. S., Assistant Dean
LEVI JACKSON HORLACHER, M. S. in Agr., Assistant to the Dean
ELIZABETH SLOAN, A. B., Secretary

THE COLLEGE OF ENGINEERING

†JAMES HIRAM GRAHAM, B. C. E., C. E., Dean
WILLIAM EDWIN FREEMAN, A. B., E. E., Assistant Dean
ETHEL JELLEY, Secretary

THE COLLEGE OF LAW

*ALVIN E. EVANS, M. A., Ph. D., Dean
FRANK, MURRAY, A. B., LL. B., S. J. D., Acting Dean 1935-36
DOROTHY SALMON, B. S., Secretary

THE COLLEGE OF EDUCATION

WILLIAM SEPTIMUS TAYLOR, A. M., Ph. D., Dean
LUCY BLAKEMORE GARDNER, M. A., Secretary

THE COLLEGE OF COMMERCE

EDWARD WIEST, A. M., Ph. D., Dean
JANE EARLE MIDDELTON, A. B., Secretary

THE GRADUATE SCHOOL

WILLIAM DELBERT FUNKHOUSER, M. A., Ph. D., Dean
MARY FRANCES KRIEGEL, A. B., Secretary

THE SUMMER SESSION

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

THE UNIVERSITY EXTENSION

LOUIS CLIFTON, M. A., Director

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† Elected June, 1935.
* On leave 1935-36.

GENERAL

OFFICE OF THE PRESIDENT

FRANK LEROND MCVEY, B. A., Ph. D., LL. D., Hum. D., President of the University
JANE J. NICHOLS, Secretary
DOROTHY WALKER, A. B., Stenographer

OFFICE OF THE BUSINESS AGENT

DAVID HOWARD PEAK, A. M., Business Agent
LINN HEMINGWAY MCCAIN, Accountant
MINNIE PHERIGO, Order Clerk
MABEL LEWIS HANKES, Assistant Accountant
RUTH EARNEST, Voucher Clerk
EMMA G. MERRELL, Ledger Clerk
MARGARET LEWIS, Cashier
VIRGINIA BAXTER EARNEST, Clerk

OFFICE OF THE REGISTRAR

EZRA L GILLIS, A. B., Registrar and Secretary of the Senate
MAPLE MOORES, Secretary and Officer of Admissions
HELEN HAYDEN STANLEY, B. S., Recorder
DOROTHY LINVILLE, A. B., Assistant Officer of Admissions
JESSIE WILSON, M. A., Assistant Recorder
BESSIE O. CLEVELAND, Transcript Clerk
RUTH TRUMBO, Stenographer
*QUEENIE MORROW GRABLE, M. A., Assistant Secretary
SARAH UTTERBACK, M. A., Statistical Clerk
MARY HESTER COOPER, A. B., M. A., Clerk

DEAN OF MEN

T. T. JONES, M. A., Ph. D., Dean of Men
BESS PARRY, A. B., Secretary

DEAN OF WOMEN

SARAH GIBSON BLANDING, A. M.
SARAH BENNETT HOLMES, A. B., Assistant Dean
ANITA GARDNER, Secretary

SECRETARIAL AND CLERICAL STAFF

NANCY BENTLEY, Department of Mining and Metallurgical Engineering.

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* On leave March 1-Sept. 1, 1936.

MARTHA BARTON, Department of Mechanical Engineering.
CASSIE PACE BOBBITT, Bureau of School Service.
†OLIVE GRESHAM BOWDEN, Office of Dean of College of Education.
ELISE ADELE BUREAU, A. B., B. S. in M. E., Administrative Offices of College of Engineering
GREENWDOOD COCANOUGHER, Secretary Athletic Association
**VIRGINIA BOYD COX, A. B., Secretary, Music Department
CYNTHIA DAGLEY, Department of History of Education
WILLENA DUNCAN, Office of Dean of College of Arts and Sciences
MARY DUNNE, A. B., Department of Military Science
LOUISE EWING, Department of Mechanical Engineering
KATHERINE HAMMACK, A. B., Secretary, Placement Bureau
WILLA BELLE HAMILTON, B. S., Department of Home Economics Education
MARGARET BELL HUMPHREYS, Bureau of School Service
JESSIE LEE JONES, Art Department (Part Time)
JUDITH KEY, Psychology Department
MARY KERR, A. B., Office of Director of University Training School
EDNA MAY KIRK, Office of Director of Summer Session
EDITH LOVE, Department of Chemistry
CECIL MCCONATHY, Department of Civil Engineering
W. D. MCDANIEL, Military Storekeeper
**MARJORIE MITCHEL, A. B., Department of Physics
MARGARET O'CONNELL, A. B., Secretary, Physical Education Department
BEATRICE R. SKIDMORE, Administrative Offices, College of Engineering
MARIE DICKERSON STEPHENSON, Department of Vocational Education
VIRGINIA DIBLER THORNE, A. B., Bureau of Business Research
BILLY WHITLOW, A. B., Summer Session, Educational Psychology and Philosophy of Education Departments.
ANNE LEWIS WILSON, B. S. in Com., Office of Dean of College of Education.

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† Resigned May 1, 1936.
** Resigned June 30, 1936.

SECRETARIAL AND CLERICAL STAFF OF THE COLLEGE OF AGRICULTURE

SECRETARIAL STAFF

Oleva L. Ginocchio, Secretary to the Dean and Director
Susan Kidd Slaughter, Secretary to Director of Extension
Elizabeth Sloan, A. B., Office of the Dean

CLERICAL STAFF

Teaching Division

Sophia Combs
Mary Lou Guyn

Experiment Station

Katherine Bascom
Ethel V. T. Caswell
Jessie Frazer Caswell
Garnett Rainey Chase
Mary Dolan
Katherine E. Fried
Francis Fugazzi
Sarah K. Golden
Lucille Graves
Frances Irvin, A. B.
Nellie Mae Lawrence
Anne McCullough
Mariana Lancaster, A. B.
Fanny Bush Merritt
Margaret G. Morris
Loula Florence Pharis
Mattie Ramsey
Roxie H. Robinson
Betty Roser
Elizabeth Snowden
Mary Bronston Utterback
Anna Wallis, A. B.
Elizabeth Wyatt

Extension Division

Dora Baker
Lucile Bush
Katherine Fried
Marietta Gerard Meeks
Hazel Moores
Margaret C. Ryan
Anita Sallee
Violette Shankland
Virginia Singleton
Mary E. Stilwell

STENOGRAPHIC BUREAU

Mary Johnston, Head Stenographer
Mabel Thacker Allen, Stenographer
Jessie Lee Jones, Stenographer (Part Time)
Mildred Morris, A. B., Stenographer
Katherine W. Winfree, Mimeograph Operator

UNIVERSITY COMMONS

L. Maye Hoover, M. S., Director
Elizabeth Gault, Assistant
Elizabeth Hatcher, Assistant

POST OFFICE

Carrie Bean, Postmaster
Eloise Gray Webb, Assistant Postmaster

CAMPUS BOOK STORE

James E. Morris, A. B., Manager
Lloyd Q. Mautz, Assistant Manager
Bess Dudley Mayes, Secretary

LIBRARIES

Margaret Isadora King, A. B., B. S., University Librarian
Hallie Day Blackburn, A. B., Asst. Cataloger
Bessie M. Boughton, A. B., B. S. in L. S., First Asst. Cataloger
Jacqueline Page Bull, A. B., Secretary to Librarian
Norma Beatrice Cass, A. B., B. S., M. A. in L. S., Reference Librarian
Daisy T. Croft, A. B., Head of Circulation Department
Mary Elizabeth Hanson, A. B., B. S., Periodical Librarian
Margery P. Hornsby, B. L. E., A. B., Head, Order Department
Catherine Lynn Katterjohn, A. B., B. S. in L. S., Assistant Cataloger
Jane Ann Mathews, A. B., Acting Assistant in Reference Department
Annie Sue Montgomery, A. B., B. S., Asst. Reference Librarian
Mildred Semmons, A. B., Head of Department of Library Science
Ellen B. Stutsman, A. B., Head Cataloger
Mary Honey Sullivan, Assistant Order Department
Artie Lee Taylor, Librarian in charge Reserved Book Room
Margaret Helmsing Tuttle, A. B., B. S. in L. S., Librarian in charge of Department Libraries
Emma Jane Walker, B. S., Order Clerk
Clara W. White, Librarian in charge of Educational Collection
Annette Zink Davis, A. B., LL. B., Law Librarian
Grace L. Snodgrass, A. B., Librarian, Experiment Station
Lucy Gragg Wood, A. B., B. S., Librarian Training School Library

UNIVERSITY EXTENSION

Louis Clifton, M. A., Director
W. Gayle Starnes, A. B., in charge of Visual Education
Maude Ward Lafferty, Secretary, Division of Women's Club Work
Mildred Lewis, B. S. in Music, Instructor of Music
Effie Cox Starns, A. B., M. A., Instructor
Bethel Lipps, Stenographer
Beatrice Jacobs, Stenographer
Eva F. Downing, A. B., Stenographer

UNIVERSITY Y. M. C. A.

Bart Nixon Peak, A. B., LL. B., Secretary
Martha Huber, Assistant

UNIVERSITY Y. W. C. A.

Augusta Roberts, A. B., Secretary

RESIDENCE HALLS

*Eda M. Giles, Manager of Residence Halls for Women
Margaret Chenault Crutcher, Men's Residence Halls
Ethel R. Lebus, Woman's Building

OFFICE OF SUPERINTENDENT OF BUILDINGS AND GROUNDS

M. J. Crutcher, B. M. E., Superintendent
Thos. D. Boyd, B. S., Assistant
Laura Shade, Secretary
Claude Dickerson, Steam-Fitting and Plumbing Foreman
Carvel Hensley, Painter Foreman
G. C. Jones, Carpenter Foreman
Jullius Rominger, Gardener
L. D. Kitchen, Electrician
Howard Jones, Custodian Men's Gymnasium
John Heckler, Supervisor of Janitors
H. O. Bradshaw, Labor Foreman

UNIVERSITY DISPENSARY

John S. Chambers, M. D., Director
Oliver H. Pinney, M. D., Associate Director
F. C. Thomas, M. D., Physician
George Fergison Doyle, M. D., Physician

* On leave 1936-37.

†Wilbur A. Heinz, A. B., M. S., Assistant Professor
Elizabeth Desha, Registered Nurse
Lillie Davis, Registered Nurse
W. Brooks Hamilton, B. S. A., M. S., Ph. D., Bacteriologist and Assistant Professor
Marvin Dunn, B. S., Technician
Katherine W. Owens, Secretary

BUREAU OF MINERAL AND TOPOGRAPHICAL SURVEY

Arthur C. McFarlan, A. B., Ph. D., Director and State Geologist
David M. Young, A. B., M. S., Curator of Museum and Assistant Geologist

ALUMNI ASSOCIATION

Robert K. Salyers, A. B., Secretary

PUBLICITY BUREAU

Elmer G. Sulzer, A. B., Director
Helen King, A. B., Assistant

† On leave 1935-36.

THE UNIVERSITY SENATE

The Senate consists of the President, the Deans of the various Colleges, the Registrar, the Director of the Experiment Station, the Director of Extension, the Dean of Men, the Dean of Women, Professors, Associate Professors, Assistant Professors, the Business Agent, and the Librarian.

THE UNIVERSITY COUNCIL

The Council consists of the President (Chairman), the Deans of the Colleges, the Dean of the Graduate School, the Dean of Men, the Dean of Women, the Registrar (secretary ex officio) together with four members elected by the University Senate.

THE ASSEMBLY

The University Assembly consists of all officers of instruction of the rank of instructor and above, the Directors of Divisions and Stations, those engaged in state service work under the direction of the President, the Registrar, the Librarian, the Business Agent, and such other administrative officers as shall be designated by the President or Senate or Trustees. It meets near the beginning of each semester, at the call of the President or at any time upon the written request of ten members. The Assembly may formulate its attitude upon any matter affecting the institution and may make recommendation to the Senate, or the Board of Trustees, or the President, or the Council.

BOARD OF CONTROL—RESIDENCE HALLS FOR WOMEN

Dean Sarah Blanding (Chairman), Mrs. Chas. J. Smith, Mrs. P. P. Boyd.

The President is ex officio member of all committees.

COMMITTEES OF THE SENATE

1936-37

1. Accredited Relations

   P. P. Boyd (Chm.), Ezra L Gillis, W. D. Funkhouser, Edward Wiest, W. S. Taylor, Alvin Evans.

2. Athletics

   W. D. Funkhouser (Chm.), Enoch Grehan, P. P. Boyd, E. A. Bureau, M. E. Ligon.

3. Auditing Committee for Student Enterprises
   H. H. Downing (Chm.), H. E. Curtis, D. H. Peak, Robt. Haun.

4. Commencement Exercises
   M. E. Ligon (Chm.), W. L. Roberts, Ezra L Gillis, Brinkley Barnett, Sarah G. Blanding, Eda M. Giles, B. E. Brewer, Flora LeStourgeon, R. D. McIntyre, A. J. Olney.

5. Duplication of Courses
   Ezra L Gillis (Chm.), Jesse Adams, C. S. Crouse, E. S. Good, A. E. Evans, W. S. Webb, R. N. Maxson.

6. Extension Committee
   Jesse E. Adams (Chm.), E. F. Farquhar, W. D. Funkhouser, W. W. Jennings, Louis Clifton, George Roberts.

7. Grants and Aids
   D. V. Terrell (Chm.), S. A. Boles, B. L. Pribble, C. O. Wynn, T. T. Jones.

8. Library
   George K. Brady (Chm.), J. W. Martin, Edward Tuthill, C. S. Crouse, John Kuiper, T. D. Clark.

9. Music
   W. E. Freeman (Chm.), C. A. Lampert, Edward Wiest, Wellington Patrick, Elmer G. Sulzer, Frank C. Fowler, R. D. McIntyre.

10. Publication of Monographs
    Edward Wiest (Chm.), E. F. Farquhar, George Roberts, A. C. McFarlan.

11. Rules
    P. P. Boyd (Chm.), Ezra L Gillis, W. E. Freeman, Edward Wiest, W. S. Taylor, Sarah G. Blanding, L. J. Horlacher, Frank H. Randall.

12. Scholarship and Attendance
    P. P. Boyd, T. T. Jones, L. J. Horlacher, Alvin E. Evans, W. E. Freeman, Ezra L Gillis, W. S. Taylor, Edward Wiest, Sarah G. Blanding.

13. Student Social Affairs
    T. T. Jones (Chm.), A. J. Olney, Sarah G. Blanding, Eda M. Giles, B. E. Brewer.

14. Student Welfare

J. S. Chambers (Chm.), T. T. Jones, J. R. Johnson, Florence O. Stout, S. A. Boles, Sarah G. Blanding, Eda M. Giles, P. P. Boyd, Marguerite McLaughlin, Bart Peak, O. H. Pinney.

15. Study of Ability and Training

J. B. Miner, Edw. Wiest, Ezra L Gillis, C. C. Ross.

Part II
GENERAL INFORMATION

HISTORY AND LOCATION OF THE UNIVERSITY OF KENTUCKY

The University of Kentucky has had an interesting history. It began as a part of the Kentucky University under a cooperative plan authorized by the Legislature in 1865. The purpose of this plan, directed by John B. Bowman, was to unite sectarian and public education under one organization. This experiment was tried for a number of years. The federal funds authorized under the Morrill Act were used to develop agriculture and mechanical arts in Kentucky University. In 1878 when the people of Kentucky decided to establish an educational institution of higher learning of their own, the College of Agriculture and Mechanical Arts was erected on land given to the State by the city of Lexington and the county of Fayette. Thirty years later the Legislature gave a new title to the institution; it was called the State University of Kentucky. At the same time the Legislature granted additional funds for the State University. In 1916 the name was again changed to the University of Kentucky and additional maintenance was arranged by legislative act.

This institution at Lexington has a campus of 94 acres with forty buildings, and an Experiment Station Farm of 600 acres; a forest reserve and sub-experiment station at Quicksand of 15,000 acres, and a sub-experiment station at Princeton of 600 acres.

Lexington, the location of the University, is reached by busses, and by railroads: from the north by the Southern and L. & N. railroads, from the east and west by the L. & N. and C. & O., and from the south by the Southern and the L. & N. railroads.

Thru the county and the home demonstration agents the investigations of the Kentucky experiment and sub-experiment stations, the resources of the College of Agriculture are made available to the farmers and homemakers of Kentucky.

The various institutes, conferences, and short courses under the conduct of the University, touch the lives of many of Kentucky's citizens. Extension classes in stragetic centers are held during the year. The University Extension Department furnishes to the women's clubs and other organizations of the State suggestions for programs and speakers. In fact, the University of Kentucky is at all times concerned with the life of the State, and is ready to be of service, whenever possible, in helping to solve the problems of Kentucky.

BUILDINGS

The buildings of the University are listed below and may be located on the map facing page one of this catalog.

Administration Building
Law Building
Kastle Hall
Mechanical Hall
Woodshop and Machine Shop
Science Hall
Gymnasium and Armory
Frazee Hall
University Museum
Superintendent's Residence
President's Residence
Norwood Hall
Mining Laboratory
Agricultural Hall
Civil Engineering and Physics Building
University Library
McVey Hall
College of Education Buildings
Memorial Hall
Observatory
White Hall
Neville Hall
Gymnasium for Women
Men's Gymnasium
Women's Building
Patterson Hall
Smith Hall
Boyd Hall
Scovell Hall
Insectary and Conservatory
Animal House
Residences for Men: Breckinridge, Bradley and Kincaid Halls
Art Center and Guignol Theater
Dairy Building
Judging Pavilion
Agricultural-Engineering Building
Animal Laboratory

The University Library, of Georgian Colonial architecture and built of red brick with Bedford stone trimmings, is situated on the east end of the campus. The building was opened for use in 1931 and makes available 700 seats in various reading rooms, stacks, and seminar rooms. For advanced students, special facilities are afforded in the immediate vicinity of the books, and ample provisions are made for serving undergraduates.

The libraries of the University contain 165,000 volumes, of which 14,000 are deposited in 10 department libraries connected with laboratories and classrooms. The library receives regularly 1,172 periodicals and is a depository for U. S. government publications.

The Patterson Library, gift of former President Patterson, is housed on the fourth floor of the General Library. The Browsing Room, on the second floor, affords a comfortable place for relaxation in leisure moments and for the reading and enjoying of the special open shelf collection of interesting books. The display tables and wall cases located

on the first floor, contains exhibits of interesting and rare books or museum objects owned by the University or loaned for its use.

In addition to the book facilities of the General Library and the department libraries, the faculty and students may use the closely associated Law Library, the Agricultural Experiment Station Library, the Training School Library, the Lexington Public Library, with its especially fine collection of old newspapers, and the Transylvania University Library, rich in early medical books and other historical material.

A guide to the use of the library is provided by a bulletin, available at the circulation desk, which presents the rules and regulations governing its use.

A staff of trained librarians is ready and willing to serve all members of the University and the general public.

ADMISSION TO UNIVERSITY

Graduates of high schools accredited by the Association of Kentucky Colleges are admitted to the University on certificate, provided they have fifteen credits of high school work acceptable to the University. In these fifteen credits five basic units are required; three in English, one in algebra and one in plane geometry. The other ten units may be selected from groups of foreign languages, history and civics, education, mathematics and sciences; from vocational subjects four units may be offered. If a student expects to enter the College of Engineering it is recommended that he offer one unit in physics, one and one-half units in algebra and one-half unit in solid geometry. All applications for admission must be made to the Registrar of the University of Kentucky. Credits should be sent in before the opening of the term. Students who come from high schools not on the accredited list may enter if they successfully pass examinations for admission. Applicants for admission to the freshman class who are not residents of Kentucky and who do not rank in the upper two-thirds of their graduating class must also pass the examination for entrance.

ADMISSION TO THE FRESHMAN CLASS

An applicant for admission to the freshman class of any of the Colleges of the University except Law must offer credit for fifteen units of high school or other secondary school work, so chosen as to include the five basic units prescribed by all the colleges. Only students who hold certificates of graduation from an accredited high

school will be admitted without examination. No student will be admitted with less than fifteen units.

ADMISSION TO THE COLLEGE OF LAW

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

ADMISSION TO THE COLLEGE OF EDUCATION

For admission to the College of Education the applicant must have completed sufficient college work to be classified as a junior. This change is to conform to the ruling of the Council on Public Higher Education to the effect that all graduate work in state institutions is to be centered at the University of Kentucky and that the first two years work in education is to be done at the State Teachers Colleges.

ADMISSION TO ADVANCED STANDING

Candidates who can present equivalents of any part of the college work may secure advanced standing and thereby reduce the number of hours required for graduation. They may secure this advanced standing by one of two methods:

a—By examination on each subject for which credit is desired.

b—By transfer from a college or university. An official statement must be submitted to the Registrar certifying in detail the work for which credit is desired. Credit is not allowed on transfer for work done with the lowest passing grade.

OUTLINE OF ENTRANCE REQUIREMENTS

The figures indicate the maximum and minimum number of units that may be offered in each subject.

1. Basic Units—Required by all colleges.

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

2. Elective—In addition to the units required under 1, a sufficient number of units to make a total of fifteen must be offered from Groups A and B, except that not more than four units may be offered from Group B.

Group A

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

Group B

(Only four units may be offered in this group.)

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

The minimum amount of credit allowed in any subject will be one-half unit.

NOTE.—It is strongly recommended that a student desiring to enter the College of Engineering offer for entrance one unit in Physics, one and one-half units in Algebra, and one-half unit in Solid Geometry. If this is not done, he will be required to carry additional courses in college on these subjects to make up the deficiency, which may delay his graduation.

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* Not less than one unit in Foreign Languages will be accepted.

† Students offering credit in Problems of Democracy may not offer credit in Sociology, Economics, and Civics.

‡ Not more than one unit may be offered for any one subject in Agriculture and Home Economics.

LIVING CONDITIONS AT THE UNIVERSITY

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

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

The University does not maintain dining halls in the men's dormitories. However, the University Commons, located on the third floor of McVey Hall, serves excellent and inexpensive meals. The Commons is conveniently located and students may easily get their meals there.

Many of the householders living around the University rent rooms to students at reasonable rates. The fraternities have their own houses and provide room and board for their members at moderate cost. Board may be had at private houses for from $4.50 to $7.00 a week.

CARE OF THE STUDENT

There are two administrative officers at the University of Kentucky to assist students with their problems, to aid them in their adjustment to College life, and to supervise them in matters of discipline. These officers are the Dean of Men and the Dean of Women. The Dean of Men is Professor T. T. Jones and the Dean of Women, Miss Sarah G. Blanding. The University endeavors to guard from excesses of all kinds the students who come to it, yet in order that the students may obtain the greatest self-development, the University wishes at the same time to give them a reasonable amount of freedom.

The University feels a special obligation to look after the health of the students; it has, therefore, established a dispensary under the

direction of able medical men. This dispensary which occupies the lower floor of Neville Hall is open to students every week day of the College year. No fee is charged except a small amount included in the matriculation fee at the opening of the University sessions. The staff consists of the director, Dr. J. S. Chambers, and one full-time physician, Dr. O. H. Pinney, two part-time physicians, Dr. F. C. Thomas, eye specialist, Dr. Geo. F. Doyle, ear, nose and throat specialist. In addition there are two registered nurses and a technician. The dispensary has X-ray machines and other laboratory equipment that would be a credit to any first class clinic. The medical staff of the University, without charge, call on students who are ill in their rooms.

FEES AND EXPENSES PER SEMESTER

Total Fees for Regular Students

	*Registration Fee	Incidental Fee	Total
(Residents of Kentucky)			
All Colleges except Law	$5.00	$42.00	$47.00
College of Law	5.00	45.00	50.00
(Non-Residents)			
In all Colleges (in addition to other fees)		13.00	
(Part-Time Students)			
Undergraduate (except Law)	2.00	4.00 per cr. hr.	
Graduate and Law	2.00	5.00 per cr. hr.	
(Non-Residents)			
Undergraduate (except Law)	2.00	5.00 per cr. hr.	
Graduate and Law	2.00	6.00 per cr. hr.	
(Auditors)			
In lecture and recitation courses	2.00	1.00 per cr. hr.	
In studio and laboratory courses	2.00	4.00 per cr. hr.	

Graduation Fee.—Candidates for the bachelor's degree will be charged a graduation fee of $10.00. This will include the rental of cap and gown, diploma fee and senior dues. Candidates for the Master's degree will be charged a fee of $15.00, which will include the above and in addition the candidate will be presented with the Master's hood.

SPECIAL FEES FOR CANDIDATES FOR THE DEGREE B. S. IN MUSIC

$25.00 per semester for each student for four-credit course in Applied Music.

* The registration fee is payable each semester by all students and is not returnable.

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

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

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

FEES FOR SPECIAL PRIVILEGES

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

Late Classification. Students who fail to arrange classification within the scheduled time will be charged a fee of $1.00.

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

Changes in Classification. After the second Monday of the semester a fee of $1.00 will be charged for a change in schedule.

Special Examination. A fee of $2.00 will be charged for a special examination in a single course. For entrance examinations taken after the regular period, a fee of $5.00 will be charged.

Room and Board. Room and board in the residence halls for women is $260 a year, payable quarterly in advance.

Rooms in the Men's Residence Halls range from $37.50 to $49.00 per semester.

General Deposit. A general deposit of $6.00 will be required of all students, this to be returned at the end of the year less any charges that may be assessed against it. This deposit takes the place of a number of deposits formerly required, with the exception of room reservation.

Privileges Granted Ex-Service Men

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

Privileges Granted Children of Ex-Service Men

Children not under sixteen years of age and not over twenty-one

years who have had their homes in Kentucky for the preceding twelve months and whose fathers were killed in action or died from other causes in the World War from April 6, 1917, to July 2, 1921, while serving in the army, navy or marine corps of the United States are entitled to receive aid under Sections 4376b-11 to 4376b-13, inclusive, of the 1930 Supplement to Baldwin's Edition of Carroll's Kentucky Statutes. Each war orphan is entitled to receive not more than $150 a year, this fund to be used in attending state maintained educational or training institutions and for the sole purpose of providing for matriculation fees, board, room rent, books and supplies. For this privilege, application must be made to the State Board of Education, Frankfort, Ky.

Refunds

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

Marking System

Results of work will be recorded in the Registrar's office as follows:

A. Exceptionally high quality, valued at 3 points for each credit.
B. Good, valued at 2 points for each credit.
C. Fair, valued at 1 point for each credit.
D. Unsatisfactory, indicates a deficiency and gives no points but gives credit for graduation if with such credits the student's standing is 1 or more.
E. Failure, valued at 0 credits and 0 points.
I. Incomplete.
X. Absent from examinations.

The *standing* of a student is defined as the ratio of his total number of points to his total number of credits. For example, a student who makes an average mark of C thruout his course of 120 semester hours, would have 120 points and 120 credits, and a standing of *one*. An average mark of B would give the student 240 points and 120 credits and a standing of *two*. When a semester's work is to be considered, "standing" is understood to be the ratio of the number of points gained to the number of credits scheduled.

Probation

A regular student who fails to pass in three-fourths of the normal load required by his college in his preceding year (preceding semester

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

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

Definition of a Credit

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

RESIDENCE REQUIREMENTS FOR GRADUATION

Two semesters of work at the University of Kentucky will satisfy the residence requirements for the bachelor's or the master's degree. Three summer terms are considered equivalent to one semester. For the bachelor's degree thirty semester credits must be completed in the senior year (the work to be done in the college from which the student is to be graduated). For the master's degree at least twenty-four credits must be completed in addition to the thesis.

Degrees

The following degrees will be conferred upon undergraduates who have completed the work as prescribed in the various colleges:

Bachelor of Arts (A. B.)
Bachelor of Arts in Journalism (A. B. in Jour.)
Bachelor of Science in Commerce (B. S. in Com.)
Bachelor of Science (B. S.)
Bachelor of Science in Industrial Chemistry (B. S. in Ind. Chem.)
Bachelor of Science in Medical Technology (B. S. in Med. Tech.)
Bachelor of Arts in Education (A. B. in Educ.)
Bachelor of Science in Agriculture (B. S. in Agr.)
Bachelor of Science in Home Economics (B. S. in H. E.)
Bachelor of Science in Music.
Bachelor of Laws (LL. B.)
Bachelor of Science in Architectural Engineering (B. S. in A. E.)
Bachelor of Science in Electrical Engineering (B. S. in E. E.)

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

GENERAL INFORMATION

The following advanced degrees are conferred in the Graduate School:

Master of Arts (A. M.)
Master of Arts in Education
Master of Science (M. S.)
Master of Science in Agriculture (M. S. in Agr.)
Master of Science in Civil Engineering (M. S. in C. E.)
Master of Science in Education
Master of Science in Electrical Engineering (M. S. in E. E.)
Master of Science in Mechanical Engineering (M. S. in M. E.)
Master of Science in Metallurgical Engineering (M. S. in Met. E.)
Master of Science in Mining Engineering (M. S. in E. M.)
Civil Engineer (C. E.)
Mechanical Engineer (M. E.)
Electrical Engineer (E. E.)
Mining Engineer (E. M.)
Doctor of Philosophy (Ph. D.)

For further information concerning advanced degrees, see statement of the Graduate School.

SCHOLARSHIPS AND PRIZES

General

The Algernon Sidney Sullivan Medallions (Three)
Women's Self Government Association Prize ($100)
Young Men's Christian Association Key (Gold Key)
Graduate fellowships and scholarships

College of Agriculture

Alpha Zeta (Medal)
Block and Bridle Cups
Phi Upsilon Omicron (Medal)
James B. Haggin Memorial Essay Contest

College of Arts and Sciences

The Charles S. Brent Memorial Prize in American History
The Bennet Prizes

Mortar Board Prizes (Two Cups)
Members of University Debating Team
Interscholastic Tournament Prizes

English Department

Cale Young Rice Prizes ($10 each)
The Chi Delta Phi Prizes ($10 each)
Kentucky Kernel Cup
Sigma Delta Chi Scholarship Keys

Military Department

American Legion Trophy
Colonel Freeman Cup and Streamer
Lafeyette Hotel Cup
Lexington Herald Cup
Lexington Leader Cup
Phoenix Hotel Cup
Reserve Officers Training Corps (Honor Graduates)
Reserve Officers' Association of Central Kentucky
Rotary Citizenship Trophy
Scabbard and Blade Cup
University Cup

Romance Language Department

French Essay Prize ($25)

College of Commerce

The Chi Omega Sorority Prize ($25.00)

College of Engineering

E. G. Ellis Prize ($100)

College of Law

The Lafferty Medal

Loan Funds

General Loan Fund
Alumni Loan Fund
Skain Loan Fund
Hughes Loan Fund
Lexington Kiwanis Loan Fund
W. S. G. A. Loan Fund

Memorial Funds

Mabel Sawyer McVey Memorial Fund
Morgan O. Hughes Memorial Fund
Mollie McCoy Vogt Memorial Fund
George Clark Rogers Memorial Fund
Jessie Cecil Todd Memorial Fund
Elizabeth Waddy Scholarship
Walter Patterson Scholarship

PROFESSIONAL AND HONORARY FRATERNITIES

Phi Beta Kappa
Sigma Xi
Pi Mu Epsilon (Math.)
Mortar Board (Hr. Sr. Girls)
Tau Beta Pi (Honor. Engineer)
Kappa Delta Pi (Honor. Educa.)
Theta Sigma Phi (Women's Journalism)
Phi Upsilon Omicron (Home Ec.)
Scabbard and Blade (Military)
Chi Delta Phi (Literary—Women)
Phi Beta (Music—Women)
Alpha Zeta (Agriculture)
Phi Alpha Delta (Law)
Beta Gamma Sigma (Honor. Commerce)
Phi Delta Phi (Law)
Lances (Junior)
Sigma Gamma Epsilon (Geology)
Alpha Chi Sigma (Chemistry)
Omicron Delta Kappa (Campus Leaders)
Sigma Delta Chi (Journalism—Men)
Omega Beta Pi (Pre-Med.)
Lamp and Cross (Senior)
Alpha Delta Sigma (Advertising)
Phi Mu Alpha (Music—Men)
Keys (Sophomore)
Phi Sigma Pi (Biological Science)
Eta Sigma Phi (Latin and Greek)
Pi Sigma Alpha (Political Science)
Phi Delta Kappa (Honor. Grad. Ed.)
Sigma Pi Sigma (Physics)
Order of Coif (Law)
Delta Sigma Pi (Commerce)
Cwens (Honorary Sophomore Women)
Beta Sigma Alpha (Social Service—Boy Scouts)
Phi Epsilon Phi (Botany)
Delta Kappa Alpha (DeMolays)

ORGANIZATIONS AND SOCIETIES

Agricultural Society
Block and Bridle Club
American Institute of Elec. Eng. (Student Branch)

American Society of Mech. Eng. (Student Branch)
American Society of Civ. Eng. (Student Branch)
American Society of Mining and Metallurgical Eng. (Student Branch)
Norwood Mining Society
Strollers
SuKy
White Mathematics Club
English Club
German Club
Cercle Francais
Ateneo Castellano
History Club
Young Men's Christian Association
Young Women's Christian Association
Women's Student Government Association
Men's Student Government Association
Woman's Pan-Hellenic
Inter-Fraternity Council
Pryor Premedical Society
Women's Athletic Association
Men and Women's Glee Clubs
Pan-Politikon
International Relations Club
Dairy Club
The Hort Club

RELIGIOUS LIFE AT THE UNIVERSITY

The University, because it is distinctly interested in the religious life of students, encourages them to maintain their memberships in the churches of their choice and to attend religious worship regularly. On the campus the Young Men's Christian Association and the Young Women's Christian Association are active organizations, each with a paid secretary. Through the year great preachers are brought to the University to speak to students. Through these resident secretaries and visiting preachers the opportunity is given the students to consult with sympathetic and able persons. The Newman Society cooperates in looking after the spiritual life of its members.

Since the University and its staff are interested in the best all-round development of the student, every encouragement is given them to maintain high moral and spiritual standards. The vitality of religious life on the campus of the University of Kentucky is evidenced

by the Pitkin Club, organized seven years ago at the University and named for Horace Tracey Pitkin, a missionary to China who lost his life during the Boxer Rebellion. It is an organization of students, originally limited to twenty-five. For the last two years the limit has been raised to seventy-five, and at present there is a waiting list of about thirty who want to become members.

ADDITIONAL CULTURAL OPPORTUNITIES

During the academic year well-known speakers and authorities in their special fields come to the University to make addresses and to hold conferences with students. Once a month there is held a general University convocation at which students and faculty hear able speakers. Each college holds an assembly either weekly or bi-weekly, at which time matters of college interest are discussed. The various departments bring special lecturers to the University. The Art Department introduces not only to its students, but also to the whole University, exhibits of great paintings, of etchings, or drawings. The Music Department sponsors a philharmonic orchestra, a University band, men's glee club, and women's glee club, all of which give concerts and furnish music for convocations. Moreover, this department brings in concert to the University musicians of note and cooperates with the musicians of central Kentucky in producing each year at least one oratorio.

Pan Politikon, a student organization to promote knowledge of countries other than our own, studies thru the various departments and activities of the University the social, political and cultural life of foreign countries. Departmental clubs add effectively to the cultural life of the University.

UNIVERSITY OF KENTUCKY

CONVOCATIONS AND SPEAKERS FOR 1935-36

Memorial Hall

CONVOCATIONS 1935-36.

September	President Frank L. McVey, Opening Address.
October	Edwin R. Embree, President of the Rosenwald Foundation, Chicago. Subject: "The Marks of An Educated Man."
November	S. Parkes Cadman, Minister of the Central Congregational Church, Brooklyn, N. Y. Subject: "The World Situation."

December	Dr. Frank L. McVey, President of the University. Subject: "Between Us".
February	Dr. Paul Dengler of Vienna, Director of Austro-American Institute of Education. Subject: "Higher Education in a Changing Europe".
March	Dr. Ethan Colton, Author and World Traveler. Subject: "The Challenges to Youth in Our Times."
April	Dr. Amandus Johnson, Head of Swedish American Museum, Philadelphia. Subject: "Modern Sweden".
June	Commencement. Dr. Thomas Parran, Jr., Surgeon General of the United States Public Health Service. Subject: "Prologues".

PUBLICATIONS

The students of the University of Kentucky, thru the Department of Journalism, publish a weekly newspaper, the "Kernel." This paper is ably edited and stands in the first group of college papers in the country. The students also issue a yearbook known as "The Kentuckian." This book contains a list of organizations, pictures of the junior and senior classes and the usual things that are found in college yearbooks. Both of these publications have had a long history. The Department of Psychology publishes the Personnel Bulletin and the College of Law publishes the Kentucky Law Journal. All of these publications are either directed by students or have students associated with their direction. The University publishes in addition a series of bulletins appearing each month and also a series of monographs on various scientific subjects. Some of the most extensive publications issued by the University are those under the direction of the Agricultural College in the Experiment Station and Division of Agricultural Extension.

STUDENT ACTIVITIES

Many opportunities are given to the student to take part in various activities outside of his college studies. He or she may engage in newspaper work in connection with the student paper, "The Kentucky Kernel." If he is interested in dramatics he has the opportunity of taking part in plays presented in a real theater under the Department of Dramatics. Thru cooperating with the Men's Student Council or the Women's Self Government Association, the student, in maintaining the integrity and honor of the campus and of the student body,

will be training himself or herself for future leadership. The member of the Hi Y Club or of the Girl Reserves finds a welcome in the University Y. M. C. A. or Y. W. C. A. The student can enter into the management of various enterprises, participate in debating and in oratorical contests, take part in athletics, become a member of the Orchestra, Band, Glee Club, and go to social affairs sponsored by the University and by the various organizations. At the University is the opportunity for him to exercise his many interests, not only in hard work with his studies but in activities which bring him in contact with his fellow students.

Part III

COLLEGES AND SCHOOLS

COLLEGE OF ARTS AND SCIENCES

PAUL PRENTICE BOYD, M. A., Ph. D., DEAN

INTRODUCTORY STATEMENT

AIM

The aim of the College of Arts and Sciences is the training of the individual student as thoroughly as possible in the four years in the directions of his interest and powers, in order that he may lead a happy and useful life and contribute his share of leadership in social, intellectual, economic and political advancement.

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

The distinctive character of the College is that it insists on an acquaintanceship with the main fields of intellectual interest and, in addition, as deep a knowledge as possible in the time allotted in some one special field. While all students are trained along lines useful in various vocations, the College emphasizes preparation *for* vocations rather than *in* them by the building of a well-rounded life, rich in interests, resourceful, capable of continuous growth and of adaptation to times and circumstances.

ORGANIZATION

The College of Arts and Sciences embraces twenty-five departments: Anatomy and Physiology, Ancient Languages and Literatures, Anthropology and Archaeology, Art, Bacteriology, Botany, Chemistry, English Language and Literature, Geology, German Language and Literature, History, Hygiene and Public Health, Journalism, Library Science, Mathematics and Astronomy, Military Science, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Romance Languages and Literature, Sociology, Zoology. These twenty-five departments have been grouped into four divisions: Literature, Philosophy and the Arts, Social Studies, Physical Sciences, Biological Sciences. The chairmen of these divisions form an Advisory Committee for the Dean.

ADMISSION

Requirements for admission to the College of Arts and Sciences,

as a freshman, or with advanced standing, or as a special student, are the same as for other colleges of the University.

Courses

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

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

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

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

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

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

6. Graduate courses leading to the Master's and the Doctor's degrees in the graduate school.

Degrees

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

THE DEGREE OF BACHELOR OF ARTS

For the degree of Bachelor of Arts the student is required to gain a total of 127 credits and 127 points,* that is, a standing of 1; and in the departments of Anatomy and Physiology, Ancient Languages, Economics, Geology, German, Journalism, Mathematics and Astronomy, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Sociology, Zoology, pass a final comprehensive examination on his major subject. The detailed conditions are as follows:

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

LOWER DIVISION

Freshman and Sophomore Years

General Requirements

Matriculation Lectures, first semester, freshman year, .3 credit.
English, 6 to 12 credits (12 credits if only 3 units of entrance are presented).
General Hygiene, freshman year, 1 credit.
Physical Education, freshman and sophomore years, 2.8 credits.
Military Science (men), freshman and sophomore years, 5.6 credits.

Group Requirements

Foreign Languages, 6 to 18 credits.

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

Social Studies, 6 to 12 credits.

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

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

Physical Sciences, 6 to 10 credits in one department.
(Astronomy, Chemistry, Geology, Physics.)

Biological Sciences, 6 to 8 credits in one department.
(Bacteriology, Botany, Physiology, Zoology.)

UPPER DIVISION

Junior and Senior Years

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

The college recognizes two types of Fields of Concentration:

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

Generically Related Fields

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

1. *Literature, Philosophy and the Arts*
   This field includes Ancient Languages and Literatures, Art, English Language and Literature, German Language and Literature, Journalism, Library Science, Music, Philosophy, Romance Languages and Literatures.

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

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

4. *Biological Sciences*
   This field includes Anatomy, Physiology, Agriculture (biological phases), Bacteriology, Botany, Chemistry (biological phases), Hygiene, Public Health, Physical Education, Psychology (biological phases), Zoology.

   Courses outside of the formal field of concentration may be included in the required 40 credits if in the opinion of the adviser and the dean they contribute logically to the student's program of concentration.

   The student is required to gain at least 15 of his required 40 credits in a department which he chooses as his major.

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

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

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

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

A student electing a combination course in Arts and Medicine, Dentistry or Law, is required to complete 20 credits in his concentration field, before transferring to the professional school.

Topically Related Fields

The student may elect for his concentration field some topic, and choose for the field courses which contribute to this central interest. This may lead to choices of courses from two or more of the generically related fields.

Tutorial Work and Comprehensive Examinations

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

A. B. OR B. S. WITH DEPARTMENT HONORS

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

Independent Work Courses

A junior or senior, if his particular excellence in the department warrants it, may with the approval of his major professor and dean, register for an independent work course in his major subject. Such a course is characterized by special assignments for study, weekly or bi-weekly conferences, reports and semester papers of some sustained effort. Credit for such courses may be granted to an amount of not more than 12 credits. At the end of the semester a written report of the work in such a course, or a paper representing part of the work must be read before the staff of the department. A copy of this semester paper must be filed in the office of the dean.

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

Credit for Beginning Foreign Languages

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

Classification in Foreign Languages

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

Electives in Other Colleges

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

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

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

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

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

Maximum and Minimum Credits Allowed

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

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

Residence Requirements

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

Credits by Extension

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

THE DEGREE OF BACHELOR OF SCIENCE

The degree of Bachelor of Science will, if preferred, be granted under the same conditions as govern the degree of Bachelor of Arts, provided that the student has gained at least 60 credits in science.

THE DEGREE OF A. B. IN JOURNALISM

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

THE DEGREE OF B. S. IN INDUSTRIAL CHEMISTRY

The degree of B. S. in Industrial Chemistry is awarded upon completion of a four years' prescribed course which is set out in detail under the Department of Chemistry. It aims to provide a solid foun-

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

dation for continued work in chemistry, and enables the student to engage at once in technical work with excellent prospects for success.

THE DEGREE OF B. S. IN MUSIC

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

THE DEGREE OF B. S. IN MEDICAL TECHNOLOGY

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

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

A student may combine his courses in Arts and Sciences and Law or Medicine or Dentistry, gaining the A. B. or B. S. degree after three years in this college and one or more years in the professional school.

1. He must gain at least 97 credits in Arts and Sciences subjects, with a standing of 1 or more, before transferring to the professional school.

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

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

4. He must spend at least one year in a College of Law approved by the Association of American Law Schools, or in a "Class A" medical school, or in a "Class A" college of dentistry as rated by the Dental Educational Council of America.

5. He must in his law or medicine work secure sufficient semes-

ter credits to bring his total in the Arts and the professional work up to 127 credits, and must secure a standing of at least 1, or its equivalent, in the professional work. Professional courses duplicating Arts and Sciences courses or duplicating courses elected in other colleges of the University by the student while registered in the College of Arts and Sciences, will not be counted in the total. In the Combined Arts-Dentistry course, the arts degree will not be conferred until after the completion of the dentistry course.

PRE-MEDICAL COURSES

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

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

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

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

RECOMMENDED COURSES PREPARATORY TO THE STUDY OF MEDICINE*

FRESHMAN YEAR

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

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

** Two years of Foreign Language in college are recommended, or the equivalent in high school, although a few medical schools require none or only 1 year. If the student is a candidate for the A. B. or B. S., he will be required to take from 1 to 3 years' work in Foreign Language, according to his entrance units.

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

SOPHOMORE YEAR

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

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

Upper Division

The student in his junior and senior years will proceed to complete the group and field requirements and the additional specific requirements demanded by the medical school to which he will apply for admission. He should consult both his "major professor" and his "Pre-Medical Adviser."

PRE-DENTAL COURSE

Students who wish to take up the study of dentistry are advised to follow the two years' Pre-Medical Course. This course more than

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

PRE-LAW COURSES

Two years of college work (sixty credits, exclusive of physical education and military science) will be required for admission to the College of Law, which preliminary work will usually be done in the College of Arts and Sciences. Students expecting to enter the College of Law later are advised to lay especial emphasis on English, history, economics, accounting, political science and psychology.

THE PREPARATION OF TEACHERS

Students of the College of Arts and Sciences may by electing courses in the College of Education qualify for teachers' certificates from the State Department of Education. For specific information concerning courses consult the statement of the College of Education.

TRAINING FACILITIES FOR SOCIAL WORK

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

To meet these new and enlarging demands, special schools of

social work have been set up in certain of the larger cities of the country, while in some of the universities special training facilities have been made available. For the facilities offered at the University of Kentucky, see announcement of the Department of Sociology.

PREPARATION FOR WORK IN GEOLOGY

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

COURSES FOR NURSES

The college affords preliminary work for nurses. This covers anatomy and physiology, bacteriology, chemistry, hygiene and sanitation, and psychology. Nutrition and cooking is offered in the College of Agriculture. Students who complete this work gain credit for it in civil hospitals to which they are admitted. No general statement can be made as to this, however. The student should take the question up with the hospital schools under consideration. For further information consult the Head of the Department of Hygiene and Public Health.

Graduates of nursing schools approved by the University will be admitted with a maximum of 30 advanced credits.

LIBRARY SCIENCE

The college affords through the Department of Library Science, opportunity for thirty credit-hours of professional training in library work including practice and observation in well-organized libraries. The courses meet the standards of the Southern Association of Colleges and Secondary Schools, and are designed to fit students for librarianships in public school libraries and junior colleges, or for assistantships in the larger public and college libraries.

THE RESERVE OFFICERS' TRAINING CORPS

The Department of Military Science conducts a four years' course, the first two years of which are required of all male freshmen and

sophomores who are citizens of the United States, over fourteen years of age, and who conform to the physical requirements prescribed by the War Department.

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

PUBLIC SERVICE CURRICULUM

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

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

DEPARTMENTS OF INSTRUCTION

AGRICULTURE

A student in the College of Arts and Sciences may elect toward the A. B. or B. S. degree a total of 30 credits from other colleges at the University

ANATOMY AND PHYSIOLOGY

Associate Professor Allen, Assistant Professor Sherwood and Mr. Cox

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

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

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

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

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

1a—GENERAL PHYSIOLOGY. This is an elementary course consisting of lectures, demonstrations and recitations. It includes the study of the chemical composition and general structure of the human body; nature and properties of living protoplasm; the process of ossification or the formation and growth of bones; the skeleton; the structure and functions of the motor organs (muscles); the nervous system—structure and functions; and the

special senses, namely, internal and cutaneous, smell, taste, hearing and vision. Not open to freshmen.

3 *credits; both semesters* (Allen, Sherwood)

1b—GENERAL PHYSIOLOGY. The course is a continuation of 1a. The vascular system, respiration, gastro-intestinal tract, digestion and absorption of foods, organs of excretion, production and regulation of the body's heat and the organs of speech are studied in detail. Not open to freshmen.

3 *credits; both semesters* (Allen, Sherwood)

3—PHYSIOLOGY. Required of Home Economics students; open to others. This is a study of the digestive system. The various organs of the system are considered separately with respect to location in body, structure and functions. Other systems of the body which are closely allied to the digestive system are also surveyed. Such are: The circulatory, respiratory and excretory. The latter are studied only in so far as they are related to the principal subject of the course. Lectures and recitations, two hours a week; laboratory, four hours a week.

Prerequisites: *Chemistry* 1*a and* 1*b or the equivalent; Chemistry* 7. 4 *credits; 1st semester* (Allen and Cox)

4—ELEMENTARY ANATOMY. This course is arranged especially for students who are majoring in Physical Education; open to others. The muscles of a lower animal are dissected and carefully studied with respect to their relation with the bones of the animal's body. The results of the dissections are compared with the corresponding structures and arrangements found in the human body. This will be accomplished by means of charts and skeletons of the Human Being. Lecture, one hour a week; laboratory, four hours a week. Offered for 1936-37.

Prerequisite: *Sophomore standing.* 3 *credits; 1st semester* (Sherwood and Cox)

5—PHYSIOLOGY. A course for students who are majoring in Physical Education but can be taken by others. Emphasis will be placed upon the physiology of muscle, circulation, respiration, digestion and absorption, energy metabolism, and excretion. Other subjects of the science will also be considered but not in great detail. Lecture, two hours a week; laboratory, two hours a week. Offered for 1936-37.

Prerequisite: *A. & P.* 4. 3 *credits; 2nd semester* (Allen and Cox)

6—GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES. The subject is designed to meet the requirements of those who are in training, and includes a general survey of the following: Physico-chemical phenomena of protoplasm; general structure of the body; osteology; myology; the nervous system and special senses; the vascular system; respiratory system; gastro-intestinal tract; digestion and absorption of foods; organs of excretion; heat production and the regulation of the body's temperature; and the reproductive system. Lectures and recitations, three hours a week; laboratory, two hours a week.

Prerequisite: *General Chemistry is most desirable. If not had General Chemistry must accompany the course.* 4 *credits; 1st semester* (Allen and Sherwood)

Courses open only to Upper Division and Graduate Students

103a to d—INDEPENDENT WORK IN ANATOMY. The pursuit of some advanced problems in anatomy under the direct supervision of the instructor. Discussion period, one hour a week; laboratory, four hours a week. Given in 1935-36; not offered for 1936-37.
Prerequisites: *A. & P. 1a and 1b or 2a and 2b.* 3 *credits; both semesters* (Sherwood)

104a to d—INDEPENDENT WORK IN PHYSIOLOGY. A study of some advanced problem in physiology under the direct supervision of the instructor. Discussion period, one hour a week; laboratory, four hours a week. Not given in 1935-36; offered for 1936-37.
Prerequisites: *A. & P. 1a and 1b or 2a and 2b; Chemistry 1a and 1b.* 3 *credits; 1st semester* (Allen)

105—ARCHITECTURE OF THE HUMAN SKELETON. The course is designed for the student who anticipates further advanced study in Anatomy and Physiology, for students of Anthropology, for students in Art, and for those who are preparing for the study of medicine. The study begins with the development of the skeleton and joints. This is followed by the process of ossification and the histology of bones. Each bone is studied in detail, organized demonstrations are given with architecture and function being stressed. Variations in the skeleton are considered. When possible, the bone is compared with that of the lower vertebrates. The physiology of the bone, joint and muscular relations are studied in detail. Lecture and recitation, one hour a week; laboratory, six hours a week. Offered for 1936-37.
Prerequisite: *Junior standing.* 4 *credits; 1st semester* (Sherwood and Cox)

106—INTRODUCTION TO ENDOCRINOLOGY. An introductory study of the glands of internal secretion or endocrine glands in which the general development, anatomical location and structure, and fundamental functions of the organs will be presented. The purpose of the course is to give a general knowledge that will be of value not only to the student of Anatomy and Physiology and related subjects but also, to those of educational and sociological interests. Lectures and recitations, three hours a week. Offered for 1936-37.
Prerequisites: *A. & P. 1a and 1b or the equivalent; Zoology 7b; Chemistry 1a and 1b; and the instructor's consent.* 3 *credits; 2nd 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 the form, structure and functional arrangements of the nervous system for students of biology, physiology, psychology and those preparing for the study of medicine. The work of the course includes a careful study of the nervous systems of vertebrates. The simpler types of nervous system are compared with that of man. The development of the various reflexes are considered. The relation of the structure of the nervous system to psychological reactions are studied. Lec-

tures and recitations, two hours a week; laboratory, four hours a week. Offered for 1936-37.

Prerequisites: *A. & P. 1a and 1b or the equivalent.* — *4 credits; 2nd semester* (Sherwood)

108a—ADVANCED PHYSIOLOGY. The course is designed for students who anticipate further advanced study in physiology and also, for those who are preparing for the study of medicine. In the course, graphic records which show the character of contraction of muscle (skeletal and smooth) are made. This is followed by observing the different factors that vary the character of the contraction. Experiments are performed to show that muscle is a thermogenic and an electrogenic organ. The nervous system which includes the structures and functions of the spinal cord, the medulla oblongata, the cerebellum, the cerebrum and the autonomic system are taken up in great detail. The course will close with an intensive study of the special sense organs. Practically half of the semester will be devoted to the nervous system. Lectures and recitations, two hours a week; laboratory, four hours a week. Given in 1935-36; offered in 1936-37.

Prerequisites: *A. & P. 1a and 1b; Chemistry 1a and 1b; Physics 1a and 1b.* — *4 credits; 1st semester* (Allen, Sherwood)

108b—ADVANCED PHYSIOLOGY. This is a continuation of 108a. The course is opened with the study of the circulatory system. Much time is given to the consideration of the mechanics of the heart, its nervous regulation and the functional peculiarities of its tissues. The mechanics of the circulation (hemodynamics) which includes the nervous regulation of the blood vessels are also surveyed. Other subject material to be covered consists of the respiratory system; the gastro-intestinal tract with its secretory organs; the processes of digestion, absorption, excretion, heat production; voice and the production of speech. Lectures and recitations, two hours a week; laboratory, four hours a week. Given in 1935-36; offered for 1936-37.

Prerequisite: *A. & P. 108a.* — *4 credits; 2nd semester* (Allen, Sherwood)

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, likewise, find the course to be of practical and cultural value. The course is opened by thoroughly acquainting the student with the various physical phenomena that are to be considered. This will be followed by applying the same to the physiological processes of the body, which will include stress and strain with respect to the bones of the skeleton, types of levers involved in joint action, permeability, calorimetry, mechanics of circulation and temperature regulation, mechanics of vision, mechanics of hearing, mechanics of speech or voice. 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. Lecture and recitation, two hours a week; laboratory, two hours a week. Not offered for 1936-37.

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 the Department of Physics)

116a—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 by the seminar in general. In addition to the foregoing, each member of the seminar will be required to follow closely the current publications bearing upon the subjects of the class and present brief reports of such articles which are of interest. One two-hour discussion period a week. Open only to Seniors and Graduates. Given in 1935-36; offered for 1936-37.

Prerequisites: *A. & P. 1a and 1b or the equivalent.* — 1 *credit; 1st semester* (Allen, Sherwood)

116b—SEMINAR IN ANATOMY AND PHYSIOLOGY. Continuation of 116a. One two-hour discussion period a week. Open only to Seniors and Graduates. Given in 1935-36; offered for 1936-37.

Prerequisites: *A. & P. 1a and 1b or the equivalent.* — 1 *credit; 2nd semester* (Allen, Sherwood)

Courses open only to Graduates Students

201a—RESEARCH IN PHYSIOLOGY. The pursuit of an assigned problem in which the student will have the opportunity to demonstrate his or her originality. Conferences and laboratory ten hours a week. Given in 1935-36; offered for 1936-37.

Prerequisites: *A. & P. 1a and 1b or the equivalent; Chemistry 127a and 127b or the equivalent; Physical Chemistry desirable; Physics, one year.* — 5 *credits; 1st semester* (Allen, Sherwood)

201b—RESEARCH IN PHYSIOLOGY. Continuation of 201a. Conferences and laboratory, ten hours a week. Given in 1935-36; offered in 1936-37.

Prerequisites: *A. & P. 1a and 1b or the equivalent; Chemistry 127a and 127b or the equivalent; Physical Chemistry desirable; Physics, one year.* — 5 *credits; 2nd semester* (Allen, Sherwood)

SUGGESTED COURSE FOR MAJOR IN ANATOMY AND PHYSIOLOGY

JUNIOR YEAR†

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

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

SENIOR YEAR

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

ANCIENT LANGUAGES AND LITERATURE

Professor Jones and Assistant

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

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen.

LATIN

*1—BEGINNING LATIN.
3 *credits; 1st semester* ( )

*2—CAESAR AND SELECTIONS. The equivalent of four books of Cæsar.
Prerequisite: *Latin* 1. 3 *credits; 2nd semester* ( )

*3—CICERO AND SELECTIONS. The equivalent of five orations of Cicero.
Prerequisite: *Latin* 2. 3 *credits; 1st semester* ( )

*4—VERGIL. (Books I, II, IV, VI of the Aeneid.)
Prerequisite: *Latin* 2 *or* 3. 3 *credits; 2nd semester* ( )

*5—LIVY. (Book I and Selections.)
Prerequisite: *Latin* 3 *or* 4. 3 *credits; 1st semester* (Jones)

*6—HORACE. (Odes and Selected Satires.)
Prerequisite: *Latin* 4 *or* 5. 3 *credits; 2nd semester* (Jones)

7—TACTITUS (Germania and Agricola); OVID (Selections).
Prerequisite: *Latin* 5 *or* 6. 3 *credits; 1st semester* (Jones)

8—PLINY'S LETTERS (Selections); TERENCE (one play).
Prerequisite: *Latin* 5 *or* 6. 3 *credits; 2nd semester* (Jones)

Courses open only to Upper Division and Graduate Students

16a—TUTORIAL WORK IN ANCIENT LANGUAGES.
1 *credit; 1st semester* (Jones)

16b—TUTORIAL WORK IN ANCIENT LANGUAGES.
1 *credit; 2nd semester* (Jones)

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* Courses open to Freshmen.

109a—LATIN LITERATURE. (Selections from various authors.)
Prerequisite: *Latin* 7 *or* 8. 3 *credits; 1st semester* (Jones)

109b—LATIN LITERATURE. (Continuation of 109a.)
Prerequisite: *Latin* 7 *or* 8. 3 *credits; 2nd semester* (Jones)

110a—LATIN LITERATURE. (Continuation of 109b.)
Prerequisite: *Latin* 7 *or* 8. 3 *credits; 1st semester* (Jones)

110b—LATIN LITERATURE. (Continuation of 110a.)
Prerequisite: *Latin* 7 *or* 8. 3 *credits; 2nd semester* (Jones)

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

114a—ADVANCED LATIN COMPOSITION. Easy selections of connected discourse.
Prerequisite: *Latin* 5. 1 *credit; 1st semester* (Jones)

114b—ADVANCED LATIN COMPOSITION. (Continuation of 114a.)
Prerequisite: *Latin* 5. 1 *credit; 2nd semester* (Jones)

115a—LATIN COMPOSITION. (Continuation of 114b.)
Prerequisite: *Latin* 5. **1 *credit; 1st semester* (Jones)**

115b—LATIN COMPOSITION. (Continuation of 115a.)
Prerequisite: *Latin* 5. 1 *credit; 2nd semester* (Jones)

120—SURVEY OF GREEK CIVILIZATION. History, Public and Private Life, Archaeology.
Prerequisite: *Junior standing.* 3 *credits; 1st semester* (Jones)
Not given 1935-36; offered 1936-37.

121—SURVEY OF ROMAN CIVILIZATION. (Continuation of 120.)
Prerequisite: *Junior standing.* 3 *credits; 2nd semester* (Jones)
Given 1935-36; not offered 1936-37.

150a—TEACHERS' COURSE IN LATIN; BASED ON FIRST YEAR WORK. A hasty review of Bennett's Beginners' Book, and the reading of Selections from the last three books of Caesar. Discussion of the principles of teaching Latin, stressing the connection between Latin and English, the merits of the different texts, etc. Given only in summer school.
Prerequisite: *Junior standing.* 2 *credits; 1st term summer school* (Jones)

150b—TEACHERS' COURSE IN LATIN; BASED ON SECOND YEAR WORK. This course will follow closely the recommendation of the Classical League Investigating Committee. A considerable amount of easy Latin will be read, taken from several authors. Discussion of Latin exhibits and other means of arousing interest in the work. Given only in summer school.
Prerequisite: *Latin* 2 *or* 150*a*. 2 *credits; 2nd term summer school* (Jones)

"Two-hundred" courses open to Graduate Students only

201a—LATIN PASTORAL POETRY.
Prerequisite: *Latin* 109*a or equivalent.* 3 *credits; 1st semester* (Jones)
Not given 1935-36; offered 1936-37.

201b—LATIN ELEGIAC POETRY.
Prerequisite: *Latin* 109*a or equivalent.* 3 *credits; 2nd semester* (Jones)
Not given 1935-36; offered 1936-37.

GREEK

51—BEGINNING GREEK. Beginners.
Prerequisite: *Freshman standing.* 3 *credits; 1st semester* (Jones)
Given each year.

Courses open only to Upper Division and Graduate Students

122a—GREEK LITERATURE IN ENGLISH TRANSLATION; EPIC AND LYRIC POETRY.
Prerequisite: *Junior standing.* 3 *credits; 1st semester* (Jones)
Not given 1935-36; offered 1936-37.

122b—GREEK LITERATURE IN ENGLISH TRANSLATION; DRAMA, ORATORY, PHILOSOPHY.
Prerequisite: *Junior standing.* 3 *credits; 2nd semester* (Jones)
Given 1935-36; not offered 1936-37.

149—EASY SELECTED READINGS FROM GREEK AUTHORS.
Prerequisite: *Greek* 51. 3 *credits; 2nd semester* (Jones)
Given each year.

152—ANABASIS.
Prerequisite: *Greek* 51. 3 *credits; 1st semester* (Jones)
Given 1935-36; offered 1936-37.

153—HOMER. Selections.
Prerequisite: *Greek* 149. 3 *credits; 2nd semester* (Jones)
Not given 1935-36; offered 1936-37.

154—PLATO. Selections.
Prerequisite: *Greek* 149. 3 *credits; 1st semester* (Jones)
Not given 1935-36; offered 1936-37.

155—HERODOTUS. Selections.
Prerequisite: *Greek* 149. 3 *credits; 2nd semester* (Jones)
Not given 1935-36; offered 1936-37.

ANTHROPOLOGY AND ARCHAEOLOGY

Professor Webb, Professor Funkhouser

Courses open only to Upper Division and Graduate Students

101—PRINCIPLES OF ANTHROPOLOGY. Lectures three hours a week. 2 *credits; 1st semester* (Funkhouser)

102—KENTUCKY ARCHAEOLOGY. Lectures three hours a week.
2 *credits; 2nd semester* (Webb)

103a-d—INDEPENDENT WORK.

3 *credits* (Webb and Funkhouser)

105—ETHNOLOGY. Lectures three hours a week.

2 *credits; 2nd semester* (Funkhouser)

110a, b, c—FIELD WORK IN ARCHAEOLOGY. Laboratory practice in field during the summer.

3 *credits* (Webb and Funkhouser)

ART

Professor Rannells, Assistant Professor Fisk,
Assistant Professor Callihan,† Mr. Barron

REQUIREMENTS FOR A MAJOR. Prerequisites: Ten credits in lower division, including 61a, 61b or 63a and 62a or 30a. Required: 9 to 12 credits in studio courses—63a, 63b; 64a, 64b; 55a, 55b; 159a, 159b; 9 to 12 credits in history courses—35, 36, 137, 138 (a minimum of 21 credits in upper division).

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen. Advanced courses in European history are counted in the field of concentration. Majors in Art are expected to acquire a reading knowledge of French or German.

*30a—INTRODUCTION TO ART. Principles. Lectures, notebooks, problems in design.

2 *credits; both semesters* (Rannells)

*30b—INTRODUCTION TO ART. Survey of the plastic arts. Lectures, notebooks, reports.

2 *credits; 2nd semester* (Rannells)

60a—SEMINAR IN ART. Open to major students only.

1 *credit; 1st semester* (Rannells)

60b—SEMINAR IN ART. Open to major students only.

1 *credit; 2nd semester* (Rannells)

DRAWING AND PAINTING

*61a—DRAWING. The study of line and form in pencil and charcoal mediums. Six studio hours and weekly problems.

3 *credits; both semesters* (Rannells)

*61b—DRAWING. Continuation of 61a.

3 *credits; 2nd semester* (Rannells)

63a—INTERMEDIATE DRAWING. Problems in analysis and con-

† On leave 1936-37.
* Courses open to Freshmen.

struction of form. Value drawing in monochrome. Nine studio hours a week.
Prerequisite: 61*b*. 3 *credits; 1st semester* (Fisk)

63b—INTERMEDIATE DRAWING. Continuation of 63a.
3 *credits; 2nd semester* (Fisk)

55a—PAINTING. Still life and outdoor painting in oil and water color mediums. Composition problems; nine studio hours a week.
Prerequisite: 63*b* 3 *credits; 1st semester* (Fisk)

55b—PAINTING. Continuation of 55a.
3 *credits; 2nd semester* (Fisk)

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

112a—ADVANCED COMPOSITION. A study of pictorial organization for advanced students. Six studio hours a week.
Prerequisites: 63*b and approval of department head.* 2 *credits; 1st semester* (Rannells, Fisk)

112b—ADVANCED COMPOSITION. Continuation of 112a.
2 *credits; 2nd semester* (Rannells, Fisk)

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

116a—ADVANCED ETCHING. Open to advanced students upon approval of department head. Eight studio hours and weekly problems.
Prerequisite: 63*b*. 4 *credits; 1st semester* (Fisk)

116b—ADVANCED ETCHING. Continuation of 116a.
4 *credits; 2nd semester* (Fisk)

159a—INTERMEDIATE PAINTING. Still life and outdoor painting. Nine studio hours a week.
Prerequisite: 55*b*. 3 *credits; 1st semester* (Fisk)

159b—INTERMEDIATE PAINTING. Continuation of 159a.
3 *credits; 2nd semester* (Fisk)

64a—INTERMEDIATE DESIGN. Consideration of materials and processes in designing objects of use. Six studio hours and weekly problems.
Prerequisites: 61*a and* 62*b or* 30*b*. **3 *credits; 1st semester* (Rannells)**

64b—INTERMEDIATE DESIGN. Continuation of 64a.
3 *credits; 2nd semester* (Rannells)

HISTORY AND APPRECIATION OF ART

*17a—ART APPRECIATION. Survey of the plastic arts.
1 *credit; 1st semester* (Rannells)

*17b—ART APPRECIATION. Survey of painting.
1 *credit; 2nd semester* (Rannells)

35—HISTORY OF ANCIENT ART. Not open to freshmen. Lectures, conferences and reports. 3 *credits; 1st semester* (Barron)

36—HISTORY OF MEDIEVAL ART. Not open to freshmen. Lectures, conferences and reports. 3 *credits; 2nd semester* (Barron)

41—ARCHITECTURE OF THE UNITED STATES. One lecture and weekly problems. 1 *credit; 1st semester* (Barron)
[NOT OFFERED IN 1936-37]

42—PAINTING AND SCULPTURE IN THE UNITED STATES. One lecture and weekly problems.
1 *credit; 1st semester* (Rannells)
[NOT OFFERED IN 1936-37]

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

137—HISTORY OF RENAISSANCE ART IN ITALY. Lectures, conferences and reports. 3 *credits; 1st semester* (Barron)

138—HISTORY OF RENAISSANCE ART IN THE NORTH. Lectures, conferences and reports. 3 *credits; 2nd semester* (Barron)

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. For juniors and seniors who have not scheduled history of art courses. Lectures and reports.
3 *credits; summer* (Rannells)

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

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*Courses open to Freshmen.

146b—HISTORY OF ARCHITECTURE. Continuation of 146a. Concurrent with lecture course Art 145b. Two hours per week.
2 *credits; 2nd semester* (Barron)

PUBLIC SCHOOL ART

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

NOTE: Other courses, such as Elementary Design (62a-b), Period Furniture (21), American Arts and Crafts (22), Decorative Arts of the 18th Century (23a-b), Directed Travel and Study in Europe (142a-b) and individual work in Illustration, Interior Decoration, etc., are given from time to time. "Independent Work" courses (115a-d) provide for the advanced student of special interests and abilities.

BACTERIOLOGY

Professor Scherago, Associate Professor Weaver, Assistant Professor Maxwell, Mr. Snyder, Mr. Stokes, Miss Jolly

The Department of Bacteriology affords opportunity for students to gain the A. B. or B. S. degree with bacteriology as a major, and also provides a course in Medical Technology. The course in Medical Technology is a prescribed course thruout and leads to the degree of Bachelor of Science in Medical Technology. This course is designed to prepare men and women for positions in hospital laboratories, physicians' and surgeons' clinics, and federal, state and municipal laboratories and to fit the especially adapted student for either commercial or research laboratory work in bacteriology. It also meets all the requirements of the United States Civil Service Commission for the rank of Junior Bacteriologist (30 credits in Bacteriology).

The University of Kentucky is registered as an approved school for the training of laboratory technicians by the Board of Registry of the American Society of Clinical Pathologists.

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

Course 52 or 102 may be taken to fulfill the requirement of students in the College of Agriculture and by those taking the premedical course. Courses 2a and 2b are recommended for students desiring to major in bacteriology and for those taking bacteriology to fulfill the biological science group requirement.

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

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the Biological Sciences Field, including the major work, in courses not open to freshmen.

*2a—ELEMENTARY MICROBIOLOGY. A study of the fundamental nature of bacteria and other microorganisms, special attention being given to morphology. This course is recommended for Bacteriology majors and for those taking Bacteriology to fulfill a biological science requirement, and should be followed by 2b. No prerequisites. Lectures and recitations two hours; laboratory four hours a week.

4 credits; both semesters (Weaver)

*2b—ELEMENTARY MICROBIOLOGY. Continuation of course 2a. A cultural study of bacteria. Microbial physiology. A discussion of the relationship of microorganisms to soil fertility, foods, industrial fermentations, disease, etc. Lectures and recitations two hours; laboratory four hours a week.

Prerequisite: *Bacteriology 2a.* *4 credits; both semesters* (Weaver)

*6—BACTERIOLOGY FOR NURSES. A study of the characteristics and habits of microorganisms and of their relation to medicine, surgery, and public health. Lecture, one hour a week; laboratory, four hours a week.

3 credits; both semesters (Scherago and Jolly)

*8—BACTERIA IN RELATION TO MAN. An elementary lecture course dealing in a general way with the relation of microorganisms to man, and his environment. This course will not substitute for the required courses, 2a and 2b, 52 or 102 and does not fulfill the requirements for advanced work in Bacteriology. *2 credits; summer school* (Weaver)

52—PRINCIPLES OF BACTERIOLOGY. An alternative course for students who do not have the prerequisites for 102. Lectures and recitations two hours; laboratory four hours a week.

Prerequisite: *Must be preceded or accompanied by Chemistry 1b.* *4 credits; both semesters* (Scherago and Stokes)

56—BACTERIOLOGY OF FOODS (for Sophomores). Microbiology of milk, butter, cheese, ice cream and other milk products, eggs, tomato products, meat and meat products; food preservation; bacterial food poisoning. Relation of microorganisms to food production and handling. Standard methods of bacterial analysis as used in official food and public health laboratories. Lectures and recitation two hours; laboratory four hours a week.

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

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* Courses open to Freshmen.

57—BACTERIOLOGY OF WATER AND SEWAGE (for Sophomores). Microflora of water; importance of colon-typhoid group in water; standard methods of water analysis and interpretation of results; water purification; bacteriology of sewage disposal; swimming pools, bacterial examination, purification, control, etc. Water purification plants, sewage disposal plants and swimming pools will be visited and studied. Lectures and recitations two hours; laboratory four hours a week.
Prerequisites: *Bacteriology* 102 *or* 52*; or* 2*b* and *Chemistry* 1*b*. 4 *credits; 2nd semester* (Weaver)

Courses open only to Upper Division and Graduate Students

102—GENERAL BACTERIOLOGY. Observation and cultivation of bacteria and related microorganisms; study of their morphology, classification, physiology, relation to certain fermentations, to food, to soil fertility and to disease. Lectures and recitations two hours; laboratory four hours a week.
Prerequisite: *Chemistry* 1*b*. 4 *credits; 2nd semester* (Scherago and Stokes)

103—PATHOGENIC BACTERIOLOGY. A study of human and animal pathogenic microorganisms, especially their morphological, cultural and pathogenic properties. Lectures and recitations two hours; laboratory four hours a week.
Prerequisites: *Bacteriology* 52 *or* 102*; or* 2*b* and *Chemistry* 1*b*. 4 *credits; 1st semester* (Scherago)

104—APPLIED BACTERIOLOGY. A course in bacteriological analysis to supplement Courses 52 or 102. Laboratory four hours a week.
Prerequisites: *Bacteriology* 102 *or* 52*; or* 2*b* and *Chemistry* 1*b*. 2 *credits; 2nd semester* (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: *Preceded or accompanied by Bacteriology* 103. 3 *credits; 1st semester* (Scherago)

110b—LABORATORY DIAGNOSIS. Continuation of 110a. Laboratory diagnosis of intestinal parasitism; examination of stomach and intestinal contents; laboratory methods used in diagnosis of gonorrhea, typhoid fever, diphtheria, syphilis, etc. Laboratory six hours a week.
Prerequisite: *Bacteriology* 110*a*. 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, inflammations, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied.
Prerequisites: *Physiology* 1*a-b; Zoology* 7*b*, 101*b*, *and* 106*; Bacteriology* 103, *and consent of Head of Department*. 4 *credits* (Maxwell)

115a to d—INDEPENDENT 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 and Maxwell)

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* 110*a and b; consent of Head of Department.* 4 *credits* (Maxwell)

120b—HOSPITAL LABORATORY PRACTICE. Continuation of 120a. Eighteen hours laboratory.
Prerequisites: *Bacteriology* 110*a and b; consent of Head of Department.* 6 *credits* (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 if national bacteriological societies.
1 *credit; both semesters* (Staff)

The following courses open to Graduate Students only

201a-d—RESEARCH IN BACTERIOLOGY. Labortory, ten hours a week.
5 *credits; both semesters* (Scherago, Weaver, Maxwell)

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, standarization and practical application 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; 2nd semester* (Scherago)

203b—PUBLIC HEALTH BACTERIOLOGY. Continuation of course 203a.
Prerequisite: *Bacteriology* 203*a*. 3 *credits; 1st semester* (Scherago)

NOTE—Courses 203a and b offered in the summer session only.

206—BACTERIOLOGY OF FOODS. Microbiology of milk and milk products, eggs, tomato products, meat and meat products; food preserva-

tion; bacterial food poisoning. Lectures and recitations, two hours a week; laboratory, four hours a week.

Prerequisite: *Bacteriology 2b, or 52 or 102; Chemistry* 8. 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, or 52 or 102; Chemistry* 8. 4 *credits; 2nd semester* (Weaver)

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN MEDICAL TECHNOLOGY

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Matric. Lec. Required of all Freshmen	.3	Hyg. 1 Gen. and Per. Hyg.	1.
Eng. 1a Eng. Composition	3.	Eng. 1b Eng. Composition	3.
Chem. 1a Gen. Inorganic Chem.	5.	Chem. 1b Gen. Inorganic Chem.	5.
Bact. 2a Elem. Microbiology	4.	Bact. 2b Elem. Microbiology	4.
Zool. 1a General Zoology	4.	Zool. 1b General Zoology	4.
Mil. Sci. 1a First Year Basic Course	1.3	Mil. Sci. 1b First Year Basic Course	1.3
Phys. Ed. Freshman Gym.	.7	Phys. Ed. Freshman Gym.	.7
	18.3		19.0

SOPHOMORE YEAR*

First Semester	Credits	Second Semester	Credits
Chem. 4 Qualitative Analysis	4.	Zool. 7b Comparative Anat.	4.
Phys. 1a General Physics	5.	Phys. 1b General Physics	5.
Bact. 56 Bacteriology of Foods	4.	Bact. 57 Bact. of Water and Sewage	4.
Anat. & Phys. 1a Gen. Phys.	3.	Anat. & Phys. 1b Gen. Phys.	3.
Mil. Sci. 2a Second Year Basic Course	1.5	Mil. Sci. 2b Second Year Basic Course	1.5
Phys. Ed. Sophomore Gym.	.7	Phys. Ed. Sophomore Gym.	.7
	18.2		18.2

* Women students must substitute one year of foreign language for the two years of Military Science. This should be taken in the sophomore year.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 8 Quantitative Anal.	5.	Zool. 101b Histology	3.
Zool. 101a Histology	3.	Bact. 125 Immunology and Serology	5.
Bact. 103 Pathogenic Bact.	4.	Zool. 106 Embryology	4.
For. Lang. Elective	3.	For. Lang. Elective	3.
Bact. 110a Lab. Diagnosis	3.	Bact. 110b Lab. Diagnosis	3.
	18.		18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 127a Organic Chem.	5.	Chem. 127b Organic Chem.	5.
Bact. 111 Gen. Pathology	4.	Bact. 150b Seminar	1.
Bact. 150a Seminar	1.	Physics 120 X-Ray Technique	2.
Bact. 120a Hosp. Lab. Prac.	4.	Bact. 120b Hosp. Lab. Prac.	6.
Math., Phil., Psych. or Soc. Sci. Elective	3.	Math., Phil., Psych. or Soc. Sci. Elective	3.
	17.		17.

Students will be given an opportunity in the summer to obtain additional practical experience in one of the hospitals in and around Lexington.

Total credits 143.7.

BOTANY

Professor McFarland, Associate Professor McInteer, Mr. Shacklette

REQUIREMENTS FOR A MAJOR. Prerequisites: Botany 1a, 1b; Zoology 1a, b. Required: Botany 6, 15, 103, 125a, 125b; a minimum of 15 credits of advanced work in Botany.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the field of Biological Sciences, including the major work, in courses not open to freshmen.

*1a—GENERAL BOTANY. This introductory course to plant life deals with the history of botany, a detailed study of the cell, its structure and functions and its relation to other cells. A comparative study is made of the various types of Thallophytes and Bryophytes, including structure, classification and reproduction. Lectures two hours; laboratory four hours per week.

4 *credits; 1st semester* (McFarland, McInteer, Shacklette)

*1b—GENERAL BOTANY. This is a continuation of Botany 1a in which the Pteridophytes (Ferns) and Spermatophytes (Seed Plants) are studied. Emphasis is placed on structure, method of reproduction and life histories of the various types studied. The last six to eight weeks of this semester the students will be given some work on Heredity and instruction in the identification of unknown flowering plants. Lectures two hours; laboratory four hours per week.

4 *credits; 2nd semester* (McFarland, McInteer, Shacklette)

6—PLANT HISTOLOGY. A laboratory course dealing with the principles of killing, fixing, imbedding, sectioning, staining, mounting and studying of various kinds of plant tissues. Laboratory six hours.

Prerequisites: *Botany 1a, 1b.* 3 *credits; 1st semester* (McFarland)

15—LOCAL FLORA (Systematic Botany). A laboratory course dealing with the identification of unknown flowers and ferns. The use of manuals and method of making are taken up for study. The various systems of classification are taken up in detailed study, as well as the laws of nomenclature.

Prerequisites: *Botany 1a, 1b.* 3 *credits; 2nd semester* (McFarland)

* Courses open to Freshmen.

19—DENDROLOGY. This is a field course in which the student is taught the principles of identification of trees, as well as how to recognize them by their leaf, bark and bud characters. Three lectures a week.
Prerequisites: *Botany* 1*a*, 1*b*. 2 *credits; either semester* (McFarland)

Courses open only to Upper Division and Graduate Students

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* 1*a*, 1*b*. 4 *credits; 1st semester* (McInteer)

106a—SPECIAL PROBLEM. A course designed to give students who have acquired at least 18 advanced credits in botany an opportunity to take up independently some problem that may be assigned by the instructor in charge. The problem will depend upon the qualifications and fitness of the student.
Prerequisite: *Eighteen hours of Advanced Botany.* 3 *credits; 1st semester* (McFarland, McInteer)

106b—SPECIAL PROBLEM. A continuation of course 106a.
3 *credits; 2nd semester* (McFarland, McInteer)

107—MORPHOLOGY OF THE ALGAE. A laboratory course dealing with representative algae with regard to structure and reproduction and their general classification.
Prerequisites: *Botany* 1*a*, 1*b*. 3 *credits; 2nd semester* (McInteer)

111—CLASSIFICATION OF PARASITIC FUNGI. A detailed study is made of many forms of fungi that are parasites on the higher plants. Attention is given to their structure and their position in the various schemes of classification.
Prerequisites: *Botany* 125*a-b*. 1 *credit; 1st semester* (McFarland)

114—ECOLOGY. Prerequisites, Botany 1a, 1b. Botany 15 desirable before electing this course. Frequent half-day and two all-day field trips are required of students taking this course. Lecture two hours, laboratory two hours a week.
3 *credits; 2nd semester* (McInteer)

125a—MORPHOLOGY OF THE FUNGI. A comprehensive study is made of many typical forms of the Myxomycetes, Phycomycetes and a few of the Ascomycetes. Their structure, method of reproduction and classification are studied in detail. Laboratory four hours, lecture one hour; recitation one hour.
Prerequisites: *Botany* 1*a*, 1*b*. 4 *credits; 1st semester* (McFarland)

125b—MORPHOLOGY OF THE FUNGI. A continuation of course 125a. The rest of the fungi groups are taken up and a study is made as in the previous semester. The Ascomycetes and Basidiomycetes are studied as well as the Fungi imperfecti. Laboratory four hours; lecture one hour; recitation one hour.
Prerequisite: *Botany* 125*a*. 4 *credits; 2nd semester* (McFarland)

126a—MYCOLOGY. In this course the student spends the entire time in identifying unknown species of fungi. Considerable time is spent in the field in collecting and learning the habits of the various fungi. Laboratory six hours

Prerequisites: *Botany* 125*a-b*. 3 *credits; 1st semester* (McFarland)

126b—MYCOLOGY. A continuation of course 126a.

3 *credits; 2nd semester* (McFarland)

150a—ADVANCED SYSTEMATIC BOTANY. In this course the student is expected to identify many more species than given in course 15. It is expected that each student study critically some group of plants. Laboratory six hours.

Prerequisite: *Botany* 15. 3 *credits; 1st semester* (McFarland, McInteer)

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

3 *credits; 2nd semester* (McFarland, McInteer)

Courses open only to Graduate Students†

206a—RESEARCH IN MORPHOLOGY. Laboratory ten hours a week.

5 *credits; 1st semester* (McFarland, McInteer)

206b—RESEARCH IN MORPHOLOGY. Laboratory ten hours a week.

5 *credits; 2nd semester* (McFarland, McInteer)

207a—RESEARCH IN MYCOLOGY. Laboratory ten hours a week.

5 *credits; 2nd semester* (McFarland)

207b—RESEARCH IN MYCOLOGY. Laboratory ten hours a week.

5 *credits; 2nd semester* (McFarland)

210a—RESEARCH IN PLANT PHYSIOLOGY. This work is open only to students expecting to take advanced degrees with their major in the Department of Botany. The student will be encouraged to develop initiative and independence. Assignment to investigations will be made with due regard to the previous preparation in physics and chemistry. Laboratory ten hours a week.

5 *credits; 1st semester* (McInteer)

210b.—RESEARCH IN PLANT PHYSIOLOGY. A continuation of course 210a. Laboratory ten hours a week.

5 *credits; 2nd semester* (McInteer)

213a—RESEARCH IN SYSTEMATIC BOTANY. Students who desire to work in systematic botany will be assigned to some group or groups of plants for critical study. This study may include plants from the lowest type to the flowering ones. Laboratory ten hours a week.

Prerequisites: *Botany* 15, 150*a*, 150*b*. 5 *credits; 1st semester* (McFarland, McInteer)

213b—RESEARCH IN SYSTEMATIC BOTANY. A continuation of course 213a. Laboratory ten hours a week.

5 *credits; 2nd semester* (McFarland, McInteer)

† Given only as occasion demands.

CHEMISTRY

Professor Maxson, Professor Barkenbus, Professor Bedford, Associate Professor Stewart, Assistant Professor Mitchell, Mr. Keller,†
Mr. Krewson, Mr. Gabbard, Mr. Baker, Dr. Mason

The department of Chemistry affords opportunity for students to gain the A. B. or B. S. degree with chemistry as a major, and also provides a course in Industrial Chemistry. The course in Industrial Chemistry is a prescribed course thruout and leads to the degree of Bachelor of Science in Industrial Chemistry.

REQUIREMENTS FOR A MAJOR. Prerequisites: Chemistry 1a, 1b, 4, 8. Required: Chemistry 109, 127a, 127b, and either 101 or 131a and 131b.

Electives: Chemistry 150, 112, 114, 17, 118, 119a, 119b, 122a, 122b, 130a, 130b, 104, 106, 107, 108, 110, 111, 102, 105, 129.

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the Field of Physical Sciences, including the major work, in courses not open to freshmen.

*1a—GENERAL INORGANIC CHEMISTRY. One hour lecture; two hours recitation; four hours laboratory a week.
5 *credits; both semesters*
(Mitchell, Keller, Krewson, Gabbard, Amis)

*51—GENERAL INORGANIC CHEMISTRY. One hour lecture; four hours laboratory a week.
Prerequisite: *One year of high school chemistry.* 3 *credits; 1st semester* (Mitchell)

*1b—GENERAL INORGANIC CHEMISTRY. One hour lecture, two hours recitation, four hours laboratory a week.
Prerequisite: *Chemistry 1a.* 5 *credits; both semesters*
(Mitchell, Keller, Krewson, Gabbard, Amis)

*2a—GENERAL INORGANIC CHEMISTRY FOR ENGINEERS. One hour lecture, one hour recitation, four hours laboratory a week.
4 *credits; 1st semester* (Mitchell and others)

*2b—GENERAL INORGANIC CHEMISTRY FOR ENGINEERS. One hour lecture, one hour recitation, four hours laboratory a week.
Prerequisite: *Chemistry 2a.* 4 *credits; 2nd semester*
(Mitchell and others)

3—INORGANIC PREPARATIONS. The basic principles of general chemistry illustrated by typical inorganic syntheses. Laboratory four hours a week.
Prerequisite: *Chemistry 1b.* 2 *credits; 2nd semester* (Maxson)

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† On leave of absence 1936-1937.
* Courses open to Freshmen.

4—QUALITATIVE ANALYSIS. One recitation and six laboratory hours a week.
Prerequisite: *Chemistry* 1*b*. 4 *credits; both semesters* (Maxson)

6—QUALITATIVE ANALYSIS FOR MINING AND METALLURGICAL ENGINEERS. One recitation and six laboratory hours a week.
Prerequisite: *Chemistry* 2*a*. 4 *credits; both semesters* (Maxson)

7—ORGANIC CHEMISTRY. Brief course. Three recitations and two laboratory hours a week.
Prerequisite: *Chemistry* 1*b*. 4 *credits; both semesters* (Baker)

8—QUANTITATIVE ANALYSIS. Introductory course. Recitation one hour; laboratory eight hours a week.
Prerequisite: *Chemistry* 4 *or* 6. 5 *credits; both semesters* (Stewart)

10—QUANTITATIVE ANALYSIS. For mining engineers. Recitation one hour; laboratory eight hours a week.
Prerequisite: *Chemistry* 4. 2.5 *credits; one-half 2nd semester* (Stewart)

11—AGRICULTURAL ANALYSIS. An introductory course in quantitative analysis arranged for students in the College of Agriculture. The elements of quantitative analysis are studied with special reference to the constituents of soils, fertilizers and agricultural products. Recitation one hour; laboratory eight hours a week.
Prerequisite: *Chemistry* 1*b*. 5 *credits; both semesters*

17—GAS ANALYSIS. Laboratory two hours a week.
Prerequisite: *Chemistry* 1*b*. 1 *credit; both semesters* (Bedford)

20a—ORGANIC CHEMISTRY. Three recitations and four laboratory hours a week.
Prerequisite: *Chemistry* 1*b*. 5 *credits; 1st semester* (Barkenbus)

20b—ORGANIC CHEMISTRY. Continuation of 20a.
Prerequisite: *Chemistry* 1*b*. 5 *credits; 2nd semester* (Barkenbus)

49a—CHEMISTRY FOR NURSES. One hour lecture, one hour recitation, one hour laboratory a week. 2 *credits* ( )

49b—CHEMISTRY FOR NURSES. Continuation of 49a. One hour lecture, one hour recitation, one hour laboratory a week.
2 *credits* (Baker)

Courses open only to Upper Division and Graduate Students

101—PHYSICAL CHEMISTRY. For students in Agriculture and the biological sciences. Lectures and recitations three hours; laboratory four hours a week.
Prerequisites: *Chemistry* 7, 8; *Physics* 1*b*; *Mathematics* 17. 5 *credits; both semesters* (Bedford)

102—ELECTRO CHEMISTRY. Elementary electro-analysis, electro-

plating and preparation of some inorganic and organic substances by electrolysis. Laboratory ten hours a week.
Prerequisites: *Chemistry* 101 *or* 131*b*, 109, 127*b*. 5 *credits; both semesters* (Bedford)

109—QUANTITATIVE ANALYSIS. Recitation one hour; laboratory eight hours a week.
Prerequisite: *Chemistry* 8 *or* 11. 5 *credits; both semesters* (Stewart)

110—PHYSICAL CHEMISTRY. Intermediate course. Recitation and lectures three hours a week.
Prerequisites: *Chemistry* 131*b* and *Calculus*. 3 *credits; both semesters* (Bedford)

111—PHYSICAL CHEMISTRY. Intermediate course. Laboratory four hours a week.
Prerequisite: *Chemistry* 110, *or may be taken at the same time*. 2 *credits; both semesters* (Bedford)

112—AGRICULTURAL ANALYSIS. Laboratory eight hours a week.
Prerequisite: *Chemistry* 8 *or* 11. 4 *credits; both semesters*

127a—ORGANIC CHEMISTRY. Three recitations and four laboratory hours a week.
Prerequisite: *Chemistry* 1*b*. 5 *credits; 1st semester* (Barkenbus, Baker)

127b—ORGANIC CHEMISTRY. Three recitations and four laboratory hours a week.
Prerequisite: *Chemistry* 127*a*. 5 *credits; 2nd semester* (Barkenbus, Baker)

114—ADVANCED QUANTITATIVE ANALYSIS. The analysis of iron, steel and related metallurgical products. Recitation one hour; laboratory eight hours a week.
Prerequisite: *Chemistry* 109. 5 *credits; both semesters* (Stewart)

131a—PHYSICAL CHEMISTRY. Recitation two hours; laboratory four hours a week.
Prerequisites: *Chemistry* 8; *Physics* 2*a*, *ought to be taken at the same time; Mathematics* 20*a*. 4 *credits; 1st semester* (Bedford)

131b—PHYSICAL CHEMISTRY. Lectures and recitations two hours; laboratory four hours a week.
Prerequisite: *Chemistry* 131*a*. 4 *credits; 2nd semester* (Bedford)

118—WATER ANALYSIS. Laboratory four hours a week.
Prerequisite: *Chemistry* 109. 2 *credits; 1st semester* (Stewart)

119a—INDUSTRIAL CHEMISTRY.
Prerequisite: *Chemistry* 131*b*. 2 *credits; both semesters* (Maxson)

119b—INDUSTRIAL CHEMISTRY.
Prerequisite: *Chemistry* 131*b*. 2 *credits; both semesters* (Maxson)

122a—JOURNAL CLUB. Training in the use of chemical literature and special reports on typical research publications.
Prerequisite: *Chemistry* 131*b*. 1 *credit; both semesters* (Maxson)

122b—JOURNAL CLUB. Continuation of 122a.
Prerequisite: *Chemistry* 131*b*. 1 *credit; both semesters* (Maxson)

129—FOOD CHEMISTRY AND ANALYSIS. Lectures and recitation one hour; laboratory eight hours a week.
Prerequisites: *Chemistry* 7 *or* 127*a*, 8. 5 *credits; 1st semester*

130a—PHYSIOLOGICAL CHEMISTRY. A study of the chemistry of living processes. Two lectures, six laboratory hours a week.
Prerequisites: *Chemistry* 8, 127*b*. 5 *credits; 1st semester* (Barkenbus)

130b—PHYSIOLOGICAL CHEMISTRY. Continuation of Chemistry 130a. Two lectures, six laboratory hours a week.
Prerequisite: *Chemistry* 130*a*. 5 *credits; 2nd semester* (Barkenbus)

104—ADVANCED SYNTHETIC INORGANIC CHEMISTRY. Laboratory ten hours a week.
Prerequisite: *Chemistry* 150, *or to be taken at the same time*. 5 *credits; both semesters* (Maxson)

103—QUALITATIVE ORGANIC ANALYSIS. A systematic study of the separation and identification of organic compounds. Laboratory ten hours a week.
Prerequisite: *Chemistry* 127*b*. 5 *credits; both semesters* (Barkenbus)

106—ADVANCED ORGANIC CHEMISTRY. Laboratory ten hours a week.
Prerequisite: *Chemistry* 127*b*. 5 *credits; both semesters* (Barkenbus, Baker)

107—SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. Laboratory ten hours a week.
Prerequisite: *Chemistry* 109. 5 *credits; both semesters* (Stewart)

108—COLLOID CHEMISTRY. A course involving the study of the physical and the chemical properties of matter in the colloidal state. Laboratory and conferences ten hours a week.
Prerequisite: *Chemistry* 101 *or* 131*a*. 5 *credits; both semesters* (Maxson)

140—INDUSTRIAL STOICHIOMETRY. Chemical calculations of manufacturing processes. Recitations three hours a week.
Prerequisite: *Chemistry* 119*a*. 3 *credits; 2nd semester* (Bedford)

150—ADVANCED INORGANIC CHEMISTRY. Primarily for students specializing in chemistry. Two recitations and four laboratory hours a week.
Prerequisite: *Chemistry* 101 *or* 131*a*. 4 *credits; both semesters* (Maxson)

Courses open only to Graduate Students

201—SYNTHETIC INORGANIC CHEMISTRY. Laboratory ten hours a week. 5 *credits; both semesters* (Maxson)

202—QUANTITATIVE ANALYSIS. Research. Laboratory ten hours a week. 5 *credits; both semesters* (Stewart)

204a—ORGANIC CHEMISTRY. Laboratory ten hours a week.
Prerequisite: *Chemistry* 106 *or* 103. 5 *credits; both semesters* (Barkenbus)

204b—ORGANIC CHEMISTRY. Laboratory ten hours a week.
Prerequisite: *Chemistry* 204*a*. 5 *credits; both semesters* (Barkenbus)

205a—ADVANCED PHYSICAL CHEMISTRY.
Prerequisites: *Chemistry* 131*b and Calculus*. 2 *credits; both semesters* (Bedford)

205b—ADVANCED PHYSICAL CHEMISTRY. Continuation of 205a.
Prerequisite: *Chemistry* 205*a*. 2 *credits; both semesters* (Bedford)

206a—ADVANCED PHYSICAL CHEMISTRY. Laboratory course on selected topics, in advanced physical or electro-chemistry. Six or more hours a week.
Prerequisite, or accompanied by: *Chemistry* 205*a*. 3 *credits; both semesters* (Bedford)

206b—ADVANCED PHYSICAL CHEMISTRY. Continuation of Chemistry 206a. Six or more laboratory hours a week.
Prerequisite, or accompanied by: *Chemistry* 205*b*. 3 *credits; both semesters* (Bedford)

207a—SYSTEMATIC INORGANIC CHEMISTRY. Lectures and conferences, two hours a week.
Prerequisite: *Chemistry* 131*b or its equivalent*. 2 *credits; either semester* (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, or d—SEMINAR. Reports and discussions on recent research and current literature. 1 *credit; both semesters* (Staff)

COURSE IN INDUSTRIAL CHEMISTRY

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

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN INDUSTRIAL CHEMISTRY

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Mat. Lec. Required of all	.3	Eng. 1b Eng. Composition	3.
Eng. 1a Eng. Composition	3.	Math. 19 Analytical Geom.	3.
Math. 17 College Algebra	3.	Ger. 1b Elem. German	3.
Math. 18 Plane Trig.	2.	Chem. 1b Gen. Inorg. Chem.	5.
Ger. 1a Elem. German	3.	Eng. Draw. 2b Mech. Draw.	1.3
Eng. Draw. 2a Mech. Draw.	1.3	Mil. Sci. 1b First Year Basic Course, Infantry	1.3
Chem. 1a Gen. Inorg. Chem.	5.	Phys. Ed. Freshman Gym.	.7
Mil. Sci. 1a First Year Basic Course, Infantry	1.3	Hyg. 1 Personal and Community Health	1.
Phys. Ed. Freshman Gym.	.7		
	19.6		18.3

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Phys. 2a Gen. Col. Phys.	5.	Phys. 2b Gen. Col. Phys.	5.
Math. 20a Diff. Calculus	4.	Ger. 2b Intermed. German	3.
Ger. 2a Intermed. German	3.	Chem. 8 Quan. Analysis	5.
Chem. 4 Qual. Analysis	4.	Math. 20b Integral Calculus	4.
Mil. Sci. 6a Second Year Basic Course, Infantry	1.5	Mil. Sci. 6b Second Year Basic Course, Infantry	1.5
Phys. Ed. Sophomore Gym.	.7	Phys. Ed. Sophomore Gym.	.7
	18.2		19.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 127a Organic Chem., Aliphatic Series	5.	Chem. 127b Organic Chem., Cyclic Series	5.
Chem. 109 Quan. Analysis	5.	Chem. 17 Gas Analysis	1.
Chem. 131a Physical Chem.	4.	Econ. 15 Economic Problems	3.
Com. 1 Principles of Ec.	3.	Chem. 131b Phys. Chem., Continued	4.
French 1a Elem. French	3.	French 1b Elem. French	3.
Geol. 109a Mineralogy	2.	Phys. 123 Prin. of Thermodynamics	3.
	22.		19.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Elec. Engr. 105 Direct Currents and Machinery	4.	Elec. Engr. 106 Alternating Currents	4.
or		or	
Physics Advanced Physics	3.	Physics Advanced Physics	3.
Chem. 119a Indus. Chem.	2.	Chem. 150 Adv. Inorg. Chem.	4.
Chem. 122a Journal Club	1.	Chem. 119b Indus. Chem.	2.
Eng. Elective	3. or 2	Eng. Elective	3. or 2
Chem. 118 Water Analysis	2.	Chem. 122b Journal Club	1.
Chem. 103 Qual. Org. Anal.	5.	Chem. Elective	5.
Physics Elective	3.	Chem. 140 Industrial Stoichiometry	3.
	18, 19, 20		20, 21, 22

Minimum credits for a degree 154.3.

Note.—Students excused from Military Science or Physical Education must gain equivalent credits in other subjects.

ECONOMICS

REQUIREMENTS FOR A MAJOR. Prerequisites: Junior standing; six credits in Economics including course 1. Required: A minimum of 17 credits of advanced work in Economics including course 9, if not taken as a prerequisite, and courses 102 or 130, 104 or 124 and 105; the remainder of credits to be selected from the Arts and Sciences list of Economics courses numbered above 100. In addition tutorial courses 16a and b must be taken in the senior year to prepare for the required comprehensive examination.

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits of advanced work in the Field of Social Studies, including the major work.

1—PRINCIPLES OF ECONOMICS. An examination of the fundamental principles of economics and the application of these principles to practical problems. Not open to freshmen.

3 *credits; both semesters* (Wiest and others)

*2—ECONOMIC HISTORY OF EUROPE. A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, industry, and finance. Open only to freshmen and sophomores. 3 *credits; 1st semester* (Jennings and others)

*3—ECONOMIC HISTORY OF THE UNITED STATES. A brief sketch of economic life in the colonies, followed by a more detailed account of the national evolution in agriculture, manufacture, transportation, commerce and finance. Open only to freshmen and sophomores.

3 *credits; 2nd semester* (Jennings and others)

7a—PRINCIPLES OF ACCOUNTING. Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation two hours; laboratory four hours a week.

Not open to freshmen. 4 *credits; 1st semester* (Haun and Lawrence)

7b—PRINCIPLES OF ACCOUNTING. Continuation of 7a. Recitation two hours a week; laboratory four hours a week.

Not open to freshmen. 4 *credits; 2nd semester* (Haun and Lawrence)

8—ECONOMIC GEOGRAPHY. A brief study of the earth's physical characteristics and their relation to man's activities, including the effects of climate, natural resources and means of transportation upon the development of social, political and economic phases of life.

3 *credits; 1st semester* (Carter)

9—FORMS OF BUSINESS ORGANIZATION. A study of business organization primarily from a social point of view. The course traces the origin and development of forms of business organization; treats of advantages and disadvantages of the various forms; includes a study of the trust or combination movement and its effects upon society.

3 *credits; 2nd semester* (Tolman and others)

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* Courses open to Freshmen.

12—ECONOMIC GEOGRAPHY OF NORTH AMERICA. A detailed study of the agricultural, mineral, lumber, fishery and other economic resources of North America. The emphasis is placed upon the resources of the United States, the various geographical sections being intensively studied.
3 *credits; 2nd semester* (Carter)

15—APPLIED ECONOMICS. Fundamental aspects of money and banking, industrial efficiency, marketing, transportation, public utilities, public finance, social control, et cetera.
3 *credits; 2nd semester* (Sullivan and others)

The following courses not open to Lower Division Students.

16a—TUTORIAL WORK IN ECONOMICS. This course is conducted by weekly group conferences and discussions with emphasis on new materials for the purpose of unifying, coordinating, and extending the knowledge of economic subject matter. Reading lists and directed study are used for extensive independent study.
Open only to seniors majors in economics. 1 *credit; 1st semester* (Carter)

16b—TUTORIAL WORK IN ECONOMICS. Continuation of 16a.
1 *credit; 2nd semester* (Carter)

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

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. Not open to freshmen and sophomores. 3 *credits; 1st semester* (Palmer)

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)

115—CONTEMPORARY ECONOMIC THEORY. The major emphasis is on price and distribution theory.
3 *credits; 1st semester* (Sullivan)

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 movements of capital; international debts; reparations.
Prerequisite: *Course* 1. 3 *credits; 2nd semester* (Sullivan)

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)

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)

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)

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)

The following courses open only to Graduate Students

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 had 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 incidently. 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 critical examination of current literature on economic problems and policies.
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 formulæ, 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 the 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)

EDUCATION

A student in the College of Arts and Sciences may elect toward the A. B. or B. S. degree a total of 30 credits from other colleges of the University.

ENGINEERING

A student in the College of Arts and Sciences may elect toward the A. B. or B. S. degree a total of 30 credits from other colleges of the University.

ENGLISH LANGUAGES AND LITERATURE

Professor Dantzler, Professor Farquhar, Associate Professor Knight, Associate Professor Brady, Assistant Professor Sutherland, Assistant Professor Yates, Assistant Professor Fowler, Assistant Professor Kelley, Assistant Professor Gallaway, Mr. Fithian, Mrs. Smith, Mr. Bertram, Mr. Cundiff, Mr. Boucher, Miss Fox

REQUIREMENTS FOR A MAJOR. Prerequisites: English 1a, 1b, 3a, 3b. Required: A minimum of 18 credits of advanced work in English.

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the Field of Literature, Philosophy and the Arts, including the major work in courses not open to freshmen.

ENGLISH LANGUAGE AND RHETORIC

*D—ENGLISH COMPOSITION. A course for freshmen who are deficient in English. Students will be assigned to this course upon the basis of tests given in September.

0 *credits; both semesters* (Mrs. Smith)

*1a—ENGLISH COMPOSITION. A course in English Composition for freshmen. 3 *credits; both semesters* (The Staff)

*1b—ENGLISH COMPOSITION. A continuation of English 1a.
3 *credits; both semesters* (The Staff)

2a—ADVANCED COMPOSITION. An advanced course for those who wish to continue writing. Emphasis upon clear thinking and writing. Devoted exclusively to expository writing including such variants as satire and parody.
Prerequisites: *English* 1*a*, 1*b*. 2 *credits; 1st semester* (Knight)

2b—THE SHORT STORY. Primarily a course in composition, not in the history of the short story form, altho such matter is introduced. Short stories are read and analyzed; one long short story is written.
Prerequisites: *English* 1*a*, 1*b*. 2 *credits; 2nd semester* (Knight)

30—BUSINESS ENGLISH. Primarily for juniors in the College of Commerce. A study of forms of business correspondence, and practice in writing such.
Prerequisites: *English* 1*a*, 1*b*. 2 *credits; both semesters* (Cundiff)

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

102—HISTORY OF THE ENGLISH LANGUAGE. A survey of the

*Courses open to Freshmen.

development of the language, based upon Emerson's *History of the English Language;* other readings upon various phases of language development.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 2 *credits; 1st semester* (Dantzler)

[OFFERED 1936-37]

125—PRONUNCIATION OF MODERN ENGLISH. A study of present day pronunciation; dialectical peculiarities. Students will become proficient in using a phonetic alphabet.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester* (Dantzler)
[OFFERED 1936-37]

ENGLISH LITERATURE

3a—HISTORY OF ENGLISH LITERATURE. A survey of English literature from Beowulf to the present. Basic text—English Masterpieces (W. W. Norton and Company). Two classics will be read in addition during the semester.
Prerequisites: *English* 1*a*, 1*b*. 3 *credits; 1st semester* (The Staff)

3b—HISTORY OF ENGLISH LITERATURE. A continuation of English 3a. The same basic text will be used as in English 3a; two classics will be read during the semester.
Prerequisites: *English* 1*a*, 1*b*; 3*a*. 3 *credits; 2nd semester* (The Staff)

*34a—DRAMATIC PRODUCTION. This is a course designed to promote an appreciation of dramatic literature. It offers laboratory work in dramatic theory and experimentation, to prepare teachers to undertake community and high school dramatics; to develop the instinct for self-expression. The Guignol Theatre offers opportunity for acting.
2 *credits; 1st semester* (Fowler)

*34b—DRAMATIC PRODUCTION. This is a continuation of English 34a, which is not prerequisite altho desirable.
2 *credits; 2nd semester* (Fowler)

35—ADVANCED DRAMATIC PRODUCTION. This is a course which continues the work done in English 34a, 34b. Members of the class will write and produce plays in the Guignol Theatre.
Prerequisites: *English* 34*a*, 34*b*, *and consent of instructor*. 2 *credits; 2nd semester* (Fowler)

The following courses open only to Upper Division and Graduate Students

103—ADVANCED OLD ENGLISH.
Prerequisites: *English* 1*a*, *b*; 3*a*, *b*. 3 *credits; 1st semester* (Dantzler)

[OFFERED 1936-37]

104—THE SEVENTEENTH CENTURY. Cavalier and Puritan Poetry; Milton, Burton, Browne, Bunyan, Walton; Restoration Prose and Poetry. About eight weeks will be given to Milton.
Prerequisites: *English* 1*a*, *b*; 3*a*, *b*. 3 *credits* (Gallaway)
[OFFERED 1936-37]

106—ENGLISH ROMANTICISM. A careful study of growing signs of Romanticism in the early part of the 18th century. The French Revolution and its influence on the chief poets of the Romantic Movement; special emphasis on Wordsworth, Byron, Shelley, Keats and other prominent poets of the first quarter of the 19th century.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester* (Brady)
[OFFERED 1936-37]

107—VICTORIAN POETS. An extensive study of the ideas of the chief poets of the Victorian era, with special emphasis on the works of Tennyson, Browning, Arnold, Swinburne, and Rossetti.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Brady)

108a—PRINCIPLES OF LITERARY CRITICISM. A course designed to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Farquhar)

108b—PRINCIPLES OF LITERARY CRITICISM. A continuation of English 108a, which is not prerequisite altho desirable.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Farquhar)

109—PRE-SHAKESPEAREAN DRAMA. An historical course in English dramatic origins; a study of the works of Lyly, Kyd, Greene, Peele, Jonson, and Marlowe.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Farquhar)

110a—SHAKESPEARE COMEDY. Shakespeare's comedies will be studied in detail.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[NOT OFFERED 1936-37] (Farquhar)

110b—SHAKESPEARE TRAGEDY. A continuation of English 110a; which is not prerequisite, altho desirable.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[NOT OFFERED 1936-37] (Farquhar)

111a—THE ENGLISH NOVEL BEFORE SCOTT. A survey of the English novel from its beginning to Scott. A critical and appreciative study. Representative novels will be read.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Gallaway)

111b—THE ENGLISH NOVEL AFTER SCOTT. A continuation of English 111a, altho the latter is not a prerequisite; it aims to acquaint the student with the development of the novel to and including Stephen Crane, and to ssist him in forming theories concerning the art of fiction and appreciation of masterpieces. Eleven novels will be read.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Knight)

116—THE CONTEMPORARY DRAMA. A course designed to show the development and tendencies in Continental, British and American dramatic literature, 1850 to 1918.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Farquhar)

123a—AMERICAN LITERATURE BEFORE 1860. A survey course designed to introduce the student to influences in American life and thought as well as to its letters. The Puritan and Colonial writers. An anthology and two complete texts are used.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Knight)

123b—AMERICAN LITERATURE AFTER 1860. A continuation of English 123a, which is not a prerequisite. Beginning with the Civil War, and with considerable attention to Walt Whitman, Emily Dickinson, and the rise of the short story, the realistic school of fiction and the various groups of modern poets, the survey ends with a discussion of contemporary novelists, essayists, poets, and dramatists.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Knight)

124—THE RENAISSANCE. A survey of the literature of the Elizabethan period, exclusive of the drama. Foreign sources of the English Rennaissance. The sonnet from its origins to its development in Spenser. The pastoral from Theocritus to Spenser. Utopian literature from Plato to More.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Dantzler)

127a—LITERATURE OF THE BIBLE. A literary study of the Bible by Books. The purpose of the course is to develop an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Farquhar)

127b—LITERATURE OF THE BIBLE. A continuation of English 127a, which is not prerequisite altho desirable.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Farquhar)

130a—COMPARATIVE LITERATURE. Extensive reading of literary masterpieces from Homer to the present day. A study of traditions of civilization as reflected in literary movements. The readings are assigned in English translations, but a reading knowledge of at least one foreign language is desirable.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Brady)

130b—COMPARATIVE LITERATURE. A continuation of English 130a, which is not prerequisite, altho desirable.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Brady)

131a to d—INDEPENDENT WORK. A course for juniors and seniors of exceptional scholastic standing. Each student pursues a course independently. He writes a paper embodying the results of his study and submits to an examination by the staff of the Department.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 2 *credits; both semesters*
(Dantzler and others)

133—THE DEVELOPMENT OF AMERICAN REALISM. Traces the progress of American realism from Yankee and pioneer humorists, through the local color school, the leading novelists of the eighties and nineties, their contemporaries in drama and poetry, to the writers of today. Especial attention is given to the social and economic conditions which motivated this literature.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Knight)

136—VICTORIAN PROSE. A study of Carlyle, Ruskin, Newman, Spenser, Arnold, Huxley, and related writers of the period in the field of prose. Special emphasis is placed on Carlyle's *Sartor Resartus,* Newman's *Idea of a University,* and *Apologia Pro Vita Sua.*
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester* (Brady)

143—EDGAR ALLAN POE. A comprehensive study of Poe's works, poetry and prose. Primarily for the summer session.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; summer session*
(Farquhar)

145—ELIZABETHAN DRAMA, EXCLUSIVE OF SHAKESPEARE. A survey of English Drama as the title indicates. Especial study of foreign drama upon Elizabethan drama.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37]

147—AGE OF JOHNSON. From the death of Pope to 1798. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, Cowper. The preromantic movement.
Prerequisite: *English* 152*a or consent of instructor*. 3 *credits; 2nd semester*
(Gallaway)
[NOT OFFERED 1936-37]

151—ROBERT BROWNING. A study of Robert Browning's poetry. Little will be read other than the poetry.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
(Dantzler)

152—AGE OF POPE. Addison and Steele, Swift, Pope, Defoe.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Gallaway)

153—RESTORATION—EIGHTEENTH CENTURY DRAMA. A study of the dramatic types that arose betwen the closing of the theatres in 1642 and the death of Sheridan.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*

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.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
[OFFERED 1936-37] (Farquhar)

155b—CONTEMPORARY ENGLISH POETRY. A continuation of English 155a.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Farquhar)

The following courses open only to Graduate Students

201a—LITERARY CRITICISM. A course for graduate students only. Students who contemplate taking this course are strongly urged to take English 108a, 108b.
Prerequisite: *A. B. degree.* 3 *credits; 1st semester*
[GIVEN 1935-36; NOT OFFERED 1936-37] (Farquhar)

201b—LITERARY CRITICISM. A continuation of English 201a.
Prerequisites: *A. B. degree; English* 201*a*. 3 *credits; 1st semester*
[GIVEN 1935-36; NOT OFFERED 1936-37] (Farquhar)

202a—STUDIES IN CONTEMPORARY DRAMA. A course for graduate students only.
Prerequisite: *A. B. degree.* 3 *credits; 1st semester*
[NOT GIVEN 1934-35; OFFERED 1936-37] (Farquhar)

202b—STUDIES IN CONTEMPORARY DRAMA. A continuation of English 202a.
Prerequisites: *A. B. degree; English* 202*a*. 3 *credits; 2nd semester*
[OFFERED 1936-37] (Farquhar)

204a—BEOWULF. A linguistic and literary study of *Beowulf*. Some acquaintance with Old English is desirable as a prerequisite.
Prerequisite: *A. B. degree.* 3 *credits; 1st semester*
[OFFERED 1936-37] (Dantzler)

204b—BEOWULF. A continuation of English 204a.
Prerequisites: *English* 1*a*, 1*b*; 3*a*, 3*b*. 3 *credits; 1st semester*
English 204*a*. (Dantzler)
[OFFERED 1936-37]

205—CHAUCER. A course in Chaucer. All the works of Chaucer will be read. Each student will prepare one lead.
Prerequisite: *A. B. degree.* 3 *credits; 2nd semester*
[OFFERED 1936-37] (Dantzler)

206—ALFREDIAN PROSE. A course in Old English, centering in the works of Alfred. Some knowledge of Old English is desirable, tho not required.
Prerequisite: *A. B. degree.* 3 *credits; 1st semester*
[NOT GIVEN 1936-37] (Dantzler)

207—SPENSER. A study of problems in Spenser research. Attention given to bibliographical material.
Prerequisite: *A. B. degree.* 3 *credits; 2nd semester*
[GIVEN 1935-36; NOT OFFERED 1936-37] (Dantzler)

208—CARLYLE. A study of Carlyle as essayist, critic and literary historian.
Prerequisite: *A. B. degree.* 3 *credits; 1st semester*
[OFFERED 1936-37] (Brady)

210a—SEMINAR. Studies in research. This course is required of all candidates for the master's degree in English.
3 *credits; 1st semester* (The Staff)
[OFFERED 1936-37]

210b—SEMINAR. A continuation of English 210a.
[OFFERED 1936-37] 3 *credits; 2nd semester* (The Staff)

PUBLIC SPEAKING

*6—THE ESSENTIALS OF SPEECH. The course is designed to give the student platform experience in the fundamentals of effective public address. Emphasis will be placed upon correct enunciation, correction of speech defects and other requisite aspects of delivery of the various types of informal address. The material will be commensurate with the interests of freshmen. For freshmen only. 2 *credits; 1st semester* (Sutherland)

7a—ELEMENTS OF PUBLIC SPEAKING. This course is designed to give the student experience in effective extempore public speaking. Critical studies of contemporary educational, political, social, and economic institutions and problems are read to create a fund of knowledge as a basis for argument and discussion. 3 *credits; 1st semester* (Sutherland)

7b—PUBLIC SPEAKING. A continuation of English 7a, which is not prerequisite, tho desirable. 3 *credits; 1st semester* (Sutherland)

10a—PUBLIC SPEAKING. A course for students in the College of Engineering. The course is designed to give the student experience in effective extempore speaking. The reading in the course is much the same as in English 7a. 2 *credits; 1st semester* (Sutherland)

10b—PUBLIC SPEAKING. A continuation of English 10a. Reading, informal discussion and argument. 2 *credits; 2nd semester* (Sutherland)

11a—ARGUMENT AND DEBATE. This course is organized to familiarize the student with the classics of argumentative technique and to provide him with the opportunity to exercise his skill in making logical construction, logical defenses or refutations.
3 *credits; 1st semester* (Sutherland)

11b—ARGUMENTATION AND DEBATE. A continuation of English 11a, which is not prerequisite, tho desirable.
3 *credits; 2nd semester* (Sutherland)

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* Courses open to Freshmen.

15a—ORATORY. The work in this course is devoted to advanced extempore speaking and to the study of the art of formal address.
Prerequisites: *English 7a, 7b; or 10a, 10b.* 2 *credits; 1st semester* (Sutherland)

15b—ORATORY. A continuation of English 15a, which is not prerequisite, tho desirable.
Prerequisites: *English 7a, 7b; or 10a, 10b.* 2 *credits; 2nd semester* (Sutherland)

20—SPEECH TRAINING. This course is designed to meet the needs of high school teachers of speech. Problems of classroom and contest work in public speaking, debate, and oral interpretation will be discussed for the purposes of formal training procedure. Principally for teachers.
3 *credits; 1st semester* (Sutherland)

GEOGRAPHY

The following courses in Geography are offered in the University and are collected here for the convenience of the students:

ECONOMICS

8—ECONOMIC GEOGRAPHY. A brief study of the earth's physical characteristics and their relation to man's activities, including the effects of climate, natural resources and means of transportation upon the development of social, political and economic phases of life.
3 *credits; 1st semester* (Carter)

12—ECONOMIC GEOGRAPHY OF NORTH AMERICA. A detailed study of the agricultural, mineral, lumber, fishery and other economic resources of North America. The emphasis is placed upon the resources of the United States, the various geographical sections being intensively studied.
3 *credits; 2nd semester* (Carter)

GEOLOGY

24a—ELEMENTS OF GEOGRAPHY. A study of natural environment. Climate and weather. Factors controlling the nature and distribution of climates. Weather, and weather forecasting. Climatic regions of the world. Human aspects. 3 *credits; 1st semester* (Young)

24b—ELEMENTS OF GEOGRAPHY. A study of natural environment. The earth's surface features, their origin and development. Materials of the earth, their origin and use. Physiographic regions of the different continents. Human aspects. Not available for credit to students who have had Geology 22a. 3 *credits; 2nd semester* (Young)

25a—REGIONAL PHYSICAL GEOGRAPHY. A regional study of climatic and physiographic regions in North America. An explanation of the nature and origin of these regions. Human aspects.
Prerequisites: *Geology 24a, b or 22a.* 3 *credits; 2nd semester* (Young)

FARM ECONOMICS

108—LAND PROBLEMS. Land resources and their relation to the food supply; the present and potential supply of land of various grades; rent and its determination; factors determining the valuation of land; land tenure; landlord-tenant relations. Offered in alternate years.

Prerequisite: *F. E.* 4. 2 *credits; 1st semester* (Nicholls)

(NOT OFFERED 1935-36.)

HISTORY

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

Prerequisites: 10 *semester hours of American History* 1 *credit* (Knapp)

(GIVEN 1934-35.)

GEOLOGY

Professor McFarlan, Associate Professor Robinson, Mr. Averitt, Mr. Young

REQUIREMENTS FOR A MAJOR. Prerequisites: Geology 22a, 22b. Required: Geology 15a, 15b, 9a, 9b, 19a, 19b, 101a, 101b, 106a, 106b, 109a, 109b, 117a, 117b, 118a, or 118b. *Field work.* An early summer field trip, Geology 118a, or 118b is required of major students for graduation. This covers two weeks work in the Appalachian Mountains and coastal plain. Local field work is offered thruout the year, and it is recommended that all major students take a summer course in field geology and geological methods. Such courses varying from four to six weeks in length are offered by a number of institutions.

Students majoring in Geology are required to enroll in tutorial courses during the senior year and pass a final comprehensive examination in the department.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the Field of Physical and Biological Science, including the major work in courses not open to freshmen.

*3—ELEMENTARY GEOLOGY FOR AGRICULTURAL STUDENTS. A brief course in general geology consisting chiefly of study of geologic processes and a brief discussion of historical geology. Two recitations and lectures and one laboratory period a week. 3 *credits; 2nd semester*

7—ENGINEERING GEOLOGY. The practical application of geology to engineering work. A treatment of metallic and non-metallic mineral resources. Brief outline of historical geology.
Prerequisite: *Geology* 12. 2 *credits; 1st semester*

9a—FIELD GEOLOGY. Topographic mapping. Six hours of field work a week
Prerequisites: *Geology 22a, b; C. E.* 61, 62. 2 *credits; 1st semester*
(Averitt)

9b—FIELD GEOLOGY. Structure mapping and contouring. An introduction to field methods involving the identification and tracing of formations, elementary areal mapping and representation of structure by contours.
Prerequisites: *Geology 22a, b; 15a, b.* 2 *credits; 2nd semester* (Young)

12—ELEMENTARY GEOLOGY FOR ENGINEERS. An introduction to the principles of Geology as a background for the work in Geology 7. Two recitations and one laboratory conference. 3 *credits; 2nd semester*

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* Courses open to Freshmen.

* 14a—ELEMENTARY FIELD GEOLOGY. Visits are made to localities in the vicinity of Lexington, Ky., which illustrate various geologic phenomena. 1 *credit*

* 14b, c, d—ELEMENTARY FIELD GEOLOGY. Local field trips as in 14a.

1 *credit*

15a—ADVANCED GEOLOGY. A study of geological history and the interpretation of the geological record. A study of the various steps in the development of North America as it is today. An outline of the development of plant and animal life thruout geological time. To be accompanied by Geology 19a.
Prerequisites: *Geology* 22*a*, 22*b*. 3 *credits; 1st semester* (McFarlan)

15b—ADVANCED GEOLOGY. A continuation of 15a treated from a regional point of view. The geological history of selected regions in the United States. To be accompanied by Geology 19b.
Prerequisite: *Geology* 15*a*. 3 *credits; 2nd semester* (McFarlan)

19a—LABORATORY WORK IN HISTORICAL GEOLOGY. A laboratory background for Geology 15a.
Prerequisites: *Geology* 22*a, b*. 1 *credit; 1st semester* (Young)

19b—LABORATORY WORK IN HISTORICAL GEOLOGY.
Prerequisites: *Geology* 22*a, b*. 1 *credit; 2nd semester* (Young)

*22a—ELEMENTARY GEOLOGY. A study of the force and processes which determine the surface features of the earth and which in the past have determined the present conditions. Emphasis is placed on the application of an understanding of these processes to the interpretation of earth history. Three lectures, one laboratory conference per week.
4 *credits; 1st semester*

22b—ELEMENTARY GEOLOGY. A continuation of Geology 22a including an introduction to the study of mineral resources and earth history. Three lectures and one laboratory conference (or one field trip per week for one half semester) per week. 4 *credits; 2nd semester*

*23a—ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. Two weeks in the field in the Appalachian Mountains and coastal plain in a study of regional geological features. The course is offered as a part of the first summer session and is planned for the student with no other training than a year's introductory geology. The party works in conjunction with that of Geology 118a.
Prerequisite: *Geology* 22*a*, 22*b*. 2 *credits* (McFarlan and Young)

*23b—ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. A course the same type as 23a, but involving a different area.
Prerequisites: *Geology* 22*a*, 22*b*. 2 *credits* (McFarland and Young)

24a—ELEMENTS OF GEOGRAPHY. A study of natural environment.

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* Courses open to Freshmen.

Climate and weather. Factors controlling the nature and distribution of climates; weather, and weather forecasting. Climatic regions of the world. Human aspects. 3 *credits; 1st semester* (Young)

24b—ELEMENTS OF GEOGRAPHY. A study of natural environment. The earth's surface features, their origin and development. Minerals of the earth, their origin and use. Physiographic regions of the different continents. Human aspects. Not available for credit to students who have had Geology 22a. 3 *credits; 2nd semester* (Young)

25a—REGIONAL PHYSICAL GEOGRAPHY. A regional study of climatic and physiographic regions in North America. An explanation of the nature and origin of these regions. Human aspects.
Prerequisite: *Geology 24a-b (or 22a).* 3 *credits; 2nd semester* (Young)

The following courses open only to Upper Division and Graduate Students

101a—PALEONTOLOGY. A study of fossil invertebrates, their morphology, classification, and geological distribution. One lecture, two laboratory periods a week.
Prerequisites: *Geology 15a, 15b and Zoology 1a, 1b or a Zoological background.* 3 *credits; 1st semester* (McFarlan)

101b—PALEONTOLOGY. A continuation of 101a directed toward the study of geological faunas and the determination of their age relationships. One lecture, two laboratory periods a week.
Prerequisite: *Geology 101a.* 3 *credits; 2nd semester* (McFarlan)

104a—ADVANCED FIELD GEOLOGY. A field course directed to unraveling of local stratigraphy and structure. Six hours in the field a week.
Prerequisite: *Geology 9b.* 2 *credits; 1st semester* (McFarlan)

104b—ADVANCED FIELD GEOLOGY. A continuation of Geology 104a. May be repeated. 2 *credits* (McFarlan)

105a to d—INDEPENDENT WORK IN GEOLOGY. Directed work in independent investigations. Thesis required. 3 *credits*

106a—ECONOMIC GEOLOGY. Non-metallic mineral deposits. A study of the origin, mode of occurrence, treatment and uses of deposits of economic importance. Two lectures, one laboratory period per week.
Prerequisites: *Geology 15a-b.* 3 *credits; 1st semester* (Averitt)

106b—ECONOMIC GEOLOGY. Metallic Mineral Deposits. A study of the origin and mode of occurrence of metalliferous deposits. The economics of various metal industries and methods of treatment of ores will be briefly considered. Two lectures, one laboratory period per week.
Prerequisites: *Geology 15a-b.* 3 *credits; 2nd semester* (Averitt)

109a—MINERALOGY. A laboratory course covering crystallography, and physical mineralogy. The course includes a study of the systems and classes of crystals, their use in mineral identification, and the physical prop-

erties of about 100 minerals stressing those characteristics that are important in recognizing minerals. Four hours laboratory a week.
Prerequisites: *Chemistry* 1*a-b*. 2 *credits; 1st semester* (Robinson)

109b—MINERALOGY. A laboratory course covering chemical, descriptive and determinative mineralogy (including blow-pipe analysis). The course includes a study of the origin, occurrence, association and alteration and identification of about 150 minerals. Four hours laboratory.
Prerequisite: *Geology* 109*a*. 2 *credits; 2nd semester* (Robinson)

117a, b, c, d—SEMINAR. A course required of seniors in the department for the consideration of research work, independent work and review of current technical literature. May be repeated more than once.
1 *credit; each semester* (All members of staff)

118a—FIELD WORK IN REGIONAL GEOLOGY. Two weeks in the field in the Appalachian Mountains and coastal plain in a study of regional geological features. The course is an effort to bring the student into contact with geological phenomena and problems different from those found locally. The course is offered as a part of the first summer session coming in between Commencement and the opening of the summer term. Required of major students at the end of their Junior year.
Prerequisites: *Geology* 15*a, b*; 16*a, b*. 2 *credits* (McFarlan and Young)

118b—FIELD WORK IN REGIONAL GEOLOGY. A course of the same type as 118a but involving a different area. Offered on alternate years with 118a.
Prerequisites: *Geology* 15*a, b*. 2 *credits* (McFarlan and Young)

120a—GEOLOGY OF KENTUCKY. A study of the geological features of the state other than mineral resources. These include the major events in its geological history, the development of regional characters and an explanation of its scenic and natural wonders.
No prerequisite. 3 *credits* (McFarlan)

120b—GEOLOGY OF KENTUCKY. The mineral resources of the state, their distribution, origin and uses.
No prerequisite. 3 *credits* (McFarlan)

121—ECONOMIC GEOLOGY OF KENTUCKY. A technical study of the mineral resources of the state, their distribution and availability, geological occurrence, origin, and geological factors determining probable extension of known deposits and the finding of others.
Prerequisites: *Geology* 101*a, b*; 106*a, b*; 104*a, b*; 109*a, b*; 122. 3 *credits* (McFarlan and others)

122—PETROLEUM GEOLOGY. A study of the origin and accumulation of petroleum. The course includes a consideration of the stratigraphy and structure of producing regions of the United States and a study of geologic methods used in exploratory work and in the extension and development of known fields. An introduction to geophysical methods is given by Dr. Koppius.
Prerequisites: *Geology* 9*a, b*, 15*a, b*, 19*a, b*. 3 *credits; 2nd semester* (Robinson)

Courses open only to Graduate Students

202a—RESEARCH IN GEOLOGY. Registration only after consultation with instructor. May be repeated more than once.
5 *credits; 1st semester*

202b—RESEARCH IN GEOLOGY. 5 *credits; 2nd semester*

207a—PETROLOGY: OPTICAL MINERALOGY. A review of the principles of optics as applied to the petrographic microscope, the use of the miscroscope and other apparatus and descriptions of rock-forming minerals with their associations and alteration products. One recitation and lecture and four hours laboratory a week.
Prerequisites: *Geology* 109*a-b*, *Physics* 1*a-b*. 3 *credits; 1st semester* (Robinson)

207b—PETROLOGY. The origin, metamorphism and decay of igneous rocks. Practice in the use of the various mineralogical and chemical classifications in use of the present time and practice in writing descriptions from thin sections and hand specimens. One recitation and lecture and four hours laboratory a week.
Prerequisite: *Geology* 207*a*. 3 *credits; 2nd semester* (Robinson)

210—STRATIGRAPHIC PALEONTOLOGY. The course deals with the succession of geological faunas of the different periods as a basis for the correlation and determination of the age relationships of geological formations. One lecture, two laboratory periods per week.
Prerequisites: *Geology* 101*a, b*. 3 *credits; 2nd semester* (McFarlan)

SUGGESTED COURSES FOR GEOLOGY MAJOR

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Foreign Language	3.	Foreign Language	3.
Math. 17 College Algebra	3.	Math. 19 Analytic Geom.	3.
Math. 18 Trigonometry	2.	Geol. 22b Elem. Geol.	4.
Geol. 22a Elem. Geology	4.		
Hyg. 1 Personal and Community Health	1.		

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Foreign Language	3.	Foreign Language	3.
Econ. or Pol. Sci.	3.	Econ. or Pol. Sci.	3.
Chem. 1a Gen. Inorg. Chem.	5.	Chem. 1b Gen. Inorg. Chem.	5.
Eng. Draw. 2a	2.	Civil. Eng. 12 Plane Survey.	2.7
Geol. 15a Advanced Geol.	3.	Geol. 15b Advanced Geol.	3.
Geol. 19a Lab. Work in Historical Geol.	1.	Geol. 19b Lab. Work in Historical Geol.	1.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Eng. 7a Elements of Public Speaking	3.	Eng. 7b Public Speaking	3.
Zool. 1a Gen. Zoology	4.	Zool. 1b Gen. Zoology	4.
Chem. 4 Qualitative Analysis	4.	Geol. 9b Field Geology	2.
Geology 9a Field Geology	2.	Geol. 106b Econom. Geol.	2.
Geology 106a Econom. Geol.	2.	Geol. 109b Mineralogy	2.
Geol. 109a Mineralogy	2.	Chem. 8 Quan. Analysis	5.
		Geol. 118a (Summer) Field Work in Regional Geol.	2.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Psychology or Philosophy	3.	Psychology or Philosophy	3.
Phys. 1a Gen. Physics	5.	Phys. 1b Gen. Physics	5.
Zool. 108a Principles of Zool.	2.	Zool. 108b Principles of Zool.	2.
Geol. 117a Seminar	1.	Geol. 117b Seminar	1.
Geol. 101a Paleontology	3.	Geol. 101b Paleontology	3.
Geol. 104a Adv. Field Geol.	2.	Geol. 104b Adv. Field Geol.	2.
Metallurgy or Mining	2-3.	Metallurgy or Mining	2-3.

This does not constitute a prescribed course but is varied somewhat with the particular interest of the student. For the petroleum geologist additional work in the engineering aspects of production is recommended, for mineral resource work, mining methods, for the paleontologist additional Zoology, etc.

GERMAN

Professor Bigge, Dr. Hegeman, Mr. Whitaker, Mr. Schmalz

REQUIREMENTS FOR A MAJOR. Prerequisite Courses: 1a, 1b, 2a, 2b. Required: A minimum of 18 credits of advanced work independent of tutorial courses. Major students are required to enroll in tutorial courses. One credit a semester thru the junior and senior years, and to pass a final comprehensive examination in German.

REQUIREMENTS IN FIELD OF CONCENTRATION.—Forty credits in the field of Literature, Philosophy and the Arts, including the major work in courses not open to freshmen.

*1a—ELEMENTARY GERMAN. The essentials of grammar and translation of easy prose with practice in reading and writing German. No credit is given for Course 1a until Course 1b is completed.
3 *credits; both semesters* (Staff)

*1b—ELEMENTARY GERMAN. Continuation of German 1a, with more extended exercises in easy reading, writing, and pronunciation.
Prerequisite: *German 1a or one high school unit.* 3 *credits; both semesters* (Staff)

2a—INTERMEDIATE GERMAN. Graded reader, followed by short stories from representative authors. Practice in writing and speaking German.
Prerequisite: *German 1b.* 3 *credits; both semesters* (Staff)

2b—INTERMEDIATE GERMAN. Continuation of German 2a. Selected readings. Grammar review and composition.
Prerequisite: *German 2a.* 3 *credits; 2nd semester* (Staff)

3a—SELECTED READING. Prose and poetry from standard German authors with brief outline of German literature.
Prerequisite: *German 2b.* 3 *credits; 1st semester* (Staff)

3b—SELECTED READING. Continuation of German 3a.
Prerequisite: *German 2b.* 3 *credits; 2nd semester* (Staff)

* Courses open to Freshmen.

4a—CONTEMPORARY GERMAN LITERATURE. Leading tendencies in German literature since 1870. Readings, discussions, and reports.
Prerequisite: 3*a*. 3 *credits; 1st semester* (Bigge)
[NOT GIVEN 1935-36; OFFERED 1936-37]

4b—CONTEMPORARY GERMAN LITERATURE. Continuation of Course 4a.
Prerequisite: 3*b* 3 *credits; 2nd semester* (Bigge)
[NOT GIVEN 1935-36; OFFERED 1936-37]

5—HISTORY OF GERMAN LITERATURE. With special emphasis on tendencies in literary development during the classical period. Readings and reports.
Prerequisite: 3*b*. 3 *credits; 1st semester* (Hegeman)
[NOT GIVEN 1935-36; OFFERED 1936-37]

6a—SCIENTIFIC GERMAN. This course is designed primarily for students of the sciences.
Prerequisites: 2*a and* 2*b*. 3 *credits; each semester* (Staff)
[GIVEN 1935-36; OFFERED 1936-37]

6b—SCIENTIFIC GERMAN. Continuation of 6a.
Prerequisite: 6*a*. 3 *credits; each semester* (Staff)
[GIVEN 1935-36; OFFERED 1936-37]

Courses open only to Upper Division and Graduate Students

101a—NINETEENTH CENTURY LITERATURE. Studies in German literature of the 19th century with special emphasis on selected authors.
Prerequisite: 3*b*. 3 *credits; 1st semester* (Hegeman)
[GIVEN 1935-36; OFFERED 1936-37]

101b—NINETEENTH CENTURY LITERATURE. Continuation of Course 101a.
Prerequisite: 3*b*. 3 *credits; 2nd semester* (Hegeman)
[GIVEN 1935-36; OFFERED 1936-37]

102a—TWENTIETH CENTURY LITERATURE. Reading discussions and reports.
Prerequisites: 3*a*, 3*b*. 3 *credits; 1st semester* (Whitaker)
[GIVEN 1935-36; OFFERED 1936-37]

102b—TWENTIETH CENTURY LITERATURE. Continuation of Course 102a.
Prerequisites: 3*a*, 3*b*. 3 *credits; 2nd semester* (Whitaker)
[GIVEN 1935-36; OFFERED 1936-37]

105a to d—INDEPENDENT WORK. This course is designed for students of particular excellence in the department.
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 or its equivalent.* 2 *credits; 1st semester* (Staff)

[GIVEN 1935-36; OFFERED 1936-37]

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

Prerequisite: *German 2b or its equivalent.* 2 *credits; 2nd semester* (Staff)

[GIVEN 1935-36; OFFERED 1936-37]

120a, b—JUNIOR TUTORIAL IN GERMAN.

1 *credit; both semesters* (Staff)

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

103a, b—SENIOR TUTORIAL IN GERMAN.

1 *credit; both semesters* (Staff)

[GIVEN 1935-36; OFFERED 1936-37]

160a—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 creation of these literary works. Tour, assigned readings, quizzes, lectures and reports.

Prerequisite: *German 2b.* 3 *credits; summer* 1936 (Bigge)

[NOT GIVEN 1936; OFFERED 1937]

160b—LITERARY LANDMARKS OF GERMANY. Continuation of 160a. 3 *credits; summer* 1936 (Bigge)

HISTORY

Professor Tuthill, Professor Clyde, Associate Professor Knapp, Assistant Professors Hall, Lunde, Clark

Courses 2a, 2b will prepare the freshman for later courses in American history, law, and English history and literature. Courses 4a, 4b for freshmen, are recommended for cultural values in European civilization, languages, foreign commerce, and a somewhat broader outlook on the world.

Henceforth certain courses numbered above 100 will be offered in alternate years, and should be taken in sequence; hence the student should consult the Department before completing his program of studies.

REQUIREMENTS FOR A MAJOR. Prerequisites: History 2a, 2b, or 4a and 4b. Required: A minimum of 18 credits of advanced courses in History. Should include the Senior Seminar.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the Field of Social Studies, including the major work, in courses not open to freshmen.

*2a—HISTORY OF THE BRITISH PEOPLE TO THE RESTORATION. From the Roman period to the Stuart period. A general survey of the various epochs and phases of the English people at home and abroad.
3 *credits* (Hall)

*2b—HISTORY OF THE BRITISH PEOPLE SINCE THE RESTORATION. From the Stuart period to the present. A continuation of 2a.
3 *credits* (Hall)

*4a—MODERN EUROPE TO THE FRENCH REVOLUTION. A general survey of the rise of modern states in Europe to the French Revolution, with related topics. Text. Class reports. Open to freshmen.
3 *credits; both semesters* (Lunde)

*4b—MODERN EUROPE FROM THE FRENCH REVOLUTION TO THE PRESENT. A continuation of Course 4a, treating European conditions from the French Revolution to the present, based on Schevill's History of Europe. For freshmen and others offering 4a or equivalent.
3 *credits; both semesters* (Lunde)

*5a—HISTORY OF THE UNITED STATES TO 1860. Beginning about 1750, and tracing the principal features thereof to 1860. Designed especially to meet the requirements of elementary teachers' certificates in Kentucky. (Note: Students may not take 5a and 10a, nor 5b and 10b.)
3 *credits; both semesters* (Clark)

*5b—HISTORY OF THE UNITED STATES SINCE 1860. A continuation of Course 5a, from 1860 to the present. See note on 5a.
3 *credits; both semesters* (Clark)

40—HISTORY OF KENTUCKY. A general survey of the chief periods of Kentucky's growth and development from 1750 to the present.
2 *credits* (Tuthill or Clark)

I. COURSES OPEN ONLY TO UPPER DIVISION AND GRADUATE STUDENTS

100a—THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES, TO 1860. A survey designed to acquaint the student with the principles of American foreign policy and their historical evolution in practice.
Prerequisite: *Course 10a, or equivalent.* 3 *credits; 1st semester* (Clyde)

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* Courses open to Freshmen.

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

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* (Knapp)
[NOT GIVEN 1935-36]

106a—COLONIAL LATIN AMERICA. A survey of the founding and development of the Latin American Colonies and their struggle for independence.
[GIVEN 1935-36] 2 *credits* (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.
[GIVEN 1935-36] 2 *credits* (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.
[GIVEN 1935-36] 3 *credits; 1st semester* (Tuthill)

115—THE RENAISSANCE IN THE NORTH. A continuation of Course 114 with reference to the awakening of the new spirit in France, England, Germany, and the background of the Reformation period.
[GIVEN 1935-36] 3 *credits* (Tuthill)

116—SENIOR SEMINAR. A course for Seniors designed to present the bibliography and literature of selected fields.
2 *credits; 2nd semester* (Tuthill and Staff)

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* (Tuthill)
[NOT GIVEN 1935-36]

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.
[GIVEN 1935-36] 3 *credits* (Tuthill)

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; including socialism, public education, invention and discoveries. Reports on current literature and assigned reading on a liberal scale.
[GIVEN 1935-36] 3 *credits; 2nd semester* (Tuthill)

131a—ENGLISH CONSTITUTIONAL HISTORY TO 1603. A study of the backgrounds of the English constitution; the Anglo-Saxon contribution; the Norman conquest and development of governmental and legal institutions during the 12th and 13th centuries; the rise of Parliament; the Tudor strong monarchy to its close in 1603. Two hours a week.
Prerequisite: *History 2a or equivalent.* 3 *credits* (Hall)
[GIVEN 1935-36]

131b—ENGLISH CONSTITUTIONAL HISTORY SINCE 1603. A continuation of Course 131a. The constitutional struggle between the Stuart kings and Parliament; triumph of constitutional monarchy; rise of the Cabinet; effect of the spread of democracy in recent times. Two hours a week.
Prerequisite: *History 2b or equivalent.* 3 *credits* (Hall)
[GIVEN 1935-36]

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.
[NOT GIVEN 1935-36] 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.
[NOT GIVEN 1935-36] 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.
Prerequisite: *History 2a.* 2 *credits* (Hall)

140a to d—INDEPENDENT WORK. Under special conditions selected students may investigate special problems, with 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 18th Century to the present time. Carefully planned reading is expected, with writing of papers based upon some research among documents.
Prerequisite: *History* 40. 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)
[GIVEN 1935-36]

166—DIVISION AND REUNION, 1850-1865. An intensive study of sectionalism in the United States from 1850 to 1877. The political, military, economic, industrial, and educational aspects of the period of the Civil War. Emphasis on the problems of the Border States.
Prerequisite: *One year of American History.* 3 *credits* (Knapp)
[GIVEN 1935-36]

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)
[GIVEN 1935-36]

180—HISTORY OF THE NEW 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.
Prerequisites: *History* 5*a*, 5*b*. 3 *credits* (Clark)

184—THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. A study of the relationship of geography to history and the influence of the physiography upon the settlement and growth of various regions of the Americas.
Prerequisites: 10 *semester hours of American History.* 1 *credit* (Knapp)
[GIVEN 1935-36]

190a—THE FAR EAST TO 1900. European and American contacts with China, Japan, Korea, eastern Siberia and the Philippines to the close of the 19th century.
Prerequisite: *History* 4*b*. 3 *credits* (Clyde)
[GIVEN 1935-36]

190b—THE FAR EAST SINCE 1900. The developing influence of the Far East in world affairs during the 20th century.
Prerequisite: *History* 190*a*. 3 credits (Clyde)
[GIVEN 1935-36]

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.
Prerequisite: *History* 5*a, b or* *History* 4*a, b.* 3 *credits* (Clyde)

II. COURSES IN THE "200" GROUP

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

202—THE AMERICAN REVOLUTION.
3 *credits* (Knapp)

226—THE OLD SOUTH.
3 *credits* (Knapp)

280—EUROPEAN HISTORIOGRAPHY. Two hours.
2 *credits* (Tuthill)

281—AMERICAN HISTORIOGRAPHY. Two hours.
2 *credits* (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* 190*a or* 190*b or* 194. 3 *credits* (Clyde)

III. COURSES IN THE "300" GROUP

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

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)

HOME ECONOMICS

A student in the College of Arts and Sciences may elect toward the A. B. or B. S. degree a total of thirty credits from other colleges of the University.

HYGIENE AND PUBLIC HEALTH

Professor Chambers, Associate Professor Pinney, Dr. Thomas, Dr. Doyle, Assistant Professor Heinz, Assistant Professor Hamilton, Mr. Dunn, Miss Desha, Miss Davis

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

The medical service consists of complete physical examinations of all entering students, the maintenance of a dispensary on the campus for students and faculty, and calls by the physicians of the staff to sick students in their rooms.

The teaching consists of courses in general hygiene which are intended to give the university students a proper basis for an intelligent attitude toward the medical sciences in relation to himself and his community. In addition certain advanced courses are given for the benefit of students in other colleges and departments. The department does not at this time give advanced work leading to a degree in public health.

Research is a necessary part of the activities, and provision is being made for the development of this phase of the work.

*1—PERSONAL AND COMMUNITY HEALTH. Lectures and Recitation. An introduction to the principles of personal and community health.

1 *credit; both semesters* (Hamilton)

*9—HYGIENE FOR TEACHERS. This course is designed to meet the State requirements of two credits in Hygiene for the elementary certificates.

2 *credits; both semesters* (Hamilton)

7—FIRST AID. A course designed especially for senior mining engineers.

1.3 *credits; first half of 2nd semester* (Pinney)

The following courses not open to Lower Division Students

100a—PUBLIC HEALTH. Lectures, Recitations and Problems. A general consideration of different fields of public health.
Prerequisite: *Hygiene* 1. 3 *credits; 1st semester* (Chambers, Hamilton)

100b—PUBLIC HEALTH. A continuation of 100a.
Prerequisites: *Hygiene* 1 *and Hygiene* 100*a*. 3 *credits; 2nd semester* (Chambers, Hamilton)

110—HEALTH EDUCATION AND HEALTH SUPERVISION OF SCHOOLS. A general course covering the principles and practices of school health work. 3 *credits; summer school only* (Chambers)

124—PUBLIC HEALTH NURSING. The principles and practices of Public Health Nursing. 3 *credits; summer school only* (Staff)

140—CURRENT TRENDS IN PUBLIC HEALTH. 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)

150a—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)

150b—PROBLEMS IN HEALTH EDUCATION. A continuation of 150a. 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 nurse's daily activities. 2 *credits; summer school only* (Staff)

The following courses open only to Graduate Students

200—EPIDEMIOLOGY. The control of communicable disease. For health officers only. 2 *credits; summer school only* (Staff)

212—PUBLIC HEALTH ADMINISTRATION. The organization and administration of public health. For health officers only.
2 *credits; summer school only* (Staff)

218—VITAL STATISTICS. Statistics of populations, births, deaths, marriage, morbidity. For health officers only.
2 *credits; summer school only* (Staff)

JOURNALISM

Professor Grehan, Assistant Professor McLaughlin, Assistant Professor Portmann, Assistant Professor Plummer.

The department is supplied with a library containing the latest works on the subject of journalism, leading daily and weekly newspapers, periodicals, and other publications. In connection with this department function a committee on Student Publications, a Campus Bulletin, the Kentucky Kernel (student newspaper), and allied publications, the Alumnus, The Kentuckian (student annual), and The Kentucky Press (a monthly paper for the editors of the state press). All are used in laboratory work. The department is supplied with necessary standard equipment for the printing and publishing of a modern community newspaper, and for highgrade commercial job printing which serves the student body. In this equipment also is a type laboratory for instructional purposes in the study of typography, make-up, and the mechanics of publishing and advertising.

REQUIREMENTS FOR A MAJOR. Prerequisites: Journalism 1a, 1b, and either 11 or 12. Required: Journalism 104a, 104b, 105, 106, 107, 108, 90a, 90b.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the Field of Literature, Philosophy and the Arts, including the major work in courses not open to freshmen.

Comprehensive Examinations. Each major in journalism is required to pass a final comprehensive examination at the end of his senior year. Each major is required to enroll in Turtorial Work, 90a, and 90b, during his senior year.

The degree of A. B. in Journalism. Two sequences are offered which, when completed, lead to the degree of A. B. in Journalism. See outline below.

*1a—REPORTING. A study of the fundamentals of newspaper reporting; typewriting. Not open to juniors and seniors.
No prerequisites. 3 *credits; both semesters* (McLaughlin, Plummer)
[GIVEN 1935-36; OFFERED 1936-37]

*1b—REPORTING. Continuation of 1a.
Prerequisite: Journalism 1a. 3 *credits; both semesters*
[GIVEN 1935-36; OFFERED 1936-37] (McLaughlin, Plummer)

11—ADVANCED REPORTING. A study of specialized news reporting

* Courses open to Freshmen.

with emphasis placed on "beat" and court reporting. Lecture 2 hours; laboratory 2 hours.
Prerequisites: *Journalism* 1*a-b*. 3 *credits; both semesters* (Plummer)
[GIVEN 1935-36; OFFERED 1936-37]

12—FEATURE WRITING. A study of the writing of feature stories for newspapers, magazines, and other publications.
Prerequisite: *Journalism* 1*a-b*. 3 *credits; both semesters* (Plummer)
[GIVEN 1935-36; OFFERED 1936-37]

21—ETYMOLOGY. A study of words and their fundamental values with reference to development of a writing vocabulary.
Prerequisite: *Sophomore standing*. 3 *credits; both semesters* (Grehan)
[GIVEN 1935-36; OFFERED 1936-37]

Courses open only to Upper Division and Graduate Students

102—COMMUNITY JOURNALISM. A study of the problems which confront the community weekly and the small city daily.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12. 3 *credits; 1st semester*
[GIVEN 1935-36; OFFERED 1936-37] (Portmann)

103—NEWSPAPER ADMINISTRATION. A study of the business, circulation, advertising, and accounting divisions of the newspaper with special emphasis placed on the community newspaper.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12. 3 *credits; 2nd semester*
[GIVEN 1935-36; OFFERED 1936-37] (Portmann)

104a—COPYREADING, PROOFREADING, TYPOGRAPHY, EDITING. No credit for 104a until 104b has been completed. Lecture one hour; laboratory four hours a week. Majors must take 104 in their junior year. A non-credit, one-hour laboratory course in linotype and other printing machinery is offered by Mr. Griffith in connection with 104a, to a selected group of students.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12. 3 *credits; 1st semester*
[GIVEN 1935-36; OFFERED 1936-37] (Portmann)

104b—COPYREADING, PROOFREADING, TYPOGRAPHY, EDITING. Continuation of 104a. Lecture one hour, laboratory four hours a week.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12; 104*a*. 3 *credits; 2nd semester* (Portmann)
[GIVEN 1935-36; OFFERED 1936-37]

105—LAW OF THE PRESS. A study of the special laws of libel, copyright, regulatory provisions, etc., that pertain to the press.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12. 3 *credits; 1st semester*
[GIVEN 1935-36; OFFERED 1936-37] (Portmann)

106—ETHICS AND PRINCIPLES OF JOURNALISM. A study of the practices and application of the ethics, principles, and standards in modern journalism.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12; *senior standing*. 3 *credits; 1st semester* (Portmann)
[GIVEN 1935-36; OFFERED 1936-37]

107—EDITORIAL WRITING. A study of editorial writings, and the editorial page and its contents, aims, and results, and of the critical writing of the fine arts.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12; *senior standing.* 3 *credits; both semesters* (Grehan)
[GIVEN 1935-36; OFFERED 1936-37]

108—HISTORY OF JOURNALISM. A study of the rise and development of American journalism and newspapers.
Prerequisites: *Journalism* 1*a-b*; 11 *or* 12; *senior standing.* 3 *credits; 2nd semester* (Portmann)
[GIVEN 1935-36; OFFERED 1936-37]

110—SUPERVISION OF HIGH SCHOOL PUBLICATIONS. A study of the problems that confront the adviser of the high school newspaper or magazine. Open to advisers or prospective advisers with consent of the instructor. Two hours daily.
Prerequisite: *Senior college standing.* 3 *credits; 1st or 2nd summer session* (Portmann)
[GIVEN 1935-36; OFFERED 1936-37]

111—VERBAL CRITICISM. A study of words and their synonyms with reference to developing accuracy in use of English in journalistic work.
Prerequisite: *Junior standing.* 3 *credits; both semesters* (Grehan)
[GIVEN 1935-36; OFFERED 1936-37]

115—ADVERTISING TYPOGRAPHY AND LAYOUT. A study of the principles of typographic families, illustrations, decorations, etc., as pertains to modern advertising. Practical work with merchants is included in the latter part of the course. Lecture two hours; laboratory two hours.
Prerequisites: *Senior standing; Psychology* 5, *or consent of instructor.* 3 *credits; 2nd semester* (Portmann)
[GIVEN 1935-36; OFFERED 1936-37]

120a—SEMINAR IN PUBLIC OPINION. A study of the relationship of the press in its several departments to public opinion; free publicity; newspaper campaigns and crusades; propaganda; influence of politics on the press; financial control; and ethics, principles, and standards.
Prerequisite: *Senior or Graduate College standing.* 2 *credits; 1st semester* (Plummer)
[OFFERED 1936-37]

120b—SEMINAR IN PUBLIC OPINION. Continuation of 120a.
Prerequisite: *Senior or Graduate College standing.* 2 *credits; 2nd semester* (Plummer)
[OFFERED 1936-37]

90a—TUTORIAL WORK IN JOURNALISM. Open only to senior majors in the department; required of all majors.
Prerequisite: *Senior standing.* 1 *credit; 1st semester* (The Staff)

90b—TUTORIAL WORK IN JOURNALISM. Continuation of 90a.
1 *credit; 2nd semester* (The Staff)

OUTLINE OF COURSE LEADING TO DEGREE A. B. IN JOURNALISM, GENERAL SEQUENCE

Students should elect this sequence at the beginning of their sophomore year. It can be elected at the beginning of the junior year providing all requirements of the freshman and sophomore years have been met.

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Jour. 1a Reporting	3.	Jour. 1b Reporting	3.
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Phys. Sci. Descrip. Astron. or Elem. Geol.	3.	Phys. Sci. Descrip. Astron. or Elem. Geol.	3.
Psych. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Hyg. 1 Personal and Community Health	1.	Mil. Sci. 1b First Year Basic Course, Inf.	1.3
Mil. Sci. 1a First Year Basic Course, Inf.	1.3	Phys. Ed. Freshman Gym.	.7
Phys. Ed. Freshman Gym.	.7		
Mat. Lect. Required of all	.3		
	18.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Jour. 11 Adv. Reporting	3.	Jour. 12 Feature Writing	3.
Eng. 3a Hist. Eng. Lit.	3.	Eng. 3b Hist. Eng. Lit.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Biol. Sci. Bact., Bot., Zool., Physiol.	3. or 4	Biol. Sci. Bact., Bot., Zool., Physiol.	3. or 4
Soc. Sci. Hist. 5a, Pol. Sci. 15 or 51, Sociology 1a	3.	Soc. Sci. Hist. 5b, Pol. Sci. 15 or 51, Sociology 1b	3.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. Second Year Basic Course	1.5
Phys. Ed. Soph. Gym.	.7	Phys. Ed. Soph. Gym.	.7
	17.2 or 18.2		17.2 or 18.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Jour. 104a Copyreading, etc.	3.	Jour. 104b Copyreading, etc.	3.
Jour. 102 Community Jour.	3.	Jour. 103 Newspaper Administration	3.
Eng. 123a or 130a Amer. Lit., Comparative Lit.	3.	Eng. 123b or 130b Amer. Lit., Comparative Lit.	3.
Psych. 5 Advertising and Selling	3.	Electives Journ. 111, Journ. 120a, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	6.
Jour. 105 Law of the Press	3.		
	15.		15.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 106 Ethics and Prin.	3.	Journ. 108 Hist. of Journ.	3.
Journ. 90a Tutorial Work	1.	Journ. 107 Editorial Writing	3.
Electives Journ. 21, Journ. 120b, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	11.	Journ. 90b Tutorial Work	1.
		Electives Journ. 111, Journ. 115, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	8.
	15.		15.

Minimum credits required for degree 130.

OUTLINE OF COURSE LEADING TO DEGREE A. B. IN JOURNALISM, COMMUNITY SEQUENCE

Students will elect this sequence at the beginning of their sophomore year, and will follow the course as outlined in regard to specified courses in the class year specified.

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Journ. 1a Reporting	3.	Journ. 1b Reporting	3.
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Psych. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Math. 51a or Geol. Astron. or Elementary Geology	3.	Math. 51b or Geol. Astron. or Elementary Geology	3.
Hyg. 1 Personal and Community Health	1.	Mil. Sci. 1b First Year Basic Course, Inf.	1.3
Mil. Sci. 1a First Year Basic Course, Inf.	1.3	Phys. Ed. 1b Gym., Field Athletics	.7
Phys. Ed. 1a Gym., Field Athletics	.7		
Matric. Lect. Required of all	.3		
	18.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Journ. 11 Adv. Reporting	3.	Journ. 12 or Journ. 21 Feature Writing or Etymology	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Biol. Sci. Bact., Bot., Zool. or Physiol.	3.	Biol. Sci. Bact., Bot., Zool., or Physiol.	3.
Pol. Sci. 51 or 15 Amer. Govt. or Prob. of Citizenship	3.	Pol. Sci. 51 or 15 Amer. Govt. or Prob. of Citizenship	3.
Soc. 1a or Eng. 3a Prin. of Soc. or Hist. Eng. Lit.	3.	Soc. 1b or Eng. 3b Prin. of Soc. or Hist. Eng. Lit.	3.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. 6b Second Year Basic Course	1.5
Phys. Ed. 2a Gym., Field Athletics	.7	Phys. Ed. 2b Gym., Field Athletics	.7
	17.2		17.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 104a Copyreading, etc.	3.	Journ. 104b Copyreading, etc.	3.
Journ. 105 Law of the Press	3.	Journ. 103 Newspaper Adm.	3.
Journ. 102 Community Jour.	3.	Soc. 116 Rural Social Econ.	3.
Soc. 101 Social Dependence	3.	Soc. 105 Social Systems	3.
Pol. Sci. 52 Munic. Gov.	3.	Pol. Sci. 153 City Admin.	3.
	15.		15.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 106 Ethics and Prin.	3.	Journ. 107 Editorial Writing	3.
Psych. 5 Advertising and Selling	3.	Journ. 108 Hist. of Journ.	3.
Pol. Sci. 154 County Govt.	3.	Soc. 112 Com. Organization	3.
Journ. 90a Tutorial Work	1.	Pol. Sci. Course above 100	3.
Electives Hist. 110a, Eng. 123a, Journ. 111, Journ. 120a, Pol. Sci., Sociology, Eng. (Numbers over 100)	5.	Journ. 90b Tutorial Work	1.
		Electives Hist. 110b, Eng. 123b, Journ. 111, Journ. 115, Journ. 120b, Pol. Sci., Sociology, Eng. (Numbers over 100)	2.
	15.		15.

Minimum credits required for degree 130.

LAW

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

LIBRARY SCIENCE

Professor Semmons, Miss King, Mrs. Wood, Miss Cass.

The Department of Library Science affords opportunity for students in the College of Arts and Sciences to gain the A. B. Degree with Library Science as a major; for students in the College of Education to gain the A. B. in Education or B. S. in Education degree with Library Science as a second major, as outlined in the "Suggested Curriculum for Teacher Librarians" of the College of Education.

REQUIREMENTS FOR A MAJOR. Prerequisites: Senior or graduate standing. Good cultural background, especially in literature, language and the social sciences. Students desiring to enter Library Science courses should consult early in their college course with the Director concerning preparation for matriculation. Previous experience in library work and facility in the use of the typewriter are considered assets. Required courses: 30 credits or full curriculum advised.

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits of advanced work in the Field of Literature, Philosophy, and the Arts (or acceptable equivalent), including the major work.

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. Major topics discussed: The Librarian's relation 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.
[GIVEN 1935-36; OFFERED 1936-37] 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.
Education 173 *accepted in lieu,* 1935-36. 2 *credits; 2nd semester*
[NOT OFFERED 1936-37] (Semmons)

129a, b—CATALOGING AND CLASSIFICATION. A study of the principles and forms 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.
[GIVEN 1935-36; OFFERED 1936-37] 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.
[GIVEN 1935-36; OFFERED 1936-37] 1 *credit; 2nd semester* (Semmons)

132—LIBRARY WORK WITH CHILDREN. The effective organization and administration of library work with children, developed thru 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.
[NOT OFFERED 1936-37] 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, yearbooks, periodical indexes, and reference books on special subjects; and of the more important subject and trade bibliographies, with discussion of government documents, and vertical file material, and of the standards by which such material is selected. Lectures, problems and assigned readings.
[GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 1st semester* (Cass)
2 *credits; 2nd semester* (Cass)

138—METHODS OF TEACHING THE USE OF THE LIBRARY. The course emphasizes the functions 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 and presentation by the class members of a definite course of lessons correlated with the subject curricula of the school. Library publications and visual aids receive special attention.
Prerequisite: 133*a*. 2 *credits; 2nd semester* (Semmons)
[GIVEN 1935-36; OFFERED 1936-37]

139—FIELD WORK. Comparable to practice teaching. Supervised practical work in all departments of the University Training School and other school libraries, two periods a week of two consecutive hours; supplemented by Seminar discussions.
Prerequisites: 129, 133, 150. 2 *credits; 2nd semester* (Wood)
[GIVEN 1935-36; OFFERED 1936-37]

144—LIBRARY RECORDS AND METHODS. A course planned to emphasize the essentials of library organization 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 lectures.
[GIVEN 1935-36; OFFERED 1936-37] 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 selection; the writing of book notes; the reading and discussion of typical books in the fields of biography, travel, essays, drama, poetry, fiction, science, social science, useful and fine arts.
[GIVEN 1935-36; OFFERED 1936-37] 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, with special reports on assigned topics.
Prerequisites: 133, 126, 129, 150 desirable. 2 *credits; 2nd semester*
[GIVEN 1935-36; OFFERED 1936-37] (Semmons)

MATHEMATICS AND ASTRONOMY

Dean Boyd, Professor Latimer, Professor Rees,† Professor Downing, Associate Professor LeStourgeon, Associate Professor Cohen, Assistant Professor South, Assistant Professor Brown, Assistant Professor John, Miss Pence†, Mr. Hutchison, Mr. Palmquist, Mr. Donaldson, Mr. Ader, Mr. Sloan.

MATHEMATICS

Students planning to teach secondary-school mathematics should consider Courses 1 to 20b, inclusive, the minimum preparation for such work. 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 elementary calculus before counting work toward advanced degree. The White Mathematics Club and Pi Mu Epsilon meet regularly for the study of some book of general interest or for the presentation of special topics.

REQUIREMENTS FOR A MAJOR. Prerequisites, Courses 17, 18, 19, 20a. 20b will count on the major if taken in the junior year. Required: A minimum of 18 credits of advanced work in mathematics in upper division, including courses in the fields of algebra, geometry, analysis and applications. Major students are required also to enroll in turtorial courses, 1 credit a semester through the junior and senior years, and to pass a final comprehensive examination in mathematics.

REQUIREMENTS IN THE FIELD OF CONCENTRATION, UPPER DIVISION. Forty credits in the Field of Physical Sciences, including the major work, in courses not open to freshmen.

*D—NON-CREDIT COURSE. Required as prerequisite to freshman courses of those assigned on basis of psychological and placement tests.
No credits; both semesters (Donaldson)

*1—ELEMENTARY ALGEBRA. For students entering with only one unit of algebra and who wish to take college algebra or trigonometry.
3 *credits; both semesters* (Hutchison, Palmquist, Ader)

*2—SOLID GEOMETRY. For those who have not had the subject in high school and wish to take analytics.
3 *credits; both semesters* (Le Stourgeon, Palmquist, Donaldson)

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† On leave 1935-36, second semester, 1936-37.
* Courses open to Freshmen.

*17—COLLEGE ALGEBRA. The usual course leading to further work in mathematics.
Prerequisite: 1½ *units high school algebra.* 3 *credits; both semesters* (Staff)

*18—PLANE TRIGONOMETRY. A course covering the essentials.
Prerequisite: 1½ *units high school algebra.* 2 *credits; both semesters* (Staff)

19—PLANE ANALYTIC GEOMETRY. The standard course, including plane and solid analytics.
Prerequisites: *Courses* 17, 18. 3 *credits; both semesters* (Staff)

20a—DIFFERENTIAL CALCULUS. The course covers parts of differential calculus and an introduction to the integral.
Prerequisite: *Course* 19. 4 *credits; both semesters* (Staff)

20b—INTEGRAL CALCULUS. Completing the course in elementary calculus. Solid analytics will be treated briefly.
Prerequisites: *Courses* 20*a*, 2. 4 *credits; both semesters* (Staff)

11—SPHERICAL TRIGONOMETRY. Primarily for Civil Engineers. Two hours a week, second half of semester.
Prerequisite: *Course* 18. 1 *credit; 2nd semester* (Downing)

12—LEAST SQUARES. Primarily for Civil Engineers. Two hours a week first half of semester.
Prerequisite: *Course* 19. 1 *credit; 2nd semester* (Downing)

*14—MATHEMATICS OF FINANCE. Primarily for Commerce students.
Prerequisite: *Course* 17. 5 *credits; both semesters* (South, Brown, Jenkins, Pence)

16a-d—TUTORIAL WORK IN MATHEMATICS. Open only to majors in mathematics. 1 *credit; both semesters* (Senior Staff)

Courses open only to Upper Division and Graduate Students

102—VECTOR ANALYSIS. An elementary course in the algebra and calculus of vectors with numerous applications to geometry and physics.
Prerequisite: *Course* 20*b*. 3 *credits; 1st semester* (LeStourgeon)
[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* 20*a*. 3 *credits; 2nd semester* (Downing)
[GIVEN 1935-36]

104—ADVANCED ANALYTICS. An account of some of the most important modern methods as presented in the treatises of C. Smith and Solmon.
[OFFERED 1936-37] 3 *credits; 2nd semester* (John)

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* Courses open to Freshmen.

105a—DIFFERENTIAL EQUATIONS. A first course in differential equations based on A. Cohen's text.
Prerequisite: *Course* 20*b*. 3 *credits; 1st semester*
[GIVEN 1935-36; OFFERED 1936-37] (LeStourgeon, John)

106a—ADVANCED CALCULUS. Limits and infinite series. Continuous functions. The definite integral and derivative. Application to power series and Fourier series.
Prerequisite: *Mathematics* 20*b*. 3 *credits; 1st semester* (John)
[GIVEN 1935-36]

106b—ADVANCED CALCULUS. Continuation of 106a. Functions of several variables. Partial differentiation. Multiple integrals. Green's theorem. Maxima and minima.
Prerequisite: *Math.* 106*a or consent of instructor.* 3 *credits; 2nd semester* (John)
[GIVEN 1935-36]

107—PROJECTIVE GEOMETRY. A brief course, based on a text like Dowling's.
Prerequisite: *Course* 20*a*. 3 *credits; 1st semester* (Boyd)
[OFFERED 1936-37]

110a-d—INDEPENDENT WORK IN MATHEMATICS. Limited to upper division and graduate students of high standing.
Prerequisite: *Course* 20*b*. 3 *credits; both semesters* (Senior Staff)
[GIVEN 1935-36; OFFERED 1936-37]

112—SERIES. Important theorems on limits, properties of infinite series, including differentiation and integration of infinite series, uniform convergence, multiplication of series.
Prerequisite: *Course* 20*b*. 3 *credits; 1st semester* (Cohen)
[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; constrained motion work and energy inertia impulse.
Prerequisite: *Course* 20*b*. 3 *credits; 2nd semester* (Downing)
[OFFERED 1936-37]

118—SOLID ANALYTIC GEOMETRY. Loci of Equations of first and second degree in three variables. Determinates and matrices. Methods and principles of use in various fields of higher mathematics.
Prerequisite: *Course* 20*b*. 3 *credits; 2nd semester* (LeStourgeon)
[OFFERED 1936-37]

119—MODERN GEOMETRY. A course covering the ground substantially as presented in Allschiller Court's text.
Prerequisite: *Course* 20*a*. 3 *credits; 2nd semester* (Boyd)
[GIVEN 1935-36]

120—MATHEMATICAL STATISTICS. Topics considered: Averages, coefficients of dispersion and skewness, graphical representation, Bernoulli's

Theorem, curve-fitting, theory of sampling, correlation, and regression lines.
Prerequisite: *Course* 20*a*. 3 *credits; 2nd semester* (South)
[GIVEN 1935-36]

Courses open only to Graduate Students

201a—GEOMETRIC TRANSFORMATIONS. This course covers a large part of Winger's Projective Geometry.
[GIVEN 1935-36] 3 *credits; 1st semester* (John)

202a—ALGEBRAIC CURVES. The classical theory as presented by Salmon, Willeitner or Ganguli.
[OFFERED 1936-37] 3 *credits; 2nd semester* (Boyd)

203—THESIS. Required in addition to 24 credits for master's degree.
3 *credits; either semester* (Senior Staff)

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 are as deduced by Legendre, Weierstrass and Jacobi, Isoperimetric problems.
Prerequisites: *Courses* 105*a*, 106*a*. 3 *credits; 1st semester* (Downing)
[GIVEN 1935-36]

205—DIFFERENTIAL GEOMETRY. Introduction study of metric properties of surfaces and twisted curves. Although vector analysis is not required, vector methods will be found of great assistance in the study.
[OFFERED 1936-37] 3 *credits; 1st semester* (John)

207a—THEORY OF NUMBERS. This course covers the material in Chapters 1-5, inclusive, of Dickson's "Introduction to the Theory of Numbers".
[GIVEN 1935-36] 3 *credits; 1st semester* (Latimer)

207b—THEORY OF NUMBERS. This course covers the material in Chapters 6-10, inclusive, of Dickson's "Introduction to the Theory of Numbers".
[GIVEN 1935-36] 3 *credits; 2nd semester* (Latimer)

208—THEORY OF FUNCTIONS OF A REAL VARIABLE. Theory of the real number systems. Elements of point-set theories; measure of sets. Study of continuities and discontinuities, and the Riemann and Lebesgue theories of integration.
Prerequisites: *Courses* 105*a*, 106*a*. 3 *credits; 2nd semester* (Cohen)
[OFFERED 1936-37]

209—THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. Introduction to the algebra and calculus of complex numbers and their geometric representation. Conformal transformation. Theory presented mainly from the Cauchy-Riemann viewpoint, with reference to the Weierstrass development. Introduction to Riemann surfaces.
Prerequisite: *Courses* 105*a*, 106*a*. 3 *credits; 2nd semester*
[GIVEN 1935-36] (LeStourgeon)

211—HIGHER ALGEBRA. This course covers the material in Chap-

ters 2-11 inclusive and Chapter XX in Bocher's "Introduction to Higher Algebra"
Prerequisite: *Course* 20*a*. 3 *credits; 1st semester* (Latimer)
[OFFERED 1936-37]

220a-d—MATHEMATICS SEMINAR.
[GIVEN 1935-36; OFFERED 1936-37] 2 *credits; both semesters* (Cohen)

ASTRONOMY

*51a—DESCRIPTIVE ASTRONOMY. An elementary, non-mathematical course. 3 *credits; both semesters* (Downing, South)

*51b—DESCRIPTIVE ASTRONOMY. Continuation of 51a.
3 *credits; both semesters* (Downing, South)

251a—CELESTIAL MECHANICS. Topics included: Keeli linear motion; central forces of various types, potential and attraction of bodies; problem of two bodies; Ivory's theorem; Kepler's equation.
[OFFERED 1936-37] 3 *credits; 1st semester* (Downing)

Note: Other courses such as Fourier's Series, Potential Function, Actuarial Mathematics, second courses in various subjects, substitution groups, Algebraic Invariants, Practical Astronomy, Elementary Observations in Astronomy, will be given from time to time.

MILITARY SCIENCE

Lieutenant Colonel Brewer, Major Lucas, Major Scudder,
Major Triplett, Major Randolph, Captain Scheibla,
Master Sergeant Short, Staff Sergeant Kinker,
Sergeant Perkins

RESERVE OFFICERS' TRAINING CORPS

The University of Kentucky maintains an infantry unit of the senior division of the Reserve Officers' Training Corps in conformity with the provisions of the National Defense Act of 1916, as amended.

OBJECT

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

EDUCATIONAL AIM

The course of study is designed to give to the student a training

* Courses open to Freshmen.

which will be as valuable to him in his industrial or professional career as it would be should the nation call upon him to act as a leader in its defensive forces.

General Policy

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

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

Discipline of Body and Mind

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

Uniform Equipment

Government uniforms and equipment are furnished the University for issue to students without cost to the individual.

Course

The Military Department offers a progressive course of four years, consisting of two years' basic course and two years' advanced course.

Basic Course

The basic course is required of all male freshmen and sophomores who are citizens of the United States, over fourteen years of age, and who conform to the physical requirements as prescribed by the War Department for units of the Reserve Officers' Training Corps.

The successful completion of the basic course is a prerequisite for graduation in every course in the University.

Advanced Course

An elective advanced course of two years, including one summer camp, is offered to students who have successfully completed the basic course, and who have been recommended by the President of the University and the Professor of Military Science and Tactics for further

training. Recommendations for this course will be limited to those students who have manifested special interest and demonstrated ability during the basic course, and who desire to pursue the course to completion with a view of qualifying for a commission in the Officers' Reserve Corps of the army.

The government offers a very liberal allowance to students enrolling in the advanced course, in the matter of commutation of subsistence. At present the total monetary allowance amounts to about $200.00 for the two years, including the pay while attending camp, and commutation for uniform.

Each student enrolling in the Advanced Course is required to execute the following contract:

"In consideration of commutation of subsistence to be furnished in accordance with law, we hereby agree to continue in the Reserve Officers' Training Corps during the remainder of our course in this or any other institution where such course is offered, to devote five hours a week during such period to the military training prescribed and to pursue the course of camp training during such period as prescribed by the Secretary of War."

The Advanced Course having been elected, its completion becomes a prerequisite for graduation.

ADVANCED CAMPS

The summer camp prescribed for Advanced Course students is normally attended between the junior and senior years. The camp course covers a period of six weeks, and opens about June 15. The instruction is largely practical and of interest and benefit.

Transportation to and from camp, together with liberal allowance for meals *en route*, is paid by the government. Food and clothing are furnished while in attendance, and per diem allowance of seventy cents is paid the student.

*1a—FIRST YEAR BASIC COURSE. Introductory course in Military Science covering the following subjects: Orientation, Obligations of Citizenship, Military History, Current International Situation, Military Discipline, Courtesies and Customs of the Service, Sanitation and First Aid, Organization, Map Reading, and Leadership. One recitation and two laboratory hours. 1.3 *credits; 1st semester* (Scudder, Kinker, Perkins)

*1b—FIRST YEAR BASIC COURSE. Continuation of introductory course in Military Science, covering the following subjects: Drill and Command, Map Reading and Weapons. One recitation and two laboratory hours. 1.3 *credits; 2nd semester* (Scudder, Kinker, Perkins)

*3a—FIRST YEAR BASIC COURSE—BAND. For Freshmen. Three times a week. 1.3 *credits; 1st semester* (J. Lewis, Lucas)

* Courses open to Freshmen.

*3b—FIRST YEAR BASIC COURSE—BAND. For Freshmen. Three times a week. 1.3 *credits; 2nd semester* (J. Lewis, Lucas)

6a—SECOND YEAR BASIC COURSE. Course in Military Science covering the following subjects: Military fundamentals, weapons, musketry. One recitation and two laboratory hours.
Prerequisite: *Military Science* 1*a-b*. 1.5 *credits; 1st semester* (Lucas, Scheibla, Short)

6b—SECOND YEAR BASIC COURSE. Course in Military Science covering the following subjects: Scouting and Patrolling, Combat Principles, Drill and Command. One recitation and two laboratory hours.
Prerequisites: *Military Science* 1*a-b*. 1.5 *credits; 2nd semester* (Lucas, Scheibla, Short)

4a—SECOND YEAR BASIC COURSE—BAND. For Sophomores. Three times a week. 1.5 *credits; 1st semester* (J. Lewis, Lucas)

4b—SECOND YEAR BASIC COURSE—BAND. For Sophomores. Three times a week. 1.5 *credits; 2nd semester* (J. Lewis, Lucas)

7a—FIRST YEAR ADVANCED COURSE. Course in Military Science covering the following subjects: Aerial Photography, Principles of Leadership. Instructional Methods, Weapons, Combat Training. Three recitations and two laboratory hours.
Prerequisites: *Military Science* 1*a-b*; 6*a-b*. 3.0 *credits; 1st semester*
[GIVEN 1935-36; OFFERED 1936-37] **(Randolph)**

7b—FIRST YEAR ADVANCED COURSE. Course in Military Science covering following subjects: Continuation of Combat Training, Drill and Command. Three recitations and two laboratory hours.
Prerequisites: *Military Science* 1*a-b*; 6*a-b*. 3.0 *credits; 2nd semester*
[GIVEN 1935-36; OFFERED 1936-37] **(Randolph)**

8a—SECOND YEAR ADVANCED COURSE. Course in Military Science covering the following subjects: Military Fundamentals, Military Law, Administration and Supply, Officers' Reserve Corps, Regulations, Leadership. Three recitations and two laboratory hours.
Prerequisites: 1*a-b*; 6*a-b*; 7*a-b*. 3.0 *credits; 1st semester* (Triplett)
[GIVEN 1935-36; OFFERED 1936-37]

8b—SECOND YEAR ADVANCED COURSE. Course in Military Science covering the following subjects: Continuation of Leadership, Weapons, Mechanization, Drill and Command, Signal Communications. Three recitations and two laboratory hours.
Prerequisites: 1*a-b*; 6*a-b*; 7*a-b*. 3.0 *credits; 2nd semester* (Triplett)
[GIVEN 1935-36; OFFERED 1936-37]

MUSIC DEPARTMENT

Professor Lampert, Miss Mildred Lewis, Mr. John Lewis, Mrs. Dudley South, Mrs. Cullis, Mr. Alexander Capurso, Mrs. C. A. Lampert

The aim of this department is to provide musical leadership in Kentucky of a thoroughly competent character and to provide cultural

* Courses open to Freshmen.

study for those students who desire it. Various music courses may be taken:

(1) As electives for those majoring in other departments.
(2) As a major in music.
(3) As to work to apply on the degree of Bachelor of Science in Music.

The following courses are not open to students who are candidates for the A. B. degree or B. S. degree: Music 9a, 9b, 14a, 14b.

Not more than 16 credits in Applied Music may be offered to count toward the A. B. or B. S. degrees.

REQUIREMENTS FOR MAJOR: Prerequisites: Music 21a, 21b, 25a, 25b, Psychology 1. Required: Music 19a, 19b, 11a, 11b, 12a, 12b, 30a, 30b, 4a, 4b, 26.

REQUIREMENTS IN THE FIELD OF CONCENTRATION: Forty credits in the field of literature, philosophy and the arts, including the major work, in courses not open to freshmen.

4a—PUBLIC SCHOOL MUSIC. A course in methods of teaching music in the primary grades. 2 *credits; 1st semester* (M. Lewis)

4b—PUBLIC SCHOOL MUSIC. A course in methods of teaching music in the intermediate grades. 2 *credits; 2nd semester* (M. Lewis)

*21a—SIGHT READING. Drill in notation of music, scale and interval relations and rhythmic values, and their interpretation vocally. 2 *credits; 1st semester* (M. Lewis)

*21b—SIGHT READING. Continuation of previous semester's work and introduction of chords. 2 *credits; 2nd semester* (M. Lewis)

*24—THEORY AND PRACTICE OF MUSIC. 1 *credit; 2nd semester* (Lampert, Webb, Ramsay)

25a—ELEMENTARY HARMONY. Scale building, melodic and harmonic ear training, triads, and their relation in open and close position, the minor mode, classification of intervals, non-harmonic tones, inversions, the dominant seventh chord and its inversions, free composition. 3 *credits; 1st semester* (Lampert)

25b—ELEMENTARY HARMONY. Secondary triads, modulation, supertonic seventh, dominant ninth, borrowed chords, free composition. 3 *credits; 2nd semester* (Lampert)

26—HIGH SCHOOL MUSIC. A course in methods of teaching music in high school. 2 *credits; 1st semester* (M. Lewis)

11a—ADVANCED HARMONY. Secondary seventh harmonies, chords of the ninth, altered chords, augmented sixth chords, free composition. *Prerequisite*: *Harmony* 11*a*. 2 *credits; 1st semester* (Lampert)

* Courses open to Freshmen.

11b—ADVANCED HARMONY. Chords with raised fifths, transition, modulation, modern tendencies, free composition.
Prerequisite: 11*a*. 2 *credits; 2nd semester* (Lampert)

12a—COUNTERPOINT AND COMPOSITION. Simple counterpoint in all species of applied counterpoint, including the conduct of single melodic part and the association of two melodic parts.
Prerequisites: 25*a*, 25*b*, 11*a*, 11*b*. 2 *credits; 1st semester* (Lampert)

12b—COUNTERPOINT AND COMPOSITION. Continuation of 12a, applied counterpoint, including various modes of limitation, the invention forms and analysis.
Prerequisites: 25*a*, *b*; 11*a*, *b*; 12*a*. 2 *credits; 2nd semester* (Lampert)

*9a—ORGANIZATION AND TRAINING OF MUSICAL GROUPS. The first four courses devoted to the technics, organizing, instructing and directing of instrumental ensembles. The first semester deals specifically with the string instruments. 2 *credits; 1st semester* (Lampert)

9b—ORGANIZATION AND TRAINING OF MUSICAL GROUPS. Deals with brass instruments and the use of percussion.
2 *credits; 2nd semester* (Capurso)

14a—ORGANIZATION AND TRAINING OF MUSICAL GROUPS. Deals with the clarinet, flute, saxophone, and double reed instruments.
2 *credits; 1st semester* (Capurso)

14b—ORGANIZATION AND TRAINING OF MUSICAL GROUPS. Technique and practice of conducting and arranging for symphony orchestra and wind band. 2 *credits; 2nd semester* (Lampert)

*15a—APPLIED MUSIC. Study of piano, voice, violin, organ or some symphonic orchestral instrument. B. S. students only.
3 *credits; 1st semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

*15b—APPLIED MUSIC. Continuation of 15a. B. S. students only.
3 *credits; 2nd semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

16a—APPLIED MUSIC. Continuation of 15b. B. S. students only.
3 *credits; 1st semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

16b—APPLIED MUSIC. Continuation of 16a. B. S. students only.
3 *credits; 2nd semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

17a—APPLIED MUSIC. Continuation of 16b. B. S. students only.
3 *credits; 1st semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

17b—APPLIED MUSIC. Continuation of 17a. B. S. students only.
3 *credits; 2nd semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

* Courses open to Freshmen.

18a—APPLIED MUSIC. Continuation of 17b. B. S. students only.
3 *credits; 1st semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

18b—APPLIED MUSIC. Continuation of 18a. B. S. students only.
3 *credits; 2nd semester*
(Lampert, Mrs. Lampert, South, Cullis, J. Lewis)

35a-h—PIANO. The possible maximum of 16 credits for Applied Music may be gained in Piano, under the numbers 35a to 35h. One lesson and 10 hours' practice per week. A. B. students.
2 *credits* (Mrs. Lampert and Mrs. Cullis)

36a-h—VIOLIN. The possible maximum of 16 credits for Applied Music may be gained in Violin under the numbers 36a to 36h. One lesson and 10 hours' practice per week. A. B. students.
2 *credits* (Lampert and Capurso)

37a-h—VOICE. The possible maximum of 16 credits for Applied Music may be gained in Voice, under the numbers 37a to 37h. One lesson and 10 hours' practice per week. A. B. students. 2 *credits* (Mrs. South)

38a-h—ORGAN. The possible maximum of 16 credits for Applied Music may be gained in Organ, under the numbers 38a to 38h. One lesson and 10 hours' practice per week. A. B. students. 2 *credits* (Mrs. Cullis)

*40a-d—ORCHESTRA. Students who have demonstrated the required ability are given opportunity to study standard orchestral literature. Public performances are given at regular intervals. Four credits of the possible maximum of 16 credits in Applied Music may be gained in Orchestra under the numbers 40a-40d. 1 *credit; 1st semester* (Lampert)

*41a-h—METHODS AND MATERIALS FOR ORCHESTRA AND BAND. A course for those students not far enough advanced on their instrument to play with regular orchestra. A laboratory orchestra, 2 hours a week. 1 *credit; 1st semester* (Capurso)

*39a-d—GLEE CLUB. Any student in the University may be admitted to the glee club after consultation with the director. Four credits of the possible maximum of 16 credits in Applied Music may be gained in Glee Club, under the numbers 39a-39d.
1 *credit; 1st semester* (Lampert, Lewis)

19a—HISTORY AND APPRECIATION OF MUSIC. A survey of national music. The development of the orchestra and of instrumental music.
2 *credits; 1st semester* (Lampert)

19b—HISTORY AND APPRECIATION OF MUSIC. The opera. A survey of the progress of music in its various forms and a study of its composers. 2 *credits; 2nd semester* (Lampert)

*22a—BAND. For freshmen not enrolled in Military Science.
1.3 *credits; 1st semester* (J. Lewis)

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* Courses open to Freshmen.

*22d—BAND. For freshmen not enrolled in Military Science.
1.3 *credits; 2nd semester* (J. Lewis)

23a—BAND. For sophomores not enrolled in Military Science.
1.5 *credits; 1st semester* (J. Lewis)

23b—BAND. For sophomores not enrolled in Miliatry Science.
1.5 *credits; 2nd semester* (J. Lewis)

28a—CONCERT BAND. For Juniors.
1 *credit; 1st semester* (J. Lewis)

28b—CONCERT BAND. For Juniors.
1 *credit; 2nd semester* (J. Lewis)

29a—CONCERT BAND. For Seniors.
1 *credit; 1st semester* (J. Lewis)

29b—CONCERT BAND. For Seniors.
1 *credit; 2nd semester* (J. Lewis)

30a—EAR TRAINING. Drill in recognition from dictation of rhythms and intervals in a melody, and memorizing of material dictated.
Prerequisites: 21*a*, 21*b*. 3 *credits; 1st semester* (M. Lewis)

30b—EAR TRAINING. Continuation of previous semester's work, with the introduction of simple harmonic material.
3 *credits; 2nd semester* (M. Lewis)

The following course not open to Lower Division students

110a-d—INDEPENDENT WORK IN MUSIC.
3 *credits per semester* (Lampert)

UNIVERSITY ORCHESTRA

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

UNIVERSITY BANDS

The University bands furnish an opportunity for improvement for those who have previously played the various band instruments as well as an opportunity for those who have not played to learn band instruments. The bands perform together during the football season after which they divide into two groups, the first, the concert band, and the second, the basketball and military band. The bands furnish music for the R. O. T. C. formations as well as for many other campus

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Courses open to Freshmen.

and civic events. A course in band directing is available to a limited number of the more proficient students.

OUTLINE OF COURSES LEADING TO THE DEGREE OF B. S. IN MUSIC

The object of this course in music is primarily to meet a Kentucky problem; that is, to develop music supervisors that can organize, teach and direct orchestra, bands and choruses. Besides this work the student of this course must major in either voice, piano or some symphonic orchestral instrument for the entire four years. Attention should be called, however, to the fact that this course is valuable to those not contemplating teaching the subject as it furnishes an excellent opportunity to gain a very broad knowledge of music in general and detailed knowledge of one particular instrument.

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Psych. 1 Elem. Psychology	3.	Mus. 9b Org. and Training of Mus. Groups (Brass)	2.
Mus. 21a Sight Reading	2.	Hyg. 1 Personal and Community Health	1.
Mus. 9a Org. and Training of Mus. Groups (Strings)	2.	Mus. 21b Sight Reading	2.
Mus. 15a Applied Music	3.	Mus. 15b Applied Music	3.
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Mod. For. Lang. German, French or Spanish	3.	Mod. For. Lang. German, French or Spanish	3.
Mat. Lect. Required of all	.3	Phys. Ed. Freshman Gym.	.7
Phys. Ed. Freshman Gym.	.7	Mil. Sci. 1b (Men) First Year Basic Course, Inf.	1.3
Mil. Sci. 1a (Men) First Year Basic Course, Inf.	1.3	Mus. 41a (Women) Methods and Materials for Orchestra and Band	1.
	17.0 or 18.3		15.7 or 16.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Psych. 7 Psych. of the Child	3.	Mus. 4a Pub. School Music	2.
Mus. 30a Dictation and Ear Training	3.	Mus. 30b Dictation and Ear Training	3.
Mus. 25a Elem. Harmony	3.	Mus. 25b Elem. Harmony	3.
Mus. 16a Applied Music	3.	Mus. 16b Applied Music	3.
Eng. 3a Hist. of Eng. Lit.	3.	Eng. 3b Hist. of Eng. Lit.	3.
Mod. For. Lang. French, German, Spanish or Soc. Sci. Hist., Ec., Pol. Sci., Sociology	3. or 3.	Mod. For. Lang. French, German, Spanish or Soc. Sci. Hist., Ec., Pol. Sci., Sociology	3. or 3.
Phys. Ed. Sophomore Gym.	.7	Phys. Ed. Sophomore Gym.	.7
Mil. Sci. 6a (Men) Second Year Basic Course, Inf.	1.5	Mil. Sci. 6b (Men) Second Year Basic Course, Inf.	1.5
	18.7 to 20.2		17.7 to 19.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Educa. 44 Teach. of Social Studies	5.	Mus. 40b or 39b Orchestra or Glee Club	1.
Mus. 40a or 39a Orchestra or Glee Club	1.	Mus. 26 High School Meth.	2.
Mus. 4b Pub. School Music	2.	Mus. 11b Adv. Harmony	2.
Mus. 11a Adv. Harmony	2.	Mus. 17b Applied Music	3.
Mus. 17a Applied Music	3.	Elective Arts and Sci. Teach. Sequence in Eng., Rom. Lang. or Soc. Sci.	3.
Mus. 19a Hist. and Appreciation of Music	2.	Educ. 147 Foundations of Secondary Educ.	3.
Elective Arts and Science Teaching Sequence in Eng., Rom. Lang. or Soc. Sci.	3.	Mus. 19b Hist. and Appre.	2.
		Elective	3.
	18.		19.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Mus. 12a Counterpoint and Composition	2.	Elective (Women) Arts and Sciences Except Music	3.
Mus. 14a Org. and Training of Music Groups	2.	Mus. 12b Counterpoint and Composition	2.
Mus. 18a Applied Music	3.	Mus. 14b Org. and Training of Music Groups	2.
Educ. 101 School Organ.	3.	Mus. 18b Applied Music	3.
Mus. 40c or 39c Orches. or Glee Club	1.	Elective Arts and Sci. Teach. Seq. in Eng., Rom. Lang. or Soc. Sci.	3.
Educ. 177a Prac. Teaching	3.	Educ. 177b Practice Teach.	3.
Elective Arts and Sci. Teach. Seq. in Eng., Rom. Lang. or Soc. Sci.	3.	Mus. 40d or 39d Orches. or Glee Club	1.
	17.		17.

Minimum credits required for graduation 140.

Each candidate for this degree must be a member of one of the musical ensemble groups throughout his course.

If Military Science or Physical Education is not taken, equivalent credits must be gained in other subjects.

PHILOSOPHY

Professor Kuiper, Assistant.

REQUIREMENTS FOR A MAJOR. Prerequisites: Junior standing; 6 credits of Philosophy. Required: Philosophy 35a, b. A minimum of 15 credits of advanced work in philosophy. Major students are required to enroll in tutorial courses during the senior year and to pass a final comprehensive examination in the department.

REQUIREMENTS IN FIELD OF CONCENTRATION. Literature, Philosophy and the Arts; Social Studies. Forty credits are required in one of the two above fields, including the major work, in courses not open to freshmen.

21—INTRODUCTION TO PHILOSOPHY. An elementary study of the principal types of philosophy, past and present.

3 credits; both semesters

31—LOGIC. An introductory study of terms, propositions and their relations, deductive and inductive inference.

3 credits; 1st semester

35a-b—TUTORIAL WORK IN PHILOSOPHY. Weekly conferences with major students; reports on assigned readings; readings in preparation for the comprehensive examination. Open only to senior majors in Philosophy.

1 credit; each semester

51—ETHICS. A study of morality, its source, its laws, its relation to value theory, and its applications to some outstanding contemporary problems.

3 credits; 2nd semester

Courses open only to Upper Division and Graduate Students

101a—HISTORY OF PHILOSOPHY. A survey of Greek and Medieval Philosophy.

3 credits; 1st semester

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

3 credits; 2nd semester

109a-d—INDEPENDENT WORK IN PHILOSOPHY.

3 credits; both semesters

110a—MAKING OF THE MODERN MIND. A study of the intellectual background of modern times.

3 credits; 1st semester

120—GREAT RELIGIONS OF THE WORLD. A study of six contemporary and ancient religions: Shinto, Hinduism, Buddhism, Religion of Ancient Greece, Judaism and Christianity.

3 credits; 2nd semester

Courses open only to Graduate Students

220a-b—RESEARCH IN PHILOSOPHY.

3 credits; both semesters

PHYSICAL EDUCATION

Associate Professor Potter, Professor Stout, Assistant Professor Hansen, Mr. Shively, Miss Averill, Mr. Hackensmith

REQUIREMENTS FOR A MAJOR. Prerequisites. Psychology 3; Anatomy and Physiology 4, 5; English 10a, 10b. Required: P. E. 29, 128, 148, 124, 120. Minimum on Major, 15 credits.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the field of Biological Sciences, including the major work, in courses not open to freshmen.

Credits in applied Physical Education will not count toward the A. B. or B. S. degree. (P. E. 20 and 36 are applied courses.)

Upon entrance every student is given a physical examination by the Department of Health and Hygiene. The findings of the Department of Health and Hygiene are furnished the Department of Physical Education and modification in the form of exercise is made accordingly. Individuals with physical handicaps are assigned to "Restricted Physical Activity Classes".

The program of study and activities of the Physical Education Department is threefold in scope. The required physical education program consists of specific courses of instruction for men and women students which are designed to (1) teach the student an activity or activities which may serve as a recreational pursuit during leisure time, (2) provide the student with a means of regulated physical exercise, and (3) develop a sane and intelligent attitude toward physical activity and competitive sports. The second division of the department's program is its Intramural Sports program for men students and Women's Athletic Association program for women students. Through the Intramural and W. A. A. programs, numerous activities are sponsored which provide opportunity for all students to participate in sports activities on a competitive basis. The third division of the Department's functions is the Teacher Training Program which provides opportunity for students to prepare themselves to teach physical education, to coach athletic teams and to train for leadership in municipal or community recreational work.

FOR MEN

A uniform, consisting of regulation sweat shirt, sweat trousers, white cotton undershirt, gym shorts, and rubber-soled gym shoes, is required of all men students. The cost of this ranges from $2.50 to $5.00, according to the quality of suit purchased. A locker fee of $1.25 per semester is charged each student and includes clean towel service, soap, and locker rental.

NOTE: The following courses may be elected to meet the physical education requirements for graduation.

*1a, b, c, d—RESTRICTED PHYSICAL ACTIVITY. Students are assigned to this class on recommendation of the University physician. Special exercise programs, and game activities are taught to meet the individual needs. Two hours per week.
.7 *credit; 1st and 2nd semesters* (Potter)

*2—TAP AND CLOG DANCING. Fundamental steps designed for beginners. Students with experience are not admitted to the course. Two hours per week. .7 *credit; 2nd semester* (Staff)

* Courses open to Freshmen.

*3—BOXING. Fundamentals of boxing. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Hansen)

*4—HANDBALL. Fundamentals of handball. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Staff)

*5—BASKETBALL AND SOFTBALL. Fundamentals of basketball first half semester; fundamentals of softball second half semester. Two hours per week. .7 *credit; 2nd semester* (Staff)

*6—WRESTLING. Fundamentals of wrestling. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Shively, Hackensmith)

*7—GOLF. Fundamentals of Golf. For beginners. Two hours per week. .7 *credit; 2nd semester* (Shively)

*8—GROUP GAMES AND CONTESTS. Low organized games, mass recreational activities and individual contests. Two hours per week. .7 *credit; 1st and 2nd semesters* (Staff)

*9—ADVANCED APPARATUS AND STUNTS. Tumbling stunts, apparatus activities and feats of skill. For students with previous experience in apparatus work. Two hours per week. .7 *credit; 2nd semester* (Staff)

*10—INDIVIDUAL ATHLETICS. Practice in individual athletic events including track, field and gymnasium activities. Two hours per week. .7 *credit; 1st and 2nd semesters* (Staff)

*11—TENNIS. Fundamentals of tennis. For beginners. Two hours per week. .7 *credit* (Hansen)

*12—TOUCH FOOTBALL AND VOLLEYBALL. Fundamentals of touch football first half semester; fundamentals of volleyball second half semester. Two hours per week. .7 *credit; 1st semester* (Staff)

*13—FENCING. Fundamentals of fencing. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Hackensmith)

*15—APPARATUS AND TUMBLING. Fundamental activities on gymnasium apparatus and tumbling stunts. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Hansen, Hackensmith)

Note: The following courses are for students majoring in Physical Education.

*20—CALISTHENICS AND GYMNASTICS STUNTS. Theory and practice of free exercise in gymnastics. Lecture and practice on the significance of formal gymnastics, order of exercise and the arrangement of lesson plans. Gymnastic stunts and apparatus work adaptable to the elementary and secondary school levels. 4 *credits; 2nd semester* (Hackensmith)

*36—FOOTBALL AND BASKETBALL FUNDAMENTALS. Basic fundamentals of football and basketball are studied and practiced. The

* Courses open to Freshmen.

course includes practice and theory of the games of football and basketball. Individual instruction and practice in the fundamental duties of each playing position. Emphasis is placed on blocking, tackling, punting and passing, in football, and dribbling, shooting, passing, etc., in basketball.
4 *credits; 1st semester* (Shively)

50—TRACK AND FIELD ATHLETICS. Instruction and practice in starting, sprinting, distance running, hurdling, high- and broad-jumping, pole-vaulting, and all track and field athletic events. Eight hours a week.
4 *credits; 2nd semester* (Shively)

*29—(Men) THEORY ND PRACTICE OF ORGANIZED PLAY. Active participation in playing and conducting games of all types suitable for playground, community center, gymnasium and rural community use. Four hours per week. 2 *credits; 2nd semester* (Hansen)

70—PRINCIPLES OF ATHLETIC TRAINING AND FIRST AID. Diagnosis and treatment of injuries common to athletic contests. Theory and practice in massage, taping and bandaging. Two hours a week.
Prerequisites: *A. & P. 2a and 2b.* 1 *credit; 2nd semester* (Shively)

The following courses not open to Lower Division students

†60a—TUTORIAL WORK IN PHYSICAL EDUCATION. Required of all students majoring in the department. Preparation for comprehensive examination. Two hours per week. 1 *credit; 1st semester* (Staff)

†60b—TUTORIAL WORK IN PHYSICAL EDUCATION. Continuation of 60a. Two hours per week. 1 *credit; 2nd semester* (Staff)

†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.
Prerequisites: *P. E.* 20 *and P. E.* 29. 3 *credits; 1st semester* (Potter)

†120—PHYSICAL DIAGNOSIS AND MEDICAL GYMNASTICS. Theory and practice in physical and health examinations. Study of exercises applicable to weak feet, heart disturbances, constipation, hernia, blood pressure, paralysis, obesity, mal-nutrition, post-operation conditions and bone and joint abnormalities. Three hours recitation.
Prerequisites: *P. E.* 20; *Anatomy and Physiology* 4 *and* 5. 3 *credits; 1st semester* (Potter)

142—ADVANCED FOOTBALL. Lecture and recitation on the theory of football. Special emphasis is placed on generalship, signal systems, scouting and conditioning of players. Football is studied from the coach's viewpoint. Two hours a week.
Prerequisite: *P. E.* 36 *or two years college football.* 2 *credits; 1st semester* (Shively)

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* Courses open to Freshmen.
† Courses open to Men and Women students.

148—(Men) 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, and publicity are studied. Three hours recitation and lecture a week.
Prerequisites: 12 *hours of P. E. and Senior standing.* 3 *credits; 2nd semester* (Shively)

†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 education in the United States and foreign countries. Two hours recitation a week.
2 *credits; 2nd semester* (Hansen)

†125—ADMINISTRATION AND ORGANIZATION OF MUNICIPAL AND COMMUNITY RECREATION. A study of the principles and procedures in organization methods and administrative policies for supervised children's, youths' and adults' recreation. Observation and study of organized recreational projects in local municipalities and communities. Three hours recitation and lecture a week.
Prerequisites: *P. E. 29 or sufficient experience in organized recreational work.* 3 *credits; 2nd semester* (Shively)

150—ORGANIZATION AND SUPERVISION OF INTRAMURAL ATHLETICS. Problems of policy and administration of programs on the elementary, secondary and collegiate levels are considered. Lecture and recitation on the relationship of intramural athletics to the school curriculum and physical education program. Two hours per week.
2 *credits; 1st semester* (Hackensmith)

Open to Graduate Students only

† 201—RESEARCH IN PHYSICAL EDUCATION. Theory and practice in research and statistical procedures as applied to the field and problems pertaining to athletics, recreation, intramural and other phases of Physical Education. Lectures and study on the technique and procedure of research. Special problems and the preparation of papers dealing with studies and surveys of Physical Education. Five hours recitation a week.
5 *credits; 2nd semester* (Potter)

FOR WOMEN

A regulation uniform is required of all women students. The cost of the uniform ranges from $2.50 to $5.00, according to the quality of the suit purchased. A locker rent fee of $.50 per year is charged each student and includes locker rental and service for the school year.

† Courses open to Men and Women students.

$.25 of this amount is refunded to the student at the end of the year upon returning the padlock to the Physical Education Department.

NOTE: The following courses may be elected to meet the physical education requirement for graduation.

* 1a, b, c, d—RESTRICTED PHYSICAL ACTIVITY. Students are assigned to this class on recommendation of the University physician. Special exercise programs are prescribed to meet the individual needs. Two hours per week. .7 *credit; 1st and 2nd semesters* (Stout)

* 2—TAP AND CLOG DANCING. Fundamental steps designed for beginners. Students with experience are not admitted to the course. Two hours per week. .7 *credit; 1st and 2nd semesters* (Averill)

* 5—BASKETBALL AND SOFTBALL. Fundamentals of basketball first half semester and softball second half. Two hours per week. .7 *credit; 2nd semester* (Averill)

* 7—GOLF. Fundamentals of golf. For beginners. Two hours per week. .7 *credit; 2nd semester* (Averill)

* 10—INDIVIDUAL ATHLETICS. Practice in individual athletic events including track, field and gymnasium activities. Two hours per week. .7 *credit; 1st and 2nd semesters* (Averill)

* 11—TENNIS. Fundamentals of tennis. For beginners. Two hours per week. .7 *credit; 2nd semester* (Averill)

* 13—FENCING. Fundamentals of fencing. For beginners. Two hours per week. .7 *credit; 1st and 2nd semesters* (Averill)

* 17—HOCKEY AND VOLLEYBALL. Fundamentals of hockey first half semester, volleyball second half. Two hours per week. .7 *credit; 1st semester* (Averill)

* 18—ARCHERY AND BADMINTON. Fundamentals of Archery first half semester, badminton second half. Two hours per week. .7 *credit; 1st and 2nd semesters* (Averill)

* 19—FOLK DANCING. Participation in folk dances of various countries. Two hours per week. .7 *credit; 1st and 2nd semesters* (Averill)

* 21—POSTURE. Exercise with hand apparatus and free exercise with special emphasis on postural development. Two hours per week. .7 *credit; 1st and 2nd semesters* (Stout)

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* Courses open to Freshmen.

* 22—TUMBLING AND STUNTS. Fundamentals of tumbling and stunts on the apparatus. Two hours per week.
.7 credit; 1st and 2nd semesters (Averill)

* 23—GYMNASTICS. Marching drills, gymnastic exercises and gymnasium activities. Two hours per week.
.7 *credit; 1st and 2nd semesters* (Stout)

* 24—RHYTHMICAL ACTIVITIES. Fundamental rhythmic movements and natural dance activities. Two hours per week.
.7 *credit; 1st and 2nd semesters* (Averill)

Following courses for students majoring in Physical Education:

14—ELEMENTARY PLAYS AND GAMES. Pedagogy of organized play and games for the elementary grades. Theory and practice in group games, combative contests and individual athletics. Four hours a week.
Prerequisite: Sophomore standing. 2 *credits* (Averill)

16a—TRAINING FOR LEADERSHIP IN WOMEN'S ATHLETICS. Theory and practice of sports and athletic events for women. Lectures and practice in program construction of athletic events adaptable to girls in the elementary and secondary schools. Practice in the game fundamentals and discussions of rule interpretations of all athletic events adaptable to women. Four hours a week.
2 *credits; 1st semester* (Averill)

16b—TRAINING FOR LEADERSHIP IN WOMEN'S ATHLETICS. A continuation of P. E. 16a. Four hours a week.
2 *credits; 2nd semester* (Averill)

29—(Women) THEORY AND PRACTICE OF ORGANIZED PLAY. Same content as P. E. 29 for men with special reference and application of subject material to activities for girls and women.
2 *credits* (Averill)

Note—For advanced courses, see Physical Education for Men.

148—ORGANIZATION AND ADMINISTRATION OF ATHLETICS. Same content as Physical Education 148 for men with special reference and application of subject matter to activities for girls and women. Three hours per week.
3 *credits; 1st semester* (Averill)

PHYSICS

Professor Webb, Professor Koppius, Associate Professor Hahn, Associate Professor Pardue, Associate Professor Warburton, Associate Professor Todd, Mr. Ramsay, Instrument Maker Mr. Schneider.

REQUIREMENTS FOR A MAJOR. Prerequisites: Physics 2a, 2b; Mathematics 17, 18, 19. Required: Mathematics 20a, 20b. Physics 15a, b, c, 125c. A minimum of 15 credits of advanced work in Physics.

Students majoring in Physics are required to enroll in tutorial courses during the junior and senior years and to pass a final comprehensive examination in the department.

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

* 1a—GENERAL PHYSICS. A general elementary course covering Mechanics, Wave Motion and Heat. Lectures and recitations four hours; laboratory two hours a week. 5 *credits; both semesters* (Staff)

* 1b—GENERAL PHYSICS. Continuation of Physics 1a, covering Magnetism and Electricity, Sound and Light. Lectures and recitations four hours; laboratory two hours a week.
Prerequisite: *Physics* 1*a*. 5 *credits; both semesters* (Staff)

2a—GENERAL COLLEGE PHYSICS. An advanced general course, covering Mechanics, Wave Motion and Heat. Recitations three hours, laboratory four hours a week.
Prerequisites: *Elementary Physics, Mathematics* 17, 18. 5 *credits; both semesters* (Staff)

2b—GENERAL COLLEGE PHYSICS. An advanced general course, covering Magnetism, Electricity, Sound and Light. Recitations three hours, laboratory four hours a week.
Prerequisite: *Physics* 2*a*. 5 *credits; both semesters* (Staff)

15a, b, c—TUTORIAL WORK IN PHYSICS. Weekly conferences with major students, reports on assigned readings in preparation for the comprehensive examination. Open only to junior and senior majors in physics.
1 *credit; both semesters* (Pardue)

* 51a—INTRODUCTION TO PHYSICS. A lecture demonstration course covering the subjects of Mechanics, Wave Motion and Heat.
3 *credits; 1st semester* (Webb, Ramsay)

* 51b—INTRODUCTION TO PHYSICS. A lecture demonstration course covering the subjects of Magnetism and Electricity, Sound and Light. 3 *credits; 2nd semester* (Webb, Ramsay)

Courses open only to Upper Division and Graduate Students

101—THEORY OF HEAT. A lecture and experimental course covering the fundamental principles of Heat. Opportunity is offered to study the gas thermometer, resistance thermometer, radiation pyrometers, calibration of thermocouples, determination of vapor pressures and densities, coefficients of viscosity, freezing and boiling points, latent and specific heats, heats of combustion, thermal conductivities, etc. Lectures and recitations, three hours; laboratory four hours a week.
Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 5 *credits; 1st semester* (Koppius)

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* Courses open to Freshmen.

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* 2*b*; *Mathematics* 20*b*. 5 *credits; 1st semester* (Warburton)

103—THEORY OF LIGHT. A lecture and experimental course covering the general theory of reflection, refraction, diffraction, interference and polarization. Lectures and recitations, three hours; laboratory, four hours a week.

Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 5 *credits; 1st semester* (Webb, Ramsay)

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. Lectures and recitations, five hours a week.

Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 5 *credits; 2nd semester* (Pardue)

108—THEORY OF LIGHT. This course comprises the lectures and recitations of Course 103. Lectures and recitations, three hours a week.

Prerequisites: *Same as Course* 103. 3 *credits; 1st semester* (Webb)

111—ELECTRICITY AND MAGNETISM. This course comprises the lectures and recitations of Course 102a. Lectures and recitations, three hours a week.

Prerequisites: *Same as Course* 102*a*. 3 *credits; 2nd semester* (Warburton)

114a—RADIO COMMUNICATION. Circuit constants at radio frequencies; resonant circuits; theory of vacuum tubes and measurement of vacuum tube constants; theory and design of vacuum tube amplifiers, audio and radio frequency; vacuum tube oscillators; piezo-electric phenomena; detection; modulation; antennas and wave propagation; theory of transmitter and receiver design. Lectures and recitations, two hours; laboratory, two hours a week.

Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 3 *credits; 1st semester* (Hahn)

114b—RADIO COMMUNICATION. A continuation of Course 114a. Lectures and recitations, two hours; laboratory, two hours a week.

Prerequisites: *Course* 114*a*. 3 *credits; 2nd semester* (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, photography, etc. Laboratory two hours a week.

Prerequisites: 10 *credits of Physics or Chemistry*. 1 *credit; 1st semester* (Webb, Koppius, Schneider)

116b—PHYSICAL MANIPULATIONS. A continuation of Physics 116a. Laboratory two hours a week.
Prerequisites: *See Physics* 116*a*. 1 *credit; 2nd semester*
(Webb, Koppius, Schneider)

117—THEORY OF HEAT. This course comprises the lectures and recitations of Course 101. Lectures and recitations, three hours a week.
Prerequisites: *Same as Course* 101. 3 *credits; 1st semester* (Koppius)

119—PRINCIPLES OF X-RAYS. A basic course dealing with the design and operation of x-ray equipment, the methods of crystal analysis and wave length measurements, x-ray spectroscopy; the mathematical development of the formulae of absorption, scattering, polarization and refraction, Compton effect and related phenomena, review of related articles in scientific periodicals.
Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 3 *credits; 1st semester* (Hahn)

120—X-RAY TECHNIQUE. An introduction course in x-ray technique the first half of the course dealing with the design and operation of x-ray equipment, the physical basis of voltage, current time and distance factors, intensifying screens, dark room procedure, etc. The second half is devoted to practice in the radiography of the extremeties, chest, head, teeth, etc.
Prerequisites: *Physics* 1*a and* 1*b*. 2 *credits, 2nd semester*
(Hahn, assisted by Hamilton, Department of Hygiene)

122—X-RAY ANALYSIS OF CRYSTALS. A lecture course presenting the various methods of anlyzing the crystalline structure of matter by the use of x-rays. For students of chemistry, geology and physics.
Prerequisite: *Physics* 119. 3 *credits; 2nd semester* (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. Some of the topics considered are: The gas laws for ideal and real gases, specific heat relations, continuity and change of state, vapor and osmotic pressure, equilibrium, solutions, electrical phenomena, radiation, etc. Lectures and recitations, three hours a week.
Prerequisites: *Physics* 2*b*; *Mathematics* 20*b*. 3 *credits; 2nd semester* (Koppius)

125a, b, c, d—INDEPENDENT WORK IN PHYSICS.
3 *credits* (Staff)

Courses open only to Graduate Students

Courses from the following list will be given as a demand for them justifies: Spectroscopy, Theory of Measurements, Physical Optics, Kinetic Theory of Matter, Dynamics of a Particle and Wave Motion, Conduction of Electricity Through Gases, Electro-Magnetic Theory of Light, Transient Electric and Vacuum Tube Phenomena, Quantum Theory, Theoretical Physics, Thermodynamics, X-Rays and their applications to Physical Problems, Relativity, Electro-Dynamics.

220a—SEMINAR. A weekly meeting of the staff and advanced students for presentation and discussion of recent development in physics as reported in the current literature and of work in progress in the department. Credit is given only to those who satisfactorily present papers.
Prerequisite: *Graduate standing.* 1 *credit; 1st semester* (Staff)

220b—SEMINAR. A continuation of Physics 220a.
Prerequisite: *Graduate standing.* 1 *credit; 2nd semester* (Staff)

226a-b—RESEARCH. 3 *credits* (Staff)

For the description of these graduate courses see the Graduate School Bulletin.

227a-b—RESEARCH.

5 *credits* (Staff)

PHYSICS

SUGGESTED OUTLINE OF A COURSE IN THE PHYSICAL SCIENCES WITH PHYSICS AS A MAJOR

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Phys. 1a Elem. Physics	5.	Phys. 1b Elem. Physics	5.
Math. 17 College Algebra	3.	Math. 19 Analytics	3.
Math. 18 Trigonometry	2.	Chem. 2b Gen. Inorg. Chem.	4.
Chem. 2a Gen. Inorg. Chem.	4.	Mil. Sci. 1b First Year Basic Course	1.3
Mil. Sci. 1a First Year Basic Course	1.3	Phys. Ed. 1b Gym. or Field Athletics	.7
Phys. Ed. 1a Gym. or Field Athletics	.7	Hyg. 1 Personal and Community Health	1.
	19.0		18.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Phys. 2a Gen. College Phys.	5.	Phys. 2b Gen. College Phys.	5.
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. 6b Second Year Basic Course	1.5
Slide Rule	1.	Chem. 8 Quantita. Analysis	5.
Chem. 4 Qualitative Analysis	4.	Phys. Ed. 2b Gym. or Field Athletics	.7
Phys. Ed. 2a Gym. or Field Athletics	.7	Soc. Sci. Elective	3.
Soc. Sci. Elective	3.		
	19.2		19.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Phys. ( ) "100" Course	5.	Phys. ( ) "100" Course	5.
Math. 102 Vector Analysis	3.	Math. 105a Differ. Equa.	3.
Ger. 1a Elem. German	3.	Ger. 1b Elem. German	3.
Biol. Sci.	4.	Biol. Sci.	4.
Elective	3.	Elective	3.
Phys. 15a Tutorial Work	1.	Phys. 15b Tutorial Work	1.
	19.		19.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Phys. ( ) "100" Courses	8.	Phys. ( ) "100" Courses	8.
Ger. 2a Intermed. German	3.	Ger. 2b Intermed. German	3.
Elective	6.	Math. ( ) "100" Courses	3.
Phys. 15c Tutorial Work	1.	Phys. 125c	3.
	18.		17.

Note.—Students wishing to prepare for the teaching of Physics are recommended to make the following substitutions in the above outline.

Sophomore year, replace Social Science Electives by Psychology 2a, and Education 16. Junior and Senior years, elect Education 101, Education 122, and Education 155.

This course conforms with the recommendations of the revised school code of Kentucky, and in addition gives the student a well-rounded foundation for continuing his work toward an advanced degree in Physics.

POLITICAL SCIENCE

President McVey, Professor Vandenbosch, Associate Professor Manning, Assistant Professor Blanding, Assistant Professor Cole, Assistant Professor Trimble.

The courses and facilities of the Department of Political Science are designed to serve a number of purposes. Among these purposes are: (1) To provide orientation and training in the problems of citizenship for undergraduate students. (2) To provide further special background for students majoring in journalism or preparing for admission to professional courses such as law. (3) To train social science teachers for the primary and secondary schools. (4) To provide special training for students preparing for governmental or quasi-governmental work conducted by non-governmental agencies. (5) To provide research training in the problems of government.

REQUIREMENTS FOR A MAJOR. Prerequisites: Political Science 15 and Political Science 51. Required: A minimum of 15 credits in Political Science.

All majors must take Political Science 190a and 190b and pass a comprehensive examination in the general field of political science.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in Field of Social Science, including the major work, in courses not open to freshmen.

FOR FRESHMEN AND SOPHOMORES

* 15—PROBLEMS OF CITIZENSHIP. Public opinion, the newspaper, advertising, the modern economic system, labor problems, unemployment, agriculture, conservation and the race problem.

3 *credits; both semesters* (Staff)

* 51—AMERICAN GOVERNMENT. A survey course in the structure and operation of the Federal Government.
3 *credits; both semesters* (Staff)

52—MUNICIPAL GOVERNMENT. An introductory course in the study of the structure and functions of modern city governments.
3 *credits; 1st semester* (Manning)

80—STATE GOVERNMENT. A study of the forms and functions of governments in operation in the states of the United States.
3 *credits; both semesters* (Manning)

Courses open only to Upper Division and Graduate Students†

178a-d—INDEPENDENT WORK. (Honors Course.) Consent of the department required for admission.
1 *credit; both semesters* (Staff)

180a-d—INDEPENDENT WORK. (Honors Course.) Consent of the department required for admission.
3 *credits; both semesters* (Staff)

190a—SEMINAR IN POLITICAL SCIENCE. Open to major students only.
1 *credit; 1st semester* (Vandenbosch)

190b—SEMINAR IN POLITICAL SCIENCE. A continuation of 190a.
1 *credit; 1st semester* (Vandenbosch)

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. (Given every year.)
3 *credits; 1st semester* (Cole)

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

154—COUNTY GOVERNMENT. A study of the background, the legal

* Courses open to Freshmen.
† Prerequisite for all courses numbered 100 or above; Pol. Sci. 51.

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)

[GIVEN 1935-36; OFFERED 1936-37]

158—REGULATION OF PUBLIC UTILITIES. Control of utilities through franchises and commissions, valuation, theory and law of valuations, rate structure, interstate problems.

Prerequisites: *P. S.* 51, *and one of following*: *Hist.* 119*b*, 190*a or* 190*b*. 3 *credits; 1st semester* (Manning)

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

172—KENTUCKY GOVERNMENT AND CONSTITUTION. 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.

[NOT GIVEN 1934-35; OFFERED 1936-37] 3 *credits; summer* (Manning)

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)

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

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 Acquinas, Dante, Machiavelli, Bodin, Grotius, More, Bacon, Harrington, Filmer, Hobbes, Locke, Spinoza, Montesquieu, Rousseau.

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

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 111a and 111b. Contemporary Philosophy.

Sociology 15. Social Control.

Sociology 105. Social Systems.

IV. PUBLIC LAW

155a—COMPARATIVE GOVERNMENT—PARLIAMENTARY DEMOCRACIES. 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—CONTEMPORARY DICTATORSHIPS. A study of the government of Europe including France and Switzerland and the dictatorship 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.
[OFFERED 1936-37] 3 *credits; 2nd semester* (Blanding)

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.
[GIVEN EVERY YEAR] 3 *credits; 2nd semester* (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.
[GIVEN EVERY YEAR] 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.
[GIVEN 1935-36; OFFERED 1936-37] 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.
[OFFERED 1936-37] 3 *credits; summer* (Vandenbosch)

RELATED COURSES IN OTHER DEPARTMENTS

Economics 127. International Economic Policies.

History 100a and 100b. The Diplomacy and Foreign Policy of the United States.

History 190a and 190b. The Far East.

History 119b. The Nineteenth Century.

History 120. The Twentieth Century.

Law 164. Conflict of Laws.

Courses open only to Graduate Students

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

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.
[OFFERED EVERY YEAR] 3 *credits; 2nd semester* (Vandenbosch)

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.

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

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)

SUGGESTED COURSES IN PUBLIC SERVICE

For persons interested in preparing for the various branches of government service, the following courses of study are suggested. These courses lead to the Degree of Bachelor of Arts, with a major in Public Service.

During the freshman and sophomore years the student should meet the lower division group requirements for graduation. Optional credits should be selected from introductory courses in the social sciences. In the upper division years the student should elect a minimum of 48 credits from fields related to his major interest. The following courses of study are suggested.

CONSULAR AND DIPLOMATIC SERVICE

Comparative Government, International Law, Development and Expansion of the Constitution, International Organization, Transportation, Public Finance, Statistics, International Economic Policies, Diplomacy and the Foreign Policy of the United States, American History, Modern European History, Contracts, Conflict of Law.

FINANCIAL ADMINISTRATION

Municipal Government, Municipal Administration, County Govern-

ment, Public Administration, Accounting, Statistics, Public Finance, Business Law, Personnel Management.

PUBLIC MANAGEMENT

Municipal Government, Municipal Administration, State Government, County Government, Public Administration, Personnel Management, Statistics, Accounting, Public Finance, State and Local Taxation, Legislative Drafting, Social Systems, Development and Expansion of the Constitution, Highway Location, Construction and Maintenance, Streets and Pavements, Water Supply and Water Works, Sewers and Sewage Disposal.

PUBLIC RECORDING

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

PUBLIC WELFARE ADMINISTRATION

Social Psychology, Social Systems, Ethics, Criminology, Individual Development, Psychology of the Child, Human Measurements, Abnormal Psychology, Social Dependents, Social Pathology, Immigration, Community Welfare Work, Community Survey, Community Organization, State Government, Municipal Government, County Government, Statistics, Public Finance, Administration of Justice.

PUBLIC WORKS ADMINISTRATION

Highway Location, Construction and Maintenance, Street and Pavements, Road Materials, Asphalt Laboratory, Water Supply and Water Works, Sewers and Sewage Disposal, Sewer Design, Contracts, State Government, Municipal Administration, Public Utilities, State and local Taxation, Public Finance, Accounting.

PUBLIC SAFETY ADMINISTRATION

Criminology, Abnormal Psychology, Personnel Management, Administration of Justice, Constitutional Law, Public Administration, Social Pathology, State Government, Municipal Administration, County Government, Accounting.

PSYCHOLOGY

Professor Miner, Associate Professor White, Assistant Professor Asher, Assistant Professor Beaumont, Assistant Professor Dimmick, Mr. Newbury, Mrs. Ratliff.

PSYCHOLOGICAL SERVICE. The Department offers to students and to persons sent by the schools or the social agencies an opportunity to be

examined free of charge as to their intellectual capacity, special abilities and talents, educational attainments, commercial and trade skill. Individual examinations for vocational guidance are also made. Prolonged studies of personal adjustment are undertaken when time permits. Parents and business men are invited to make use of this service. Appointments may be made by telephone.

CHILD GUIDANCE SERVICE. In cooperation with the Junior League of Lexington a special child guidance service has been established at the department with Dr. G. B. Dimmick as director. The Juvenile Court, public schools, Child Welfare and Family Welfare Societies have definitely availed themselves of this service, which is an important adjunct to the class instruction and research work in the field of personality development for both normal and maladjusted children.

PREPARATION FOR VOCATIONS. The Department has planned coordinate curricula which it recommends to students who desire to prepare for positions in the Departments of Physiology in Junior Colleges, Teachers Colleges, or Universities, and also for guidance and personnel work in schools, industry or business, mental hygiene, clinical and personal adjustment work, and for the position of Registrar.

REQUIREMENTS FOR A MAJOR. Prerequisites: Psychology 2a and 2b, or Psychology 10, or the equivalent. Required: Fifteen additional credits earned after the Sophomore year and elected among other courses in Psychology. Twenty-five other credits in Psychology or in allied fields of either the Biological or the Social Sciences in courses not open to freshmen. These courses are to be coordinated toward definite objectives with the approval of the Department.

Students in Education are advised to take Psychology 3, 7, 12, 104, 114, 108a, 108b, 109a, 109b, 113, 121, 215, 217, 219; in Commerce, Psychology 5, 112, 104, 3, 108a, 108b; in the Pre-Medical course, Psychology 3, 7, 108a, 108b, 109a, 109b, 114; in the Pre-Law course, Psychology 3, 104, 114, 108a, 108b, 119; in Social Work, Psychology 3, 7, 104, 108a, 108b, 109a, 109b, 114, 219.

*1—ELEMENTARY PSYCHOLOGY. A beginning course which presents the fundamental problems of human behavior in the simplest possible manner. The course is intended only for freshmen and sophomores entering the college the second semester who cannot postpone their first course until the next year, and for students of music.

3 *credits; either semester* (Newbury)

*2a—GENERAL PSYCHOLOGY. A first course running through the year, intended to train the student to analyze and explain the main human

* Courses open to Freshmen.

activities so that he will better understand the behavior of himself and others. Two hours recitation and a double-period in the laboratory with illustrative experiments for interpretation each week.

3 *credits; 1st semester* (All the Staff)

*2b—GENERAL PSYCHOLOGY. A continuation of 2a.

Prerequisite: *Phychology 2a.* 3 *credits; 2nd semester* (All the Staff)

10—INTRODUCTION TO PSYCHOLOGY. A first course which presents the scientific approach to the fundamental problems of explaining the activities of individuals. Open only to juniors and seniors, who are advised, however, to take 2a and 2b if possible.

3 *credits; 1st and 2nd semesters* (Watson)

3—INDIVIDUAL DEVELOPMENT. Individual differences in relation to personality. The influence of heredity, environment, training, race and sex upon the development of individuals.

Prerequisite: *An introductory course in psychology.* 3 *credits; 2nd semester* (Newbury)

7—PSYCHOLOGY OF THE CHILD. The development of behavior form birth to maturity. The problems of conduct arising during infancy, childhood and adolescence in relation to child care and training.

Prerequisite: *An introductory course in psychology.* 3 *credits; either semester* (Asher)

5—PSYCHOLOGY OF ADVERTISING AND SELLING. General principles of psychology applied to these fields as a fundamental basis for preparing advertisements and plans for selling. The bearing of research methods and the social significance of advertising. Given in cooperation with student publications, newspapers and local concerns which afford opportunities for some practice.

Prerequisites: *2a and 2b.* 3 *credits; 1st semester* (Miner)

9—GROUP THINKING. The procedures of progressive thinking by groups. One hour of supervised group discussion with two hours preparation on topics of vital interest to the students. Admission with the consent of the instructor. Not open to freshmen.

1 *credit; 2nd semester* (Newbury)

11—FIELDS OF PSYCHOLOGY. A survey of the significant contributions in the following fields of psychology: Social, abnormal, experimental, genetic, animal, tests of abilities, personnel administration, and current systems of psychology.

Prerequisite: An *introductory course in psychology.* 3 *credits; 1st semester* (Beaumont)

12—GUIDANCE. The course introduces the problems of guidance as they have been developed nationally, centering attention on the child and youth who are constantly face to face with the adjustments to home, school, occupations and life. It relates the problems of individual differences to these practical situations and offers suggestions as to methods of guidance which do not require extended technical knowledge. Open to students who have had a beginning course in psychology.

[NOT GIVEN IN 1935-36] 3 *credits; summer school* (Miner)

Courses open to Upper Division and Graduate Students who have taken Psychology 2a and 2b, 10 or the Equivalent

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 INTERPRETATION (Of the Unusual). Unusual human activities and experiences, including hypnotism, thought transference, spirit communications, psycho-therapy, and other sub-conscious phenomena are considered from the point of view of scientific evidence. The psychology of personality and genius. An attempt is made to understand the conditions for creative work in literature, art and science.

3 *credits; 2nd semester* (Miner)

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

3 *credits; 2nd semester* (Dimmick)

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 Stanford Revision and the Herring Revision of the Binet-Simon Scale.

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

115—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)

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)

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)

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)

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; 2nd semester* (Beaumont)

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. 3 *credits; 1st semester* (Miner or Beaumont)

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

2 *credits; both semesters* (Miner and others)

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 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 nine 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. Prerequisties, 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; 1st semester* (White)

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

213—THE OBSERVATION PROCESS. 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)

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)

217—PSYCHOLOGY OF LANGUAGE. An experimental course dealing with both written and spoken language. The development and physical basis of language, together with its function in thought processes. The main emphasis will be placed on the experimental phases of the subject. Two hours lecture and two hours laboratory.

3 *credits*; *2nd semester* (White)

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

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)

ROMANCE LANGUAGES AND LITERATURES

Professor Ryland, Assistant Professors Horsfield,† Server, Holmes, Schick, Instructor Hernandez.

REQUIREMENTS FOR A MAJOR. Prerequisites: For French Romance Languages 1a-b, 2a-b, 6a-b, 3a-b or 8a-b and 4a-b or 5a-b. For Spanish, 1a-b or 4a-b, 5a-b, 7a-b, 9a-b and 10a-b. Required: A minimum of 17 credits of advanced work in Romance Languages; for seniors 80a-b and the Comprehensive Examination at the end of the year.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Forty credits in the Field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen.

FRENCH

*1a—ELEMENTARY FRENCH.
3 *credits; both semesters* (Ryland, Horsfield, Server, Holmes, Schick)

*1b—ELEMENTARY FRENCH.
Prerequisites: 1*a or one year High School French.* 3 *credits; both semesters* (Ryland, Server, Holmes, Schick)

*2a—INTERMEDIATE FRENCH.
Prerequisites: 1*a-b or two years High School French.* 3 *credits; both semesters* (Ryland, Horsfield, Server, Holmes, Schick.

*2b—INTERMEDIATE FRENCH. Continuation of 2a.
Prerequisite: 2*a or 3 years High School French.* 3 *credits; both semesters* (Ryland, Horsfield, Server, Holmes, Schick)

3a—FRENCH CONVERSATION AND COMPOSITION.
Prerequisites: 1*a-b.* 2 *credits; 1st semester* (Ryland)

3b—FRENCH CONVERSATION AND COMPOSITION.
Prerequisites: 1*a-b.* 2 *credits; 2nd semester* (Ryland)

*6a—FRENCH NOVEL AND DRAMA.
Prerequisites: *Two years of College French or its equivalent.* 3 *credits; both semesters* (Horsfield)

6b—FRENCH NOVEL AND DRAMA. Continuation of 6a.
3 *credits; both semesters* (Horsfield)

8a—FRENCH PHONETICS. A scientific study of French sounds based on the International System of Phonetic Symbols.
Prerequisite: *Two years College.* 3 *credits; 1st semester* (Schick)
[GIVEN 1935-36; OFFERED 1936-37]

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† On leave 1936-37.
* Courses open to Freshmen.

8b—FRENCH PHONETICS. Continuation of 8a.
Prerequisite: 8a. 3 *credits; 2nd semester* (Schick)
[GIVEN 1935-36; OFFERED 1936-37]

16a—CIVILIZATION OF FRANCE, SPAIN, SPANISH-AMERICA AND ITALY. Lectures and correlated readings. Open to all students.
[GIVEN 1935-36; NOT OFFERED 1936-37] 1 *credit; 1st semester* (Staff)

16b—CIVILIZATION OF FRANCE, SPAIN, SPANISH-AMERICA AND ITALY. Continuation of 16a.
[GIVEN 1935-36; NOT OFFERED 1936-37] 1 *credit; 2nd semester* (Staff)

Courses open only to Upper Division and Graduate Students

109a—FRENCH LITERATURE OF THE XIX CENTURY.
[GIVEN 1935-36; NOT OFFERED 1936-37] 3 *credits; 1st semester* (Ryland)

109b—FRENCH LITERATURE OF THE XIX CENTURY.
[GIVEN 1935-36; NOT OFFERED 1936-37] 3 *credits; 2nd semester* (Ryland)

110a—FRENCH LITERATURE OF THE XVII CENTURY.
[NOT GIVEN 1935-36; OFFERED 1936-37] (Ryland)
3 *credits; 1st semester*

110b—FRENCH LITERATURE OF THE XVII CENTURY.
[NOT GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 2nd semester* (Ryland)

113a—ADVANCED GRAMMAR, SYNTAX, COMPOSITION.
[GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 1st semester* (Ryland)

113b—ADVANCED GRAMMAR, SYNTAX, COMPOSITION. Continuation of 113a. 3 *credits; 2nd semester*
[GIVEN 1935-36; OFFERED 1936-37] (Ryland)

114a-d—INDEPENDENT WORK IN ROMANCE LANGUAGES.
[GIVEN 1935-36; OFFERED 1936-37] 3 *credits; both semesters* (Staff)

115a—FRENCH LITERATURE OF THE XVIII CENTURY.
[GIVEN 1935-36; NOT OFFERED 1936-37] 3 *credits; 1st semester* (Holmes)

115b—FRENCH LITERATURE OF THE XVIII CENTURY. Continuation of 113a.
[GIVEN 1935-36; NOT OFFERED 1936-37] 3 *credits; 2nd semester* (Holmes)

116—FRENCH LITERATURE OF THE XX CENTURY.
[GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 1st semester* (Horsfield)

Courses open only to Graduate Students

201a—LITERATURE OF THE FRENCH RENAISSANCE.
[OFFERED 1936-37] 3 *credits; 1st semester* (Ryland)

201b—LITERATURE OF THE FRENCH RENAISSANCE.
[OFFERED 1936-37] 3 *credits; 2nd semester* (Ryland)

SPANISH

*5a—ELEMENTARY SPANISH.
3 *credits; both semesters*
(Ryland, Server, Hernandez, Horsfield, Holmes)

*5b—ELEMENTARY SPANISH.
Prerequisite: 5*a or one year High School Spanish.* 3 *credits; both semesters* (Ryland, Server, Hernandez, Horsfield, Holmes)

*7a—INTERMEDIATE SPANISH.
Prerequisites: 5*a-b or two years High School Spanish.* 3 *credits; both semesters* (Server, Holmes, Hernandez)

*7b—INTERMEDIATE SPANISH.
3 *credits; 2nd semester* (Server, Holmes, Hernandez)

9a—SPANISH NOVEL AND DRAMA.
Prerequisites: 7*a-b or four years High School Spanish.* 3 *credits; 1st semester* (Server, Holmes, Hernandez)

9b—SPANISH NOVEL AND DRAMA. Continuation of 9a.
3 *credits; 2nd semester* (Server, Holmes, Hernandez)

10a—SPANISH CONVERSATION AND COMPOSITION.
Prerequisites: 5*a-b.* 2 *credits; 1st semester* (Server, Hernandez)

10b—SPANISH CONVERSATION AND COMPOSITION.
Prerequisites: 5*a-b.* 2 *credits; 2nd semester* (Server, Hernandez)

Courses open only to Upper Division and Graduate Students

104a—SPANISH LITERATURE OF THE XVII CENTURY.
Prerequisites: 7*a-b and* 9*a-b or equivalent.* 3 *credits; 1st semester* (Server)
[GIVEN 1935-36; NOT OFFERED 1936-37]

104b—SPANISH LITERATURE OF THE XVII CENTURY.
[GIVEN 1935-36; NOT OFFERED 1936-37] 3 *credits; 2nd semester* (Server)

112a—SPANISH LITERATURE OF THE XIX CENTURY.
[NOT GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 1st semester* (Holmes)

112b—SPANISH LITERATURE OF THE XIX CENTURY.
[NOT GIVEN 1935-36; OFFERED 1936-37] 3 *credits; 2nd semester* (Holmes)

ITALIAN

*4a—ELEMENTARY ITALIAN.
3 *credits; 1st semester*

*4b—ELEMENTARY ITALIAN.
3 *credits; 2nd semester* (Schick)

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* Courses open to Freshmen.

15a—INTERMEDIATE ITALIAN.
Prerequisites: 4*a-b*. 3 *credits; 1st semester* (Schick)

15b—INTERMEDIATE ITALIAN.
3 *credits; 2nd semester* (Schick)

80a—TUTORIAL SEMINAR (For the Comprehensive Examination).
1 *credit; 1st semester* (Ryland)

80b—TUTORIAL SEMINAR (For the Comprehensive Examination).
1 *credit; 2nd semester* (Ryland)

SOCIOLOGY

Professor Best, Assistant Professor Caldwell, Assistant Professor ————, *Miss Buckingham*

The courses in Sociology are designed primarily to give students an acquaintance with and fundamental conceptions of the larger social problems of the day. They are prepared with the purpose of making them an elemental part of one's general education. At the same time they are intended to provide a certain training, both theoretic and practical, for students looking to the field of social work, whether as a professional career, or with the expectation to do volunteer work or to participate in the direction of some social service agency. The formal requirements for professional training in social work are set out later.

REQUIREMENTS FOR A MAJOR. Prerequisites: Sociology 1a, 1b. Required: A minimum of 15 credits of advanced work in Sociology; Sociology 20a, b; comprehensive examination in senior year.

REQUIREMENTS IN THE FIELD OF CONCENTRATION. Credits to the number of 40 in the field of social sciences, including the major work, in courses not open to freshmen.

*1a—PRINCIPLES OF SOCIOLOGY. An introductory course dealing with the fundamental principles and aims of sociology through a consideration of social origins, social evolution, social progress, and social institutions.
[NOT OPEN TO SENIORS.] 3 *credits; both semesters* (Best)

*1b—PRINCIPLES OF SOCIOLOGY. An introductory course involving an examination of certain practical, concrete social problems of the present day, such as the family, child welfare, poverty, crime, racial issues, recreational values, community organization, urban and rural trends, housing conditions, population movements, social implications of industrial development, etc.
[NOT OPEN TO SENIORS.] 3 *credits; both semesters* (————)

* Courses open to Freshmen.

20a, b—TUTORIAL WORK. Conferences, assignment of reading, reports, etc. For Senior Majors.

1 *credit; each semester* (Staff)

Courses open only to Upper Division and Graduate Students

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

3 *credits; 1st semester* (————)

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, 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 offenders, 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 the different social systems propounded or attempted in human society from Plato's Republic down to the present.

3 *credits; 1st semester* (Caldwell)

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

3 *credits; 2nd semester* (Best)

107—COMMUNITY WELFARE WORK. A 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, *or* 103. 3 *credits; 2nd semester* (————)

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

3 *credits; 2nd 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 of the practical results of organization among individuals and among different agencies in the community for the advancement of its life.

3 *credits; 1st semester* (————)

113—INTRODUCTION TO SOCIAL CASE WORK. A more or less

technical training course in social case work. Open only to properly qualified students. 3 *credits; 1st semester* (————)

114a-b—INDEPENDENT WORK IN SOCIOLOGY. Study of some special topic subject by duly authorized students.
1 *credit; either semester* (Staff)

117—ADVANCED SOCIAL CASE WORK. Continuation of 113. Open only to properly qualified students. 3 *credits; 2nd semester* (————)

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). Open only to properly qualified students. 3 *credits; 1st semester* (Buckingham and others)

120b—SUPERVISED FIELD WORK. Continuation of 120a. (150 hours.) Open only to properly qualified students.
3 *credits; 2nd semester* (Buckingham and others).

121—POPULATION MOVEMENTS. A study of movements and trends in population, and with respect to race, age, birth-rates, etc.
3 *credits; 2nd semester* (Caldwell)

122—HISTORY OF SOCIAL WORK. A study of the history and development of social work, together with its present theoretical aspects, methods, and professional status. Open only to properly qualified students.
3 *credits; 2nd semester* (————)

123—SOCIAL TREATMENT OF DELINQUENCY. An examination of possible and actual methods of dealing with the delinquent, including institutional care, juvenile court, probation, parole, etc. Open only to properly qualified students. 3 *credits; 2nd semester* (————)

124—METHODS OF SOCIAL INVESTIGATION. A study of the several methods of investigation and research employed in the fields of sociology and social work. Two hours lecture; two hours laboratory. Open only to properly qualified students. 3 *credits; 1st semester* (Caldwell)

125—COLLECTIVE BEHAVIOR. A sociological interpretation of group life and of certain aspects of social life, including the building up or shaping of public opinion or social control. 3 *credits; 1st semester* (Caldwell)

126—SOCIAL LEGISLATION. A study of the essential content of the law dealing with social welfare matters, together with the general principles involved in its enactment. Open only to properly qualified students.
3 *credits; 2nd semester* (Best)

Courses open only to Graduate Students

201a—SOCIOLOGY SEMINAR. Consideration mainly of methods of research and of current sociological literature.
1 *credit; 1st semester* (Best)

201b—SOCIOLOGY SEMINAR. Continuation of 201a.
1 *credit; 2nd semester* (Best, Staff)

COURSES FOR TRAINING IN SOCIAL WORK

Students seeking to prepare to a greater or less extent, or in some degree in a professional capacity, for social work, and who expect to meet the requirements for membership in national professional bodies of social workers, must take certain specialized or so-called technical courses in the department of sociology, as well as certain regular courses in this department and in allied departments, including those of psychology, political science, economics, etc. In addition, there are certain optional courses in these and other departments which are recommended for the affording of full and well-rounded backgrounds for social work training.

The specialized courses may not be taken before the senior year. They are not recommended for students in general who have no expectation of entering social work. They are open with permission to special students who wish to benefit from them without regard to University credit. To be eligible for them with University credit, students must have taken, as preliminary or concurrent courses, those in sociology and other departments designated as required. One of these courses, Supervised Field Work, requiring in all 300 hours of field or "laboratory" work, and under qualified direction, may be taken at the same time as the other courses are taken; or it may be taken thereafter. Full University credit, however, will not be given until it is completed. Facilities are available for it through social agencies in Lexington, Louisville, and Cincinnati.

The required regular courses in sociology and other departments may be taken only during the junior and senior years; and also if desired during one or more years of graduate work, whether or not all the steps are pursued for the attainment of a higher degree. During the freshman and sophomore years all University requirements should be worked off. During this period there should be taken so far as possible introductory courses in sociology, psychology, economics, and political science.

The several kinds of courses are as follows:

Required Specialized or Technical Courses:

History of Social Work
Advanced Social Case Work
Introduction to Social Case Work
Supervised Field Work (300 hours)
Methods of Social Investigation
Social Treatment of Delinquency
Social Legislation

Required General Courses:

Sociology:
- Social Dependence (101)
- Criminology (103)
- Community Welfare Work (107)
- The Family (109)
- Child Welfare (110)
- Community Organization (112)

Psychology:
- Clinical Psychology (119)
- Two of the following:
  - Human Measurements (108a)
  - Human Measurements (108b)
  - Diagnosis of Development (109a)
  - Diagnosis of Development (109b)
  - Abnormal Psychology (114)

Political Science:
Public Welfare Administration (174)
Home Economics (Agriculture):
Elementary Nutrition (16)
or
Physical Education:
Administration and Organization of Municipal and Community Recreation (125)

Economics:
(One of the following)
Labor Problems (102)
Labor Legislation (130)

Education:
School Organization (101)
Educational Sociology (114)
Administration of Vocational Education (211)

Law:
Domestic Relations (148)

Suggested Optional Courses:

Sociology:
Social Pathology (102)
Social Systems (105)
American Immigration (106)
Population Movements (121)
Collective Behavior (125)

Psychology:
Psychology of Child Guidance (12)
Genetic Psychology (102a)
Social Psychology (104)
Comparative Psychology (116)
Problems in Psychology (203)
Measurements of Human Relations (215)

Economics:
Government Finance (104)
Statistical Methods (107)
Organization of Economic Groups (120)
State and Local Taxation (124)
Municipal Finance (206)
Contemporary Economic Thought (215)

Political Science:
City Administration (153)
County Government (154)
Comparative Government (155a)
Comparative Government (155b)
Administration of Justice (215)
Types of Political Organization (216)

Hygiene and Public Health:
Public Health (100a)
Public Health (100b)
Public Health Nursing (124a)
Public Health Nursing (124b)
Public Health Administration (212a)
Public Health Administration (212b)
Vital Statistics (218a)
Vital Statistics (218b)

Philosophy:
Contemporary Philosophy (111a)
Contemporary Philosophy (111b)

History:
Twentieth Century (120)
Recent History of United States (147)

Zoology:
Principles of Zoology (108b)

Anthropology and Archaeology:
Principles of Anthropology (101)
Ethnology (105)

English:
Dramatic Production (34a)
Dramatic Production (34b)
Public Speaking (7)

Physical Education:
- Theory and Practice of Organized Play (29)
- Principles of Athletic Training and First Aid (70)
- Organization and Administration of Athletics (148)

Agronomy:
- Soil Management (115)

Markets and Rural Farms:
- Marketing (108)
- Cooperative Marketing (109)
- Farm Finance (112)
- Current Problems in Agricultural Economics (132)

Farm Economics:
- Land Problems (108)
- Farm Management (113)
- Rural Community Problems (120)

Home Economics:
- Dietetics (4)
- Child Care and Training (115)
- Advanced Home Management and Home Relationships (201)

Animal Industry:
- Genetics (19)

ZOOLOGY

Professor Funkhouser, Professor Allen, Associate Professor Brauer, Mr. Foster, Mr. Prather, Mr. Lowenthal

REQUIREMENTS FOR A MAJOR. Prerequisites: Zoology 1a and 1b. Required: Zoology 7a and 7b (or 157a and 157b), 106, 108a and 108b, 114a, 114b; passing a comprehensive examination which will correlate the several zoological sub-sciences.

REQUIREMENTS IN FIELD OF CONCENTRATION. Forty credits in the Field of Biological Sciences, including the major work, in courses not open to freshmen.

*1a—GENERAL ZOOLOGY. A general course in zoology consisting of lectures, recitations and laboratory work. The first semester is devoted primarily to the study of invertebrates based on the dissection of types.
[GIVEN EVERY YEAR] 4 *credits; 1st semester* (Funkhouser and others)

*1b—GENERAL ZOOLOGY. A continuation of Course 1a. The second semester is devoted primarily to a study of the vertebrates.
[GIVEN EVERY YEAR] 4 *credits; 2nd semester* (Funkhouser and others)

3a—GENERAL ENTOMOLOGY. A beginning course in the study of insects. Gross anatomy, morphology and life histories of representatives of the most important orders.
[OFFERED 1935-36] 3 *credits; 1st semester* (Allen)

3b—GENERAL ENTOMOLOGY. A continuation of Course 3a. Taxonomy and entomotaxy are given special attention during the second semester.
[OFFERED 1935-36] 3 *credits; 2nd semester* (Allen)

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* Courses open to Freshmen.

7a—COMPARATIVE ANATOMY. Invertebrates. An intensive study of the anatomy of representatives of all the important phyla, classes, orders and a few families with gross studies of many genera. Life histories of important forms. Comparative organology and physiology of higher phyla.
Prerequisites: *Zoology* 1*a, b.* 4 *credits; 1st semester* (Allen)
[GIVEN EVERY YEAR.]

7b—COMPARATIVE ANATOMY. Vertebrates. Systematic consideration of classes, orders and some families of Vertebrata. Comparative organology and physiology.
Prerequisites: *Zoology* 1*a, b.* 4 *credits; 2nd semester* (Allen)
[GIVEN EVERY YEAR.]

9—ANIMAL ECOLOGY AND FIELD BIOLOGY. A general course in ecology with special reference to the zoological aspects of the subject.
[OFFERED 1936-37] 3 *credits; 2nd semester* (Allen)

*10—OUTLINES OF ZOOLOGY. An elementary course in zoology intended primarily for students of agriculture. Special attention is given to animals of economic importance.
[NOT GIVEN IN 1935-36] 3 *credits; 2nd semester* (Brauer)

11—NATURE STUDY. A course in general nature study intended primarily for teachers who desire preparation for presenting the subject to elementary students. Intimate studies of local plants and animals based largely on field work.
[OFFERED 1935-36] 3 *credits; summer only* (Allen)

25—GENERAL ANIMAL BIOLOGY. A study of the animal and its relation to its biotic and its physical environments. Animal communities, succession, behavior, and behavior patterns. Suited for teachers of general science, and biology in secondary schools, and for students of agriculture. Recitation 2 hours, and laboratory 1 hour.
[GIVEN 1936-37] 3 *credits; 2nd semester* (Brauer)

Courses open only to Upper Division and Graduate Students

101a—HISTOLOGY. Histology of the tissues. A course in the technique of the preparation of animal tissues for microscopic study. Practice in imbedding, standing, sectioning, mounting and identification of tissues.
Prerequisites: *Zoology* 1*a-b.* 3 *credits; 1st semester* (Brauer)
[GIVEN EVERY YEAR.]

101b—HISTOLOGY. Histology of the organs. A continuation of Course 101a in which the studies are based on the organs and special attention given to pathology.
Prerequisite: *Zoology* 101*a.* 3 *credits; 2nd semester* (Brauer)
[GIVEN EVERY YEAR.]

102—ORNITHOLOGY. A study of the life histories, anatomy and physiology of birds with particular reference to the habits, songs, nests, migration and economic importance of our native birds.
[GIVEN EVERY YEAR.] 3 *credits; 2nd semester* (Funkhouser)

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* Courses open to Freshmen.

105—MEDICAL ENTOMOLOGY. General parasitology; insects and other forms affecting the health and comfort of man. Identification, anatomy, life history, and etiology of representative species. Methods of control and treatment. For pre-medical and other students interested in public health.
Prerequisites: *Zoology* 1*a, b.* 3 *credits; 1st semester* (Allen)
[OFFERED 1935-36.]

106—EMBRYOLOGY. A general course in ontogeny. Studies in maturation, fertilization, cleavage, organogenesis and anomalies of development with laboratory work based on the chick and pig.
Prerequisites: *Zoology* 1*a-b;* 101*a.* 4 *credits; 2nd semester* (Brauer)
[GIVEN EVERY YEAR.]

108a—PRINCIPLES OF ZOOLOGY. (Evolution.) An advanced lecture course open only to juniors, seniors and graduate students on fundamental principles of biology. The first semester is devoted primarily to the study of organic evolution. Three times a week.
[GIVEN EVERY YEAR.] 2 *credits; 1st semester* (Funkhouser)

108b—PRINCIPLES OF ZOOLOGY. (Heredity.) A continuation of Course 108a. The second semester is devoted to the study of heredity, eugenics and animal instincts. Three times a week.
[GIVEN EVERY YEAR.] 2 *credits; 2nd semester* (Funkhouser)

110a to d—INDEPENDENT WORK. Special problems for individual students who are capable of pursuing independent investigations.
For Zoology majors. 3 *credits; both semesters*
[GIVEN EVERY YEAR.] (Funkhouser, Allen, Brauer)

112—ICHTHYOLOGY. Taxonomy of fishes with life-histories and biology of types. Fish structure and physiology. Fish culture and economic ichthyology; care of fishes, acquaria, etc.
Prerequisite: *Zoology* 1*a-b.* 3 *credits; 1st semester* (Allen)
[OFFERED 1935-36]

114a—ZOOLOGICAL SEMINAR. Presentation of results of research; reports on technical papers in current literature; book reviews; news notes; discussions of recent developments in zoology; reports on meetings of scientific societies. Juniors majoring in Zoology are advised, and Seniors required, to attend in order to receive tutorial instruction preparatory to the final comprehensive examination.
For students majoring in biological subjects. 1 *credit; 1st semester*
[GIVEN EVERY YEAR.] (Staff)

114b—ZOOLOGICAL SEMINAR. A continuation of Course 114a. For students in biological subjects.
[GIVEN EVERY YEAR.] 1 *credit; 2nd semester* (Staff)

157a—INVERTEBRATE ANATOMY. An advanced course on the comparative anatomy of invertebrate animals with special attention paid to phylogeny, organology and taxonomy.
[GIVEN EVERY YEAR.] 4 *credits; 1st semester* (Allen)

157b—VERTEBRATE ANATOMY. A continuation of Course 157a devoted to the Chordata laboratory techniques in vertebrate anatomy.
Prerequisite: *Zoology* 157*a*. 4 *credits; 2nd semester* (Allen)
[GIVEN EVERY YEAR.]

160—ONTOGENY. Lectures on theories and philosophies of organismic development. Reports on the literature.
Prerequisites: *Zoology* 1*a and b, and at least one course numbered above* 100. 2 *credits; 1st semester* (Brauer)
[GIVEN EVERY YEAR.]

Courses open only to Graduate Students

201a—HERPETOLOGY. Systematic, taxonomic and phylogenetic studies of the Reptilia.
Prerequisites: *Zoology* 7*a-b;* 108*a,* 114*a*. 3 *credits; 1st semester* (Funkhouser)
[NOT OFFERED 1936-37.]

201b—HERPETOLOGY. A continuation of Course 201a with special reference to economic forms.
Prerequisite: *Zoology* 201*a*. 3 *credits; 2nd semester* (Funkhouser)
[NOT OFFERED 1936-37.]

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.
Prerequisites: *Zoology* 3*a-b;* 7*a;* 108*a*. 4 *credits; 1st semester* (Funkhouser)
[OFFERED 1936-37.]

202b—SYSTEMATIC ENTOMOLOGY. A continuation of Course 202a. In the second semester special attention is paid to entomotaxy and the bibliography of the group studied.
Prerequisite: *Zoology* 202*a*. 4 *credits; 2nd semester* (Funkhouser)
[OFFERED 1936-37]

COLLEGE OF AGRICULTURE

Thomas Poe Cooper, B. S. in Agr.,
Dean and Director

Organization

The College of Agriculture includes three divisions:

1. The College (resident teaching in agriculture and home economics).
2. The Experiment Station.
3. The Extension Division.

Requirements for Graduation

To receive the degree of Bachelor of Science in Agriculture, a student must complete 139.3 credits of work with a standing of 1.

These credits are classified as follows:

Prescribed subjects, non-agriculture	44.0 credits
Prescribed subjects, agriculture	35.3 credits
Electives required in agriculture	27.0 credits
Free electives	33.0 credits
Total	139.3 credits

Students who have not had physics in high school will be required to take a six-credit course in college which will reduce the number of free elective credits to 29. The free electives may be in agriculture. It will thus be seen that there is opportunity to take work in agriculture amounting to 95.3 credits.

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

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

A regular student should carry at least 12 credit hours each semester. The maximum and minimum hours for special students are the same as for regular students.

Prior to the senior year all candidates for the degree in agriculture must satisfy the Dean that they have had at least one year's

work on the farm or work for two summer vacations of three months each. Upon recommendation of the department in which a student is majoring, the Dean may permit work in the field of the student's major interest to be substituted for farm experience.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
A. I. 21 Market Classes and Grades of Livestock	2.	A. I. 17 Breeds of Livestock	3.
*A. I 21 Farm Poul. Prod.	2.	Bot. 1b Gen. Botany	4.
**A. I. 23 Elem. of Dairying	2.	†Chem. 1a Gen. Inorganic	5.
Agr. 11 Farm Crops	3.	Eng. 1b English Comp.	3.
Bot. 1a Gen. Botany	4.	Mil. Sci. 1b First Year Basic	1.3
Freshman Assembly	.3	Phy. Ed. Gym. Practice	.7
Eng. 1a English Comp.	3.		
Mil. Sci. 1a First Year Basic	1.3		
Phy. Ed. Gym. Practice	.7		
	18.3		17.0

* First half of semester.
** Second half of semester
† Chemistry 1a may be taken in the first semester.

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 1b Gen. Inorganic	5.	Agr. 1 Soils	4.
Econ. 1 Principles of Econ.	3.	A. I. 20 Prin. of Animal Nutrition	3.
F. E. 10 Mech. of Farmstead	3.	Bact. 52 Prin. of Bact.	4.
Hort. 1 Gen. Horticulture	4.	F. E. 4 Agricul. Econom.	3.
Mil. Sci. 6a Sec. Year Basic	1.5	Geol. 3 Elem. Geology	3.
		Mil. Sci. 6a Sec. Year Basic	1.5
	16.5		18.5

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

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
F. E. 113 Farm Management	3.	Ed. 16 Educa. Psychology	3.
M. & R. F. 108 Marketing	3.	Zool. 25 Gen. Animal Biol.	3.
*Electives	12.	Electives	12.
	18.		18.

* Students planning to teach under the Smith-Hughes Act are required to take Fm. Eng. 8. Agronomy 115 and 105 are required of students who have had the equivalent of Agronomy 1 and 11 in other institutions. Students entering as juniors take Agronomy 105 instead of Agronomy 11.

SENIOR YEAR

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

ADVISORY SYSTEM

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

MAJOR WORK

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

The College of Agriculture offers opportunity for major work in the following fields: Agricultural entomology, animal husbandry, crops, dairying, extension, farm economics, farm engineering, high school teaching, general horticulture, ornamental horticulture, markets and rural finance, plant pathology, poultry and soils.

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

JUNIOR AND SENIOR YEARS

First Semester	Credits	Second Semester	Credits
A. E. 10 Agr. Entomology	3.	A. E. 102 Adv. Agr. Entomol.	3.
Agr. 113 Methods and Results in Agron. Experimenta.	3.	Agr. Ext. 1 Agricul. Exten.	1.
Agr. 115 Soil Management	3.	Agr. 23 Plant Pathology	4.
A. I. 19 Genetics	3.	Agr. 105 Adv. Crops	3.
A. I. 102 Meats	4.	A. I. 13 Live Stock Judging	2.
A. I. 106 Pork Production	3.	A. I. 105 Beef Production	3.
Eng. 7a Public Speaking	3.	A. I. 107 Sheep Production	3.
F. E. 120 Rural Com. Prob.	3.	A. I. 125 Dairy Cattle Feeding and Management	3.
F. E. 8 Farm Struct. Eng.	4.	A. I. 134 Adv. Poultry Prod.	3.
Hort. 103 Pomology	3.	A. P. 116 Dis. of Dom. Animals	4.
Journ. 1a Reporting	3.	F. E. 11 Land Measurement, Drainage, Terracing	3.
M. & R. F. 111 Agr. Prices	3.	Hort. 110 Vegetable Garden	3.

TRAINING FOR TEACHERS OF VOCATIONAL AGRICULTURE

The Federal Vocational Education Act passed by Congress in 1917 makes provision for the training of teachers of vocational education in agriculture for schools below college grade. The University of Ken-

tucky has been designated as the institution in the state to train white teachers for this work.

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

ELECTIVES SUGGESTED FOR STUDENTS WHO ARE PREPARING TO TEACH VOCATIONAL AGRICULTURE

JUNIOR AND SENIOR YEARS

First Semester	Credits	Second Semester	Credits
*Agr. Ed. 181 Teach. Voc. Agr.	7.	*Agr. Ed. 181 Teach. Voc. Agr.	7.
Agr. 113 Meth. and Results in Agron. Experimentation	3.	A. E. 102 Adv. Agr. Entomol.	3.
Agr. 115 Soil Management	3.	Agr. 23 Plant Pathology	4.
A. I. 19 Genetics	3.	Agr. 105 Adv. Crops	3.
A. I. 102 Meats	4.	A. I. 13 Live Stock Judg.	2.
A. I. 106 Pork Production	3.	A. I. 105 Beef Production	3.
F. E. 120 Rural Com. Prob.	3.	A. I. 107 Sheep Production	3.
*F. E. 8 Farm Struct. Eng.	4.	A. I. 125 Dairy Cattle Feeding and Management	3.
Hort. 105 Pomology	2.	A. I. 134 Adv. Poul. Prod.	3.
Jour. 1a Reporting	3.	A. P. 116 Dis. of Dom. Animals	4.
M. & R. F. 111 Agr. Prices	3.	Ed. 122 Educ. Tests and Measurements	3.
		Hort. 110 Vegetable Garden	3.
		Hort 113 Landscape Garden	3.

Starred courses are required of students planning to teach vocational agriculture. The student should take as many of the unstarred courses as his time and ability permit. Students who become teachers are required to take Agricultural Education 179, Determining Course-Content in Vocational Agriculture, which is offered the first two and one-half weeks of the summer school. Including Agricultural Education 179, the student must present at least 15 credits in education.

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

FRESHMAN YEAR

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

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Art 63a Intermed. Draw.	3.	Agr. 1 Soils	4.
Chem. 1b Gen. Inorganic	5.	Agr. 23 Plant Pathology	4.
Econ. 1 Principles of Econ.	3.	E. D. 17a Engineering Draw.	2.
Hort. 1 Gen. Horticulture	4.	F. E. 11 Land Meas., Drainage and Terracing	3.
Mil. Sci. 6a Sec. Year Basic	1.5	Geol. 3 Elem. Geology	3.
	16.5	Mil. Sci. 6b Sec. Year Basic	1.5
			17.5

JUNIOR AND SENIOR YEARS

Prescribed Agriculture

First Semester	Credits	Second Semester	Credits
A. E. 10 Agricul. Entomol.	3.	Hort. 113 Landscape Gard.	3.
A. E. 103 Econom. Entomol.	3.	Hort. 114 Landscape Gard.	3.
Agr. 115 Soil Management	3.	Hort. 115b Special Problems	3.
Hort. 115a Special Problems	3.	Hort. 117 Elem. of Floricul.	3.
		Hort. 118 Flower Garden and Home Grounds	3.

Electives in Agriculture 20 credits
Free electives 30 credits

The 20 credits required as agricultural electives plus free electives may be applied as a minor in the following fields of study:

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

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

A MODIFIED CURRICULUM FOR TWO YEARS OF COLLEGE WORK

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

REQUIRED WORK

FIRST YEAR

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

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

SECOND YEAR

First Semester	Credits	Second Semester	Credits
Chem. 1a Gen. Inorganic	5.	Mil. Sci. 6b Sec. Year Basic	1.5
Econ. 1 Prin. of Economics	3.	Electives	16.
Mil. Sci. 6a Sec. Year Basic	1.5		
Electives	8.		17.5
	17.5		

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

LIST OF ELECTIVES

FIRST YEAR

First Semester	Credits	Second Semester	Credits
A. E. 10 Agr. Entomology	3.	A. E. 11 Agriculture	3.
Agr. 11 Farm Crops	3.	A. I. 13 Livestock Judging	2.
A. I. 4 Livestock Manag.	1.	A. I. 17 Breeds of Livestock	3.
A. I. 21 Market Classes and Grades	2.	A. I. 19 Genetics	3.
A. I. 22 Farm Poul. Prod.	2.	Chem. 1b Gen. Inorganic	5.
A. I. 23 Elem. of Dairy.	2.	F. E. 9 Farm Motors	3.
Chem. 1a Gen. Inorganic	5.	Biological Science	3-4.
F. E. 8 Farm Struc. Eng.	4.	Physical Science	3-5.
Hort. 1 Gen. Horticul.	4.	Social Science	3.
Biological Science	3-4.		
Physical Science	3-5.		
Social Science	3.		

SECOND YEAR*

First Semester	Credits	Second Semester	Credits
Agr. 14 Market Grain Grad.	2.	Agr. 1 Soils	4.
A. I. 25 Judg. Dairy Prod.	1.	Agr. 23 Plant Pathology	4.
A. I. 102 Meats	4.	A. I. 20 Prin. Animal Nutri.	3.
F. E. 10 Mech. of Farmstead	3.	A. I. 35 Artificial Incubation	2.
F. E. 113 Farm Management	3.	Bact. 52 Gen. Bacteriology	4.
F. E. 120 Rural Com. Prob.	3.	F. E. 4 Agr. Economics	3.
M. & R. F. 108 Marketing	3.	F. E. 10 Farm Accounting	3.
Biological Science	3-4.	F. E. 11 Land Meas., Drainage and Terracing	3.
Physical Science	3-5.	A. P. 116 Dis. of Dom. Anim.	4.
Social Science	3.	Biological Science	3-4.
		Physical Science	3-5.
		Social Science	3.

DEPARTMENTS OF INSTRUCTION

STUDENT ASSEMBLIES

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

.3 *credit; 1st semester* (Horlacher)

2—SOPHOMORE ASSEMBLY. (Home Economics.) Lectures on current problems in home economics.

.3 *credit; 1st semester*

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

3—JUNIOR ASSEMBLY. (Home Economics.) Lectures on current problems in home economics. .3 *credit; 1st semester* (Deephouse)

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

No credit; 2nd semester (Cooper, Horlacher)

AGRICULTURAL ENTOMOLOGY

Professor W. A. Price.

10—AGRICULTURAL ENTOMOLOGY. A general consideration of the principles of structure, biology, and classification affecting insects with frequent discussions of current topics relating to those insects. Lectures 2 hours; laboratory 2 hours. 3 *credits; 1st semester* (Price)

11—APICULTURE. The anatomy of the bee; the colony; location and equipment of the apiary; production and marketing of comb and extracted honey; diseases and enemies of bees. Lectures 2 hours; laboratory 2 hours. 3 *credits; 2nd semester* (Price)

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. Especially planned for those intending to take up vocational agriculture teaching and county agent work. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *A. E.* 10. 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. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *A. E.* 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 grain and forage; also internal and external parasites of domestic animals. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *A. E.* 10. 3 *credits; 2nd semester* (Price)

106a-b—SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. Insect physiology, anatomy, ecology, and taxomony; entomological literature and technique; studies of special groups of insects. Lectures 2 hours; laboratory 2 hours.
Prerequisites: *A. E.* 10 *and any of the following*: 102, 103, 104. 3 *credits; both semesters* (Price)

201a-b—ENTOMOLOGICAL PROBLEMS. Discussion and assignment of current insect subjects. Investigations of chosen insect problems, including original research work.
Prerequisites: *A. E.* 10, 103, 104. 3 *credits; both semesters* (Price)

AGRICULTURAL EXTENSION

Professor Bryant

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

1 *credit; 2nd semester* (Bryant)

AGRONOMY

Professor Roberts (Soils), *Professor Kinney* (Crops), *Professor Valleau* (Plant Pathology), *Associate Professor Karraker* (Soils), *Associate Professor Fergus* (Crops).

1—SOILS. An introductory study of the formation, properties and management of soils. Lectures and recitations 3 hours; laboratory 2 hours.
Prerequisites: *Chemistry* 1*a-b*. 4 *credits; 2nd semester* (Karraker)

11—FARM CROPS. A survey course considering the geographical distribution, science of production, and uses of important field crops. Lecture and recitation 2 hours; laboratory 2 hours.

3 *credits; 1st semester* (Fergus)

14—MARKET GRAIN GRADING AND GRAIN JUDGING. Studies of federal classes and grades of market grains. Attention is also given to show standards. Laboratory 4 hours.
Prerequisites: *Agronomy* 11. 2 *credits; 1st semester* (Fergus, Kinney)

23—PLANT PATHOLOGY. A general survey of the causes, effects of, and methods of control of plant diseases. Recitation 2 hours and laboratory 4 hours.
Prerequisites: *Botany* 1*a-b*. 4 *credits; 2nd semester* (Valleau)

105—ADVANCED CROPS. Important crops of the world are studied in some detail as regards distribution, soil and climatic adaptation and technique of production. Lectures and recitations 3 hours.
Prerequisite: *Agronomy* 11. 3 *credits; 2nd semester* (Kinney)

106—FIELD CROP IMPROVEMENT. A study of the principles involved and the technic used in breeding field crop plants. Lectures 2 hours.
Prerequisites: *Agronomy* 11; *A. I.* 19. 2 *credits; 2nd semester* (Kinney, Fergus)

109—RECENT DEVELOPMENTS IN SOIL MANAGEMENT. Consideration will be given to the water erosion, leaching, tillage, lining, fertilization, and cropping of soils in the light of recent knowledge.
Prerequisites: *Undergraduates, Agronomy* 115; *graduates, Agronomy* 1. 3 *credits; summer* (Roberts, Karraker)

110—ADVANCED SOILS: BIOLOGICAL STUDIES IN SOILS. A study in some detail of the soil organisms and biological soil processes. Lecture 1 hour; laboratory 4 hours.
Prerequisite: *Agronomy* 1. 3 *credits; 2nd semester* (Karraker)

111—ADVANCED SOILS: PHYSICO-CHEMICAL STUDIES IN SOILS. A study in some detail of the physico-chemical conditions and changes in soils. Lecture 1 hour; laboratory 4 hours.
Prerequisite: *Agronomy* 1. 3 *credits; 2nd semester* (Karraker)

112a-b—SPECIAL WORK IN SOILS. Students interested will be given the opportunity to do work not covered in the other courses in soils.
Prerequisite: *Agronomy* 1. 3 *credits; both semesters* (Roberts, Karraker)

113—METHODS AND RESULTS IN AGRONOMY EXPERIMENTATION. A study of the essentials of reliable field experimentation, including sources of error; a study of field results with emphasis on interpretation. Lectures and discussions 3 hours.
Prerequisite: *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 instructor.* 2 *credits; both semesters* (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)

116—TOBACCO. A course designed for students particularly interested in the more practical phases of tobacco production and grading. Laboratory periods are devoted entirely to practice in grading various types of tobacco leaf. Offered in alternate years. Lecture one hour per week; laboratory 2 hours. Open to juniors and seniors.
2 *credits; 2nd semester* (Kinney)

202a-b—SPECIAL PROBLEMS IN CROP PRODUCTION.
2 *credits; both semesters* (Kinney, Fergus)

203a-b—LITERATURE OF PLANT PATHOLOGY. A survey of the literature of plant pathology.
Prerequisite: *Agronomy* 23. 3 *credits; both semesters* (Valleau)

204a-b—INVESTIGATIONS IN SOILS.
Prerequisite: *Permission of instructor.* 3 *credits; both semesters* (Roberts, Karraker)

207a-b—SEMINAR.
1 *credit; both semesters* (Agronomy Staff)

ANIMAL INDUSTRY

Professor Good (Animal Husbandry), *Professor Horlacher* (Animal Husbandry), *Professor Anderson* (Genetics), *Professor Martin* (Poultry), *Professor Ely* (Dairying), *Associate Professor Wilford* (Animal Husbandry), *Assistant Professor Barkman* (Dairying), *Assistant Professor Harris** (Animal Husbandry), *Mr. Morrison* (Dairying).

4—LIVE STOCK MANAGEMENT. Strictly practical phases of live stock production are handled in this course, including preparation of animals for show and sale ring. Laboratory 2 hours.
1 *credit; 1st semester* (Harris)

13—LIVE STOCK JUDGING. Judging beef cattle, sheep and swine and practice in writing reasons and giving reasons orally. Laboratory 4 hours.
Prerequisite: *A. I.* 17 *or* 21. 2 *credits; 2nd semester* (Harris)

17—BREEDS OF LIVE STOCK. Origin, history, development and adaptability of the more important breeds of cattle, hogs, horses, and sheep; practice in judging. Lectures 3 hours.
3 *credits; 2nd semester* (Horlacher)

19—GENETICS. A study of the fundamental laws of heredity. Lectures 3 hours. 3 *credits; both semesters* (Anderson)

20—PRINCIPALS OF ANIMAL NUTRITION. Fundamental principles involved in the digestion, absorption and assimilation of feeds by domestic animals; uses of the different nutrients; feeds, rations and their nutritive rations; practical feeding of live stock. Lectures 3 hours.
Prerequisite: *Chemistry* 1*a*. 3 *credits; 2nd semester* (Good, Wilford)

21—MARKET CLASSES AND GRADES. A course to familiarize students with the market requirements of different types of live stock; fundamentals of judging by score card and comparative placing of animals. Laboratory 4 hours. 2 *credits; 1st semester* (Harris)

22—FARM POULTRY PRODUCTION. Production and care of poultry on the general farm; breeds and varieties; feeding; housing, culling, incubation; brooding; diseases; marketing of poultry products. Lectures 3 hours; laboratory 2 hours.
2 *credits; first half of 1st semester* (Martin)

23—ELEMENTS OF DAIRYING. The place of dairying in agriculture; factors influencing the composition of milk; laws governing production and distribution of dairy products; operation and use of the Babcock test; types of farm dairy equipment. Lectures 3 hours; laboratory 2 hours.
2 *credits; second half of 1st semester* (Ely, Morrison)

25—JUDGING DAIRY PRODUCTS. A study of the accepted stand-

* On leave 1936-37

ards for judging market milk, cream, butter, ice cream, cheese, and starters, and practice in scoring these products in accordance with standard methods. Laboratory 2 hours. 1 *credit; 1st semester* (Barkman)

35—ARTIFICIAL INCUBATION AND BROODING. The fundamental principles involved in the operating of mammoth incubators and brooders; hatchery operation and management. Practice in the operation of mammoth incubators and storage brooders. Laboratory 4 hours.
Prerequisite: *A. I.* 22. 2 *credits; 2nd semester* (Martin)

102—FARM BUTCHERING AND CURING MEATS. Slaughtering and blocking out of beeves, veals, hogs, and lambs; judging on foot and on the hook; wholesale and retail cuts, meat curing and cures with special emphasis on pork. Lectures 2 hours; laboratory 4 hours.
Prerequisite: *A. I.* 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. Lectures 3 hours; laboratory 2 hours.
Prerequisite: *A. I.* 17, 19. 4 *credits; 2nd semester* (Anderson)

105—BEEF PRODUCTION. Development of the beef cattle industry in this and other countries; feeding, breeding and management of beef cattle. Laboratory work consists in judging beef cattle and practical problems relating to the industry. Lectures 2 hours; laboratory 2 hours.
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. Lectures 2 hours; laboratory 2 hours.
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. Lectures 3 hours.
Prerequisite: *A. I.* 17 *or* 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. Laboratory 2 hours. 1 *credit; 1st semester* (Horlacher)

110—ADVANCED LIVE STOCK JUDGING. Primarily for judging team candidates. Lectures and laboratory.
Prerequisites: *A. I.* 17, 21. 3 *credits; 1st semester* (Horlacher)

111a-b—SPECIAL PROBLEMS IN ANIMAL HUSBANDRY.
3 *credits; both semesters* (Staff)

120—SYSTEMS OF LIVE STOCK PRODUCTION. A survey of the systems of live stock production in the various countries of the world; government regulation and codes; designed to give the student a broad view of the live stock industry. Lectures 3 hours.
Prerequisite: *A. I.* 17 *or* 21. 3 *credits; 1st semester and summer* (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. Lectures 3 hours.
Prerequisite: *A. I.* 19. 3 *credits; 1st semester* (Anderson)

124—ADVANCED STUDY OF THE DAIRY BREEDS. 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. Lectures 2 hours; laboratory 4 hours.
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. Lectures 3 hours.
Prerequisite: *A. I.* 20. 3 *credits; 2nd semester* (Ely)

127—ADVANCED POULTRY BREEDING. Fundamental genetic principles involved in poultry breeding; transmission of egg production, broodiness, egg shell color and feather color; a breeding program is mapped out, analyzed, and studied in detail. Lectures 3 hours.
Prerequisite: *Genetics.* 3 *credits; 2nd semester* (Martin)

129—DAIRY BACTERIOLOGY. The application of bacteriological principles to the production of processing of milk and other dairy products involving methods of entrance of microorganisms into dairy products, effects of their growth and methods for their control. Lectures 2 hours; laboratory 4 hours.
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 6 hours.
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 6 hours.
Prerequisite: *A. I.* 23. 3 *credits; 2nd semester* (Morrison)

132a-b—SPECIAL PROBLEMS IN DAIRYING.
3 *credits; both semesters* (Staff)

133a-b—SPECIAL PROBLEMS IN POULTRY.
3 *credits; both semesters* (Staff)

134—ADVANCED POULTRY PRODUCTION. Advanced problems involved in incubation, brooding, pathology, nutrition, and flock management. Lectures 3 hours.
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)

201a-b—ECONOMIC FACTORS INVOLVED IN MEAT PRODUCTION. Problems involving the economical production of beef, pork, and mutton.
3 *credits; both semesters* (Good, Horlacher, Wilford, Harris)

202a-b—MEATS. Research in any field touching on the industry.
3 *credits; both semesters* (Wilford)

203a-b—RESEARCH IN GENETICS.
3 *credits; both semesters* (Anderson)

204a-b—RESEARCH IN DAIRYING.
3 *credits; both semesters* (Dairy Staff)

205a-b—INVESTIGATIONS IN BREEDING LIGHT HORSES.
3 *credits; both semesters* (Anderson)

206a-b—RESEARCH IN POULTRY. Special problems involving original investigations on the part of the student. Throughout the year.
3 *credits; both semesters* (Martin)

207a-b—INVESTIGATIONS IN WOOL. Special research problems.
3 *credits; both semesters* (Horlacher)

208a-b—RESEARCH IN ANIMAL BREEDING.
3 *credits; both semesters* (Anderson)

209a-b—ANIMAL HUSBANDRY SEMINAR.
1 *credit; both semesters* (Good and Staff)

ANIMAL PATHOLOGY

Dr. Dimock, Dr. Hull.

116—DISEASES OF DOMESTIC ANIMALS. Distribution, general nature, methods of dissemination, sanitation, prevention, and eradication of infectious and parasitic diseases of animals; hygiene and preventive medicine, with emphasis on the transmissible diseases. Lectures, recitations, and reference reading. 4 *credits; 2nd semester* (Dimock)

126—ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS. Correlation of structure and function of the various organs of the body; a study of anatomy and physiology as related to work offered in other courses as live stock judging, butchering, animal nutrition, animal breeding, and animal diseases. Lectures 3 hours; laboratory 2 hours.
4 *credits; 1st semester* (Hull)

201a-b—INVESTIGATIONS IN ANIMAL DISEASES.
Prerequisites: *A. P.* 126 *and* 116 *or equivalent.* 4 *credits; both semesters* (Dimock)

FARM ECONOMICS

Professor Nicholls, Mr. Galloway, Mr. Oyler.

4—AGRICULTURAL ECONOMICS. Fundamental economic principles involved in the problems of the farmer, including the determination of value, interest, wages and profits; economic motives and ideals; geographic factors; principles of production; proportioning of land, labor and capital; farm credit, land tenure. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *Economics* 1. 3 *credits; 2nd semester* (Galloway)

10—FARM ACCOUNTING. Principles of accounting with special reference to their application to the organization and operation of the farm. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *F. E.* 4 *or permission of instructor.* 3 *credits; 2nd semester* (Galloway)

107a-b—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, crops or live stock, or the problem of profitable farm organization in a specified community. 3 *credits; both semesters* (Nicholls)

108—LAND PROBLEMS. Land resources and their relation to the food supply; the present and potential supply of land of various grades; rent and its determination; factors determining the valuation of land; land tenure; landlord-tenant relations. Offered in alternative years.
Prerequisite: *F. E.* 4. 2 *credits; 1st semseter* (Nicholls)
[NOT OFFERED 1936-37]

109—ADVANCED FARM MANAGEMENT. This course consists of a fuller study of the principles of farm management considered in course 113. A feature of the laboratory work is the visiting of well-organized and successful farms and studying their organization. Lecture 1 hour; laboratory 2 hours. Offered in alternate years.
Prerequisite: *Farm Economics* 113. 2 *credits; 1st semester* (Nicholls)

113—FARM MANAGEMENT. Principles underlying the organization and operation of a farm in such a way as to secure the greatest continuous profit; a study of the experience and methods employed by successful farmers. Lectures 3 hours.
Prerequisite: *Farm Economics* 4. 3 *credits; 1st semester* (Nicholls)

120—RURAL COMMUNITY PROBLEMS. Fundamental principles underlying the social organization of country life; rural vital statistics; the shifting of the rural population; community hygiene and sanitation; the rural church; the rural school; organization for community betterment; special study by the student of his own community. Lecture 3 hours.
Prerequisite: *Economics* 1. 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)

201a-b—RESEARCH IN FARM ECONOMICS. Assignment of an advanced problem in the field of farm economics. Stress is placed on the plan, technique and scientific method used by the student in developing his research. 3 *credits; both semesters* (Nicholls)

203a-b—AGRICULTURAL ECONOMICS SEMINAR. Discussions and papers on methods, problems, current literature and research in the field of agricultural economics. Two hours. 1 *credit; both semesters* (Staff)

FARM ENGINEERING

Professor Kelley, Mr. Brooks.

8—FARM STRUCTURAL ENGINEERING. A combination farm building, drawing and shop course specially designed for students preparing for vocational high school teaching. Lectures and recitations 2 hours; laboratory 4 hours. 4 *credits; 1st semester* (Brooks)

9—FARM MOTORS. A study of the fundamental principles governing the selection, construction, operation, repairing, and testing of tractors and motors adapted for farm use. Lectures and recitations 2 hours; laboratory 2 hours. 3 *credits; 2nd semester* (Kelley)

10—MECHANICS OF THE FARMSTEAD. A study of the fundamentals of engineering as applied to agriculture. The course includes the following subjects: Mechanics of materials, transmission of power, farm sanitation equipment, and farm implements. Lecture and recitation 2 hours; laboratory 2 hours. 3 *credits; 1st semester* (Kelley)

11—LAND MEASUREMENT, DRAINAGE AND TERRACING. Surveying and mapping farm land; locating farm buildings and fields; designing and constructing farm drainage systems; terracing to prevent erosion; and the use of surveying instruments for these purposes. Lecture 1 hour; laboraotry 4 hours. 3 *credits; 2nd semester* (Kelley)

101a-b—SPECIAL PROBLEMS.
Prerequisite: *Farm Engineering* 10. 3 *credits; both semesters* (Kelley)

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: *F. E.* 10. 3 *credits; 1st semester* (Kelley)

HORTICULTURE

Professor Olney, Professor Elliott, Mr. Waltman, Mr. Emmert.

1—GENERAL HORTICULTURE. A study of the principles underlying the care and management of horticultural crops, including propagation, nutrition, habits of growth, fruitfulness, pollination, pruning, training, insect and disease control, harvesting and storing. Lectures 3 hours; laboratory 2 hours. 4 *credits; 1st semester* (Olney, Waltman)

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)

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; lectures 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)

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-b—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; both semesters* (Staff)

117—ELEMENTS OF FLORICULTURE. A study of the fundamental principles of flower growing under glass and in the garden. Lectures 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. Lectures 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* 1*a-b*. 3 *credits; 2nd semester* (Elliott)

200a-b—SEMINAR. 1 *credit; both semesters* (Staff)

MARKETS AND RURAL FINANCE

Professor H. B. Price, Assistant Professor Card, Mr. Bradley.

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 price; marketing costs; and cooperative marketing. Lectures 3 hours.
Prerequisite: *Economics* 1. 3 *credits; 1st semester* (Price)

109—COOPERATIVE MARKETING. Principles, methods and problems involved in the cooperative marketing of farm products; legal, organization, and management problems which cooperatives encounter for different classes of farm products. Lectures 3 hours.
Prerequisite: *M. & R. F.* 108. 3 *credits; 2nd semester* (Price)

110—ADVANCED MARKETING. Marketing live stock, dairy products, eggs, and poultry; analysis of local and terminal market organization; factors affecting efficiency of business set-up and financial organization of marketing agencies. Lectures 3 hours.
Prerequisite: *M. & R. F.* 108. 3 *credits; 1st semester* (Price)

111—AGRICULTURAL PRICES. A study of the factors influencing prices of farm products, price movements and trends, and price relationships. Methods of price comparison, long time price movements and cyclical tendencies are reviewed. Lectures 3 hours.
Prerequisite: *Farm Economics* 4. 3 *credits; 1st semester* (Card)

112—FARM FINANCE. Principles of financing the production and marketing of farm products; credit needs of agriculture, including short time, intermediate and farm mortgage credit requirements; organization and operation of the federal farm loan system, and other agencies which furnish credit for agriculture. Lectures 3 hours.
Prerequisite: *Farm Economics* 4. 3 *credits; 2nd semester* (Bradley)

113—AGRICULTURAL STATISTICS. Sources, methods of presentation, and analysis of agricultural statistics with special references to agricultural census, crop and live stock estimates; collection, tabulation and graphic presentation of data; measure of dispersion, index numbers, trends and correlation. Lectures 2 hours; laboratory 2 hours.
Prerequisite: *Economics* 1. 3 *credits; 1st semester* (Card)

131—ADVANCED AGRICULTURAL PRICES. A review of price theory and statistical method with special reference to research in agri-

cultural prices; analysis of various price studies with reference to the theory upon which they are based, research methods used and reliability of conclusions drawn. Lectures 2 hours.
Prerequisites: *M. & R. F.* 111; 113 or *Commerce* 107. 2 *credits; 1st semester* (Card)

132—CURRENT PROBLEMS IN AGRICULTURAL ECONOMICS. This course emphasizes recent developments in agricultural economics, agricultural marketing, production and farm credit; federal production adjustment programs, organization of agricultural credit, marketing agreements and industrial codes.
Prerequisite: *Farm Econ.* 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)

203a-b—SEMINAR. Analysis of current problems in the field of marketing and rural finance. 1 *credit; both semesters* (Price)

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)

HOME ECONOMICS

Professor Erikson, Assistant Professor Grundmeier, Miss Deephouse, Miss Barkley, Miss Hoover.

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

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

Prescribed non-home economics	53.8
Prescribed home economics	45.0
Assemblies	.9
Electives required in home economics	4.0
Free electives	30.0
Total	133.7

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

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
H. E. 3 Foods and Nutri.	4.	Eng. 3b Hist. of Eng. Lit.	3.
H. E. 17 Food Sources and Costs	3.	H. E. 115 Child Care and Devel.	3.
H. E. 41 Housing	3.	H. E. 117 Interior Decora.	3.
Junior Assembly	.3	H. E. 124 Dietetics	4.
Electives	7.	Electives	4 or 5.
	17.3		17 or 18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
F. E. 120 Rural Com. Prob.	3.	*H. E. 142 Home Mgmt. and Family Relationships	5.
or		Electives	11.
Soc. 1a Prin. of Sociology	3.		
H. E. 33 Health of the Fam.	3.		
*H. E. 142 Home Mgmt. and Family Relationships	5.		
Electives	6.		
	17.		16.

* May be taken either semester.

MAJOR WORK

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

TRAINING FOR TEACHERS OF VOCATIONAL HOME ECONOMICS

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

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

SUGGESTED CURICULUM FOR HOME ECONOMICS EDUCATION

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

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Bact. 52 Prin. of Bact.	4.	Ed. 160 Technique of Teach. Home Economics	3.
H. E. 3 Food and Nutrition	4.	Eng. 3b Hist. of Eng. Lit.	3.
H. E. 17 Food Sources and Costs	3.	H. E. 115 Child Care and Devel.	3.
H. E. 41 Housing	3.	H. E. 117 Interior Decora.	3.
Ed. 147 Foundations of Sec. Education	3.	H. E. 124 Dietetics	4.
Junior Assembly	.3	Elective	1.
	17.3		17.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
*Ed. 162 Direct. Teach. in Home Economics	6.	Ed. 101 School Organiza.	3.
F. E. 120 Rural Com. Prob. or Soc. 1a Prin. of Sociology	3.	*Ed. 162 Direct. Teach. in Home Economics	6.
H. E. 33 Health of the Fam.	3.	*H. E. 142 Home Manag. and Family Relationships	5.
*H. E. 142 Home Mgmt. and Family Relationships	5.	Electives	2.
	17.		16.

SUGGESTED CURRICULUM FOR DIETETICS AND INSTITUTION MANAGEMENT

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

SOPHOMORE YEAR

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

*May be taken either semester.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 7a Prin. of Account.	4.	Com. 6 Secretarial Account.	3.
H. E. 3 Food and Nutrition	4.	Eng. 3b Hist. of Eng. Lit.	3.
H. E. 41 Housing	3.	H. E. 117 Interior Decora.	3.
H. E. 81 Institution Market	3.	H. E. 124 Dietetics	4.
H. E. 119a Exper. Cookery	3.	Electives	3.
Junior Assembly	.3		
	17.3		16.

FOURTH YEAR

First Semester	Credits	Second Semester	Credits
Bact. 52 Prin. of Bact.	4.	H. E. 112 Pub. Sch. Nutrit.	3.
F. E. 120 Rural Com. Prob.	3.	H. E. 115 Child Care and	
or		Devel.	3.
Soc. 1a Principles of Soc.	3.	*H. E. 142 Home Man. and	
H. E. 33 Health of Family	3.	Family Relationships	5.
Psy. 7 Child Psychology	3.	H. E. 178 Institution Org.	3.
Electives	3.	Electives	3.
	16.		17.

SUGGESTED CURRICULUM FOR TEXTILES AND CLOTHING

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

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 7 Organic Chem.	4.	A. & P. 3 Physiology	4.
Eng. 1a English Comp.	3.	Econ. 1 Prin. of Economics	3.
R. L. 1a Elem. French	3.	Eng. 1b English Comp.	3.
or		H. E. 47 Adv. Clothing	3.
Ger. 1a Elem. German	3.	R. L. 1b Elem. French	3.
H. E. 46 Clothing	3.	or	
Psy. 1 Elem. Psychology	3.	Ger. 1b Elem. German	3.
Sophomore Assembly	.3	Phy. Ed. Gym. Practice	.7
Phy. Ed. Gym. Practice	.7		
	17.0		16.6

*Offered both semesters.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Art. 61a Drawing	3.	Art. 61b Drawing	3.]
Eng. 6 Essen. of Speech	2.]	or	}
or	}	H. E. 104 Prob. in Textiles	4.]
Jour. 1a Reporting	3.]	Eng. 3b Hist. of Eng. Lit.	3.
H. E. 3 Foods and Nutri.	4.	H. E. 117 Interior Decora.	3.
H. E. 17 Food Sources and Costs	3.	H. E. 124 Dietetics	4.
H. E. 41 Housing	3.	Psy. 7 Child Psychology	3.
R. L. 2a Inter. French	3.]	R. L. 2b Inter. French	3.]
or	}	or	}
Ger. 2a Inter. German	3.]	Ger. 2b Inter. German	3.]
Junior Assembly	.3		
	18.3 or 19.3		19 or 20.

SENIOR YEAR

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

COURSES OF STUDY

3—FOOD AND NUTRITION. The study of the properties and nutritional values of food and its conversion into the matter and energy of the body. Lecture 2 hours; laboratory 4 hours.
Prerequisite: *Chemistry* 7. 4 *credits; both semesters* (Erikson)

6a—FOODS. An introduction to the study of food. The course includes a study of the classification and composition of foods; methods of preparation and principles involved. Laboratory 6 hours.
3 *credits; 1st semester* (Barkley)

6b—FOODS. A course dealing with the preservation of food; the selection, purchase and preparation of food in connection with meal planning and service. Laboratory 6 hours.
Prerequisite: *H. E. 6a.* 3 *credits; 2nd semester* (Barkley)

16—ELEMENTARY NUTRITION. Nutritive functions of food and nutritive requirements of the body are presented for those who wish to know the value to mental and physical efficiency of good food selection. It is given in a way that calls for no training in the natural sciences. Lectures 2 hours; laboratory 2 hours. Not open to students registered in home economics. 3 *credits; both semesters* (Grundmeier)

17—FOOD SOURCES AND COSTS. Study of the production, distribution and exchange of food supplies to develop discrimination for grades and classes of foods. Consideration is given food legislation and inspection. Lectures 3 hours.
Prerequisite: *Economics* 1. 3 *credits; 1st semester* (Hoover)

26—TEXTILES. Study of fibers, cloth manufacturers, selection, care and cost of textiles. Lecture 1 hour; laboratory 2 hours.
2 *credits;* 1 *semester*

29—COSTUME DESIGN. Study of the individual from the standpoint of personality type, color type and personal characteristics. Application of principles and elements of design to the individual wardrobe. Lectures 3 hours.
Prerequisite: *Art 2a.* **3 *credits; both semesters***

32—CHILDREN'S CLOTHING. Selection and construction of suitable clothing for children. Laboratory 6 hours.
Prerequisite: *H. E.* 46. 3 *credits; 1st semester* (Barkley)

33—HEALTH OF THE FAMILY. This course deals with the factors that influence health; the forces to be used for health improvement; the human body and its adjustments; applications of modern science to health; care of the muscular, skeletal and nervous systems; prevention of specific diseases and practice in the techniques of home nursing. Lectures 3 hours.
3 *credits; 1st semester* (Erikson)

41—HOUSING. Modern trends in housing. Economics of housing, housing laws, zoning, house plans and equipment. Present day trends in heating, plumbing and lighting for the home. Problems of costs, management, convenience and beauty are stressed. Lectures 3 hours.
3 *credits; 1st semester* (Deephouse)

46—CLOTHING. Lecture work consists of the study of social and economic clothing problems; clothing budget. Laboratory work consists of the application of the different manipulative processes to linen, cotton and silk materials. Lecture 1 hour; laboratory 4 hours.
Prerequisite: *H. E.* 29. **3 *credits; 1st semester***

47—ADVANCED CLOTHING. Special emphasis is placed upon organized planning in the making of garments and upon selection of material and design for the occasion. Tailored wool dresses, silk afternoon frocks, dinner gowns and tailored wool suits are made. Laboratory 6 hours.
Prerequisite: *H. E.* 46. **3 *credits; 2nd semester***

81—INSTITUTION MARKETING. Study of the economics of food and supplies for institutions. Field trips are made to wholesale houses, distributing centers, food factories. Lecture 1 hour; laboratory 4 hours.
Prerequisite: *Economics* 1. 3 *credits; 1st semester* (Hoover)

82—INSTITUTION FOODS. Study and practice of large quantity food preparation and service. Emphasis is placed on standard methods and cost accounting. Lectures 2 hours; laboratory 4 hours.
Prerequisite: *H. E. 6b.* 4 *credits; 2nd semester* (Hoover)

104—PROBLEMS IN TEXTILES. Study of major and minor fibers; tests both physical and chemical; individual problems used for term problems.
4 *credits; 2nd semester*

105a-b—SEMINAR IN NUTRITION. Investigations of recent research on nutrition. Lecture 1 hour.
Prerequisite: *Senior or graduate standing.* 1 *credit; both semesters* (Erikson)

106a-b—SEMINAR IN TEXTILES AND CLOTHING. Investigations of special textile and clothing problems. One hour.
Prerequisite: *Senior or graduate standing.* 1 *credit; both semesters*

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 for vitamins and proteins of various foods. Lectures 2 hours; laboratory 4 hours.
Prerequisite: *H. E.* 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. Lectures 2 hours; laboratory 2 hours.
3 *credits; both semesters* (Grundmeier)

115—CHILD CARE AND DEVELOPMENT. A survey of the field of parent education; care and training of the child from pre-natal life through the pre-school period; standards for normal development—physical, social, emotional and mental; includes observations of pre-school children. Lectures 3 hours.
Prerequisites: *H. E.* 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 18th and 19th Century costumes. Lectures 3 hours.
Prerequisites: *H. E.* 29, *Art* 2*b*. 3 *credits; 2nd semester*

117—INTERIOR DECORATION. A study of furniture, drapery, rugs, and accessories, their influence on interiors of present day, the cost factors involved and the application of principles of color and design to create a harmonious interior.
Prerequisites: *Art* 2*b*, *H. E.* 26. 3 *credits; 2nd semester*

118—TAILORING. A study of the economics of clothing, budgets. Suit and coat are made. Lecture 1 hour; laboratory 4 hours.
Prerequisite: *H. E.* 47. 3 *credits; 2nd semester*

119a-b—EXPERIMENTAL COOKERY. Study of the application of chemical methods to the problems of cookery. Observation on eflect 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 powder; jellying properties of fruit juices. Laboratory 6 hours.
3 *credits; both semesters* (Grundmeier)

121a-b—SPECIAL PROBLEMS. Special problems in undergraduate research. 2 *credits; both semesters* (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, 6*b*, *Physiology* 3. 4 *credits; both semesters* (Grundmeier)

125—CONSUMER PROBLEMS. The purpose of this course is to acquaint students with the problems of efficient buying. It includes the relation of production to family and individual consumption, the consumer and standards, marketing policies and systems, cooperatives, etc. Lectures three hours. 3 *credits; 2nd semester* (Deephouse)

126—FAMILY LIVING. The purpose of this course is to show the interlocking relationships of community and family living. It aims to bring out the influence of home conditions on the members of the family, and the result of such influence on attitudes and behaviors that affect community living. Lectures three hours. 3 *credits; 2nd semester*

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.* 41, 124. 5 *credits; both semesters* (Deephouse)

178—INSTITUTION ORGANIZATION AND ADMINISTRATION. Principles of organization are studied, types of institution service, modern, industrial tendencies, advertisement, personnel, organization and financial control. Lectures 2 hours; laboratory 2 hours.
Prerequisites: *H. E.* 81, 82. 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 institution equipment is made. Problems of lighting, heating, ventilation, refrigeration are considered. Lectures 2 hours; laboratory 2 hours.
Prerequisites: *H. E.* 81, 82. 3 *credits; 1st semester* (Hoover)

201—ADVANCED HOME MANAGEMENT AND FAMILY RELATIONSHIPS. A lecture course affording opportunity for special study in family relationships. The social and economic problems of the home are stressed. Lectures 3 hours.
Prerequisite: *H. E.* 142, *Economics* 1. 3 *credits; 2nd semester* (Deephouse)

202a-b—GRADUATE SEMINAR.
2 *credits; both semesters* (Erikson)

COLLEGE OF ENGINEERING

JAMES HIRAM GRAHAM, C. E., DEAN

INTRODUCTORY STATEMENT

ORGANIZATION

The College of Engineering embraces the following departments: Civil and Architectural Engineering, Engineering Drawing, Electrical Engineering, Engineering Mechanics, Mechanical Engineering, Mining and Metallurgical Engineering, and Practical Mechanics.

ADMISSION

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

COURSES OF STUDY AND DEGREES

The College of Engineering offers instruction leading to the following baccalaureate degrees:

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

The courses of study leading to these degrees are identical during the freshman year. The freshman courses cover such subjects as Chemistry, Drawing, English, Mathematics, Physics and Practical Mechanics, which are essential to every branch of engineering. This gives the student the benefit of one year of training in fundamental subjects before he is required to choose among the various fields.

ELECTIVE

Provision is made in the curriculum of each course for both technical and non-technical electives.

Any course given in the College of Engineering will be considered as technical, however the Head of the Department may designate certain courses in Physics, Mathematics and Chemistry as technical electives. Any course outside of the College of Engineering will be considered as non-technical. All electives must be approved by the Head of the Department in which the student is taking his major.

Requirements for Graduation

To receive a baccalaureate degree in Engineering, a student must complete a minimum of 157.0 credits with a standing of at least "1". He must also complete all of the required work as shown in the curriculum of the department in which he is taking his major work.

Graduate Courses

The College of Engineering offers graduate courses leading to the following advanced degrees:

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

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

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

For further information regarding graduate work, see the graduate school section of this catalog, and the graduate courses listed under each department.

Student Advisory Committee

The organization of the College of Engineering provides for a Student Advisory Committee. The duty of this committee is to look after the welfare of each student from the standpoint of personal problems affecting the student's relationship with his college work. Students must select, or will be assigned to, a member of this committee, who thereupon becomes the student's adviser. This provides a means of developing a close relationship between students and faculty, which helps to eliminate failures, and to encourage students to get the most from their college work.

SUMMER WORK

It is desirable that students of engineering obtain practical experience while pursuing their college course. All engineering students are urged to obtain employment during their summer vacation with a company engaged in engineering work.

OUTLINE OF FRESHMAN YEAR OF ALL COURSES LEADING TO ENGINEERING DEGREES

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Assby. 1a Introduc. to Eng.	.7	Assby. 1b Introd. to Eng.	.7
Chem. 2a Gen. Inorganic	4.	Chem. 2b Gen. Inorganic	4.
Draw. 1a Elem. Eng. Draw.	2.	Draw. 1b Elem. Eng. Draw.	2.
Hyg. 1 Personal and Community Health	1.	Draw. 3 Descrip. Geometry	3.
Math. 17 College Algebra	3.	Math. 19 Analy. Geometry	3.
Math. 18 Plane Trigonometry	2.	Prac. Mech. 12 Pattern Mak.	1.3
Prac. Mech. 11 Wood Shop	1.3	Prac. Mech. 13b Foundry	.7
Prac. Mech. 13a Foundry	.7	Mil. Sci. 1b First Year Basic	1.3
Mil. Sci. 1a First Year Basic	1.3	Phy. Ed. 1b Gym. Practice	.7
Phy. Ed. 1a Gym. Practice	.7		
	19.7		19.7

OUTLINE OF SOPHOMORE YEAR OF COURSES LEADING TO B. S. DEGREES IN ARCHITECTURAL AND CIVIL ENGINEERING

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 2 Engineering Prob.	.7	Assby. 3 Class Society	0.0
Civ. Eng. 12 Plane Surveying	2.7	Civ. Eng. 13 Adv. Surveying	3.
Civ. Eng. 31 Highway Loca., Construc. and Maint.	2.	Civ. Eng. 35 Highway Mat.	.5
Draw. 14a Eng. Drawing	2.	Draw. 14b Eng. Drawing	2.
Eng. 10a Public Speaking	2	Eng. Mech. 11 Analy. Mech.	4.
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Phys. 2a Gen. Col. Physics	5.	Phys. 2b Gen. Col. Physics	5.
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	19.9		20.0

OUTLINE OF THE SOPHOMORE YEAR OF COURSES LEADING TO B. S. DEGREES IN ELECTRICAL AND MECHANICAL ENGINEERING

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 2 Eng. Problems	.7	Assby. 3 Class Society	0.0
Civ. Eng. 12 Plane Survey.	2.7	Draw. 12b Kinematic Draw.	2.
Draw. 12a Eng. Drawing	2.	Elec. Eng. 11 Elec. Circuits	.7
Eng. 10a Public Speaking	2.	Eng. Mech. 11 Analy. Mech.	4.
Math. 20a Differ. Calculus	4.	Eng. Mech. 12 Kinematics	2.
Phys. 2a Gen. Col. Physics	5.	Math. 20b Integral Calculus	4
Prac. Mech. 14 Machine Shop	1.3	Phys. 2b Gen. Col. Physics	5.
Prac. Mech. 16 Elem. of the Automobile	1.3	Prac. Mech. 15 Forge Shop	1.3
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	20.5		20.5

OUTLINE OF THE SOPHOMORE YEAR OF COURSES LEADING TO B. S. DEGREES IN METALLURGICAL AND MINING ENGINEERING

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 2 Eng. Problems	.7	Assby. 3 Class Society	0.0
Chem. 6 Qualita. Analysis	4.	Chem. 8 Quantita. Analysis	5.
Civ. Eng. 12 Plane Survey.	2.7	Math. 20b Integral Calculus	4.
Eng. 10a Public Speaking	2.	Met. 27 Gen. Metallurgy	2.
Math. 20a Differ. Calculus	4.	Phys. 2b Gen. Col. Physics	5.
Phys. 2a Gen. Col. Physics	5.	Prac. Mech. 14 Machine Shop	1.3
Mil. Sci. 6a Sec. Year Basic	1.5	Prac. Mech. 15 Forge Shop	1.3
		Mil. Sci. 6b Sec. Year Basic	1.5
	19.9		20.1

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN ARCHITECTURAL ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Art 145a Hist. of Architec.	1.	Art 145b Hist. of Architec.	1.
Art 146a Hist. of Architec.	2.	Art 146b Hist. of Architec.	2.
Art 61a Drawing	3.	Art 61b Drawing	3.
Assby. 4a Class Society	0.0	Arch. Eng 1 Architec. Rend.	2.
Civ. Eng. 14 Topogr. Surv.	1.5	Assby. 4b Class Society	0.0
Civ. Eng. 81 Testing Mat.	1.	Civ. Eng. 5 Masonry Const.	2.
Civ. Eng. 171 Stresses	4.3	Civ. Eng. 173a Steel Struc.	2.3
Civ. Eng. 172 Timber Struc.	1.2	Mech. Eng. 103 Elem. of Heat-Power Eng.	2.
Eng. Mech. 13 Mech. of Mat.	4.	Mech. Eng. 111 Eng. Reports	2.
Non-Technical Elective	3.	Non-Technical Elective	3.
	21.0		19.3

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Arch. Eng. 2 Order Prob.	1.3	Arch. Eng. 4b Architec. Des.	2.7
Arch. Eng. 3 Sanita., Acoustics, Fire Prevention	3.	Arch. Eng. 5 Build. Equip.	2.
Arch. Eng. 4a Architec. Des.	2.7	*Arch. Eng. 6 Indep. Prob.	5.
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Civ. Eng. 102 Reinf. Concrete	3.	Civ. Eng. 111 Contracts and Specifications	1.
Civ. Eng. 104a Reinf. Concrete Design	.7	Elec. Eng. 11 Elec. Circuits	.7
Elec. Eng. 101 Elem. of Elec. Engin. Machinery	3.	Elec. Eng. 136 Illum. Eng.	2.
Mech. Eng. 106a Heating and Ventilation	2.	Mech. Eng 110 Heating and Ventilating Design	1.3
Art 17a Art Apprecia.	1.	Met. 26 Eng. Metallurgy	2.
Non-Technical Elective	3.	Art 17b Art Appreciation	1.
		Prac. Mech. 15 Forge Shop	1.3
	19.7		19.0

* This may be replaced by Technical Elective.

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN CIVIL ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Civ. Eng. 14 Topogr. Surv.	1.5	Civ. Eng. 5 Masonry Const.	2.
Civ. Eng. 81 Testing Mater.	1.	Civ. Eng. 48 Railroad, Loca., Const. and Maint.	5.7
Civ. Eng. 171 Stresses	4.3	Civ. Eng. 173a Steel Struct.	2.3
Civ. Eng. 172 Timber Struc.	1.2	Assby. 4b Class Society	0.0
Assby. 4a Class Society	0.0	Mech. Eng. 111 Eng. Reports	2.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	Geol. 12 Elem. Geol. for Eng.	3.
Eng. Mech. 13 Mech. of Mat.	4.	Math. 11 Spher. Trig.	1.
Eng. Mech. 101 Hydraulics	2.	Math. 12 Least Squares	1.
Non-Technical Elective	3.	Non-Technical Elective	3.
	20.0		20.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Civ. Eng. 102 Reinf. Concr.	3.	Civ. Eng. 32 Street and Pav.	2.
Civ. Eng. 103 Walls and Dams	2.	Civ. Eng. 36 Bitum. Mater.	1.
Civ. Eng. 104a Reinf. Concr. Design	.7	Civ. Eng. 104b Reinf. Concr. Design	.7
Civ. Eng. 173b Steel Struc.	3.3	Civ. Eng. 111 Contracts and Specifications	1.
*Civ. Eng. 181a Indep. Prob.	1.	Civ. Eng. 122 Water Power Engineering	2.
Assby. 5a Class Society	0.0	Civ. Eng. 151 Water Supply and Water Works	2.
Art 145a Hist. of Architec.	1.	Civ. Eng. 152 Sewers and Sewage Disposal	2.
Mech. Eng. 103 Elem. of Heat-Power Eng.	2.	Civ. Eng. 153 Design of Wat. Works and Sewers	1.3
Geol. 7 Eng. Geology	2.	*Civ. Eng. 181b Indep. Prob.	4.
Civ. Eng. 113 Geodesy, Precise Surv. and Leveling	3.	Assby. 5b Class Society	0.0
Non-Technical Elective	3.	Art 145b Hist. of Architec.	1.
		Met. 26 Eng. and Metallurgy	2.
	20.0		19.0

* This may be replaced by Technical Elective.

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN ELECTRICAL ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Elec. Eng. 105 D. C. Circuits and Machinery	4.	Elec. Eng. 106 Alternatg. Cur.	4.
Assby. 4a Class Society	0.0	Elec. Eng. 107 Indus. Control	3.
Eng. Mech. 13 Mech. of Mat.	4.	Elec. Eng. 121 D. C. Design	2.
Eng. Mech. 15a Mach. Design	2.	Assby. 4b Class Society	0.0
Eng. Mech. 101 Hydraulics	2.	Eng. Mech. 15b Mach. Design	2.
Civ. Eng. 81 Testing Mat.	1.	Mech. Eng. 104b Engineering Thermodynamics	2.
Mech. Eng. 104a Eng. Thermodynamics	2.	Mech. Eng. 111 Eng. Reports	2.
Mech. Eng. 112a Mech. Lab.	2.	Mech. Eng. 112b Mech. Lab.	2.
Non-Technical Elective	3.	Non-Technical Elective	3.
	20.0		20.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Elec. Eng. 108 Industrial Electronics	3.	Elec. Eng. 111b Adv. Elec. Lab.	1.
Elec. Eng. 109 Elec. Pow. Equipment	4.	Elec. Eng. 122 Transformer Design	.7
Elec. Eng. 111a Adv. Elec. Laboratory	2.	Elec. Eng. 131 Communication Engineering	3.
Elec. Eng. 123 Elec. Equip. Problems	1.3	Elec. Eng. 136 Illumination Engineering	2.
Elec. Eng. 141 Analy. Elec. Engineering	2.	Elec. Eng. 151 Elec. Eng. Conferences	1.
Assby. 5a Class Society	0.0	*Elec. Eng. 152 Independent Problems (Elective)	4.
Mech. Eng. 105 Steam Power Plant Equipment	2.	Assby. 5b Class Society	0.0
Mech. Eng. 106a Heating and Ventilation	2.	Met. 26 Eng. Metallurgy	2.
Non-Technical Elective	3.	Technical Electives	6.
		Non-Technical Elective	3.
	19.3		18.7

* Those electing Independent Problems course are not required to take Advanced Electrical Laboratory 111b and 3.0 credits of Technical Electives.

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN MECHANICAL ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Mech. Eng. 104a Eng. Thermodynamics	2.	Mech. Eng. 102 Elem. of Reciprocating Engines	2.
Mech. Eng. 112a Mech. Lab.	2.	Mech. Eng. 104b Engineering Thermodynamics	2.
Assby. 4a Class Society	0.0	Mech. Eng. 111 Eng. Reports	2.
Elec. Eng. 105 D. C. Circuits and Machinery	4.0	Mech. Eng. 112b Mech. Lab.	2.
Eng. Mech. 13 Mech. of Mat.	4.	Assby. 5b Class Society	0.0
Eng. Mech. 16 Mach. Design	4.	Elec. Eng. 106 Alternating Currents	4.
Elec. Eng. 111a Adv. Elec.		Eng. Mech. 17 Mach. Design	4.
Non-Technical Elective	3.	Non-Technical Elective	3.
	20.0		19.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Mech. Eng. 105 Steam Pow. Plant Equipment	2.	Mech. Eng. 101b Mech. Des.	5.
Mech. Eng. 101a Mech. Des.	3.3	Mech. Eng. 106b Heating and Ventilation	2.
Mech. Eng. 106a Heating and Ventilation	2.	Mech. Eng. 108 Internal Comb. Engines	3.
Mech. Eng. 107 Flow of Gases	1.	Mech. Eng. 109 Refrigeration	2.
Mech. Eng. 113a Mech. Lab.	2.	Mech. Eng. 113b Mech. Lab.	2.
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Elec. Eng. 109 Elec. Pow. Equipment	4.	Met. 26 Eng. Metallurgy	2.
Elec. Eng. 123 Elec. Equip. Problems	1.3	Non-Technical Elective	3.
Eng. Mech. 14 Hydraulics	1.		
Non-Technical Elective	3.		
	19.6		19.0

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN METALLURGICAL ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Met. 29 Metallurgy of Ferrous Metals	3.	Met. 28 Metallurgy of Copper and Lead	2.
Assby. 4a Class Society	0.0	Met. 140 Science of Metals	3.
Min. 20 Prin. of Mining	4.	Assby. 4b Class Society	0.0
Elec. Eng. 101 Elem. of Elec. Engineering Mach.	3.	Civ. Eng. 81 Testing Mat.	1.
Eng. Mech. 11 Analy. Mech.	4.	Elec. Eng. 102 Elec. Eng. Machinery	2.
Mech. Eng. 103 Elements of Heat-Power Eng.	2.	Eng. Mech. 13 Mech. of Mat.	4.
Chem. 131a Physical Chem.	4.	Mech. Eng. 111 Eng. Reports	2.
Geol. 109a Mineralogy	2.	Chem. 131b Phys. Chem.	4.
		Geol. 12 Elem. Geol. for Engineers	3.
	22.0		21.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Met. 30 Metallurgy of Aluminum and other Non-Ferrous Metals	2.	Met. 40 Metallurgy of Non-Metallics	2.
Met. 120 Assaying	2.7	*Met. 50 Indep. Work on Metallurgical Prob.	3.
Met. 130 Metallurgical Calculations (General and Non-Ferrous)	3.	Met. 121 Fuel and Metallurgical Lab.	1.
Met. 141 Metallography Lab.	1.	Met. 131 Metallurgical Calculations (Ferrous)	2.
Met. 160 Ore Dressing	3.	Met. 142 Heat Treatment	2.7
Assby. 5a Class Society	0.0	Met. 161 Flotation	2.
Min. 120 Mining Geology and Prospecting	3.	Met. 162 Ore Dressing Lab.	.7
Eng. Mech. 14 Hydraulics	1.	Assby. 5b Class Society	0.0
Mech. Eng. 107 Flow of Gases	1.	Civ. Eng. 78 Stresses	1.3
Non-Technical Elective	3.	Non-Technical Elective	3.
	19.7		17.7

* This may be replaced by Technical Elective.

OUTLINE OF THE JUNIOR AND SENIOR YEARS OF COURSE LEADING TO THE DEGREE B. S. IN MINING ENGINEERING

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Min. 20 Prin. of Mining	4.	Met. 28 Metallurgy of Copper and Lead	2.
Min. 21 Mine Surveying	4.	Met. 140 Science of Metals	3.
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Met. 29 Metallurgy of Ferrous Metals	3.	Civ. Eng. 81 Test. Materials	1.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	Elec. Eng. 102 Elec. Eng. Machinery	2.
Eng. Mech. 11 Analy. Mech.	4.	Eng. Mech. 13 Mech. and Materials	4.
Mech. Eng. 103 Elem. of Heat-Power Eng.	2.	Mech. Eng. 111 Eng. Reports	2.
Geol. 109a Mineralogy	2.	Mech. Eng. 114 Mech. Eng. Laboratory	2.
		Geol. 12 Elem. Geol. for Engineers	3.
		Geol. 109b Mineralogy	2.
	22.0		21.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Min. 100 Mining of Unstratified Min. Deposits	3.	*Min. 50 Indep. Work on Mining Problems	3.
Min. 120 Min. Geol. and Prospecting	3.	Min. 110 Mining of Stratified Min. Deposits	2.
Assby. 5a Class Society	0.0	Min. 111 Mine Ventilation	3.
Met. 120 Assaying	2.7	Min. 121 Oil Field Eng.	2.
Met. 141 Metallography Lab.	1.	Assby. 5b Class Society	0.0
Met. 160 Ore Dressing	3.	Met. 161 Flotation	2.
Eng. Mech. 14 Hydraulics	1.	Met. 162 Ore Dressing Laboratory	.7
Mech. Eng. 107 Flow of Gases	1.	Civ. Eng. 78 Stresses	1.3
Technical Elective	3.	Hyg. 7 First Aid	.5
Non-Technical Elective	3.	Non-Technical Elective	3.
	20.7		17.5

* This may be replaced by Technical Elective.

DEPARTMENTS OF INSTRUCTION

STUDENT ASSEMBLIES

1a—INTRODUCTION TO ENGINEERING. Lectures and demonstrations covering all branches of engineering and the allied sciences, study of the curriculum of the College of Engineering to aid the student in choosing the branch of engineering which he wishes to follow. Two hours a week.
0.7 credit; 1st semester

1b—INTRODUCTION OF ENGINEERING. Continuation of 1a. Two hours a week. *0.7 credit; 2nd semester*

2—ENGINEERING PROBLEMS. Analysis and solution of basic engineering problems as applied to the particular branch of engineering in which the student is registered, including the use of the slide rule. Two hours a week. *0.7 credit; 1st semester*

3—CLASS SOCIETY. The class societies, affiliated as student branches of the four founder national engineering societies. Lectures on engineering projects of local and national interest. One hour a week.
No credit; 2nd semester, sophomore year

4a—CLASS SOCIETY. Same as 3. One hour a week.
No credit; 1st semester, junior year

4b—CLASS SOCIETY. Same as 3. One hour a week.
No credit; 2nd semester, junior year

5a—CLASS SOCIETY. Same as 3. One hour a week.
No credit; 1st semester, senior year

5b—CLASS SOCIETY. Same as 3. One hour a week.
No credit; 2nd semester, senior year

ARCHITECTURAL ENGINEERING

Professor Terrell, Mr. Meriwether

1—ARCHITECTURAL RENDERING. Pictoral delineation of archi-

tectural subjects in the medium of pencil, ink and water color. Drawing room six hours a week.
Prerequisite: *Art* 61*a*. 2 *credits; 2nd semester* (Meriwether)

2—ORDER PROBLEMS. Studies of the classical orders of architecture. Drawing room four hours a week.
Prerequisite: *A. E.* 1. 1.3 *credits; 1st semester* (Meriwether)

3—SANITATION, ACOUSTICS, FIRE PREVENTION. Theory and practice as applied to architectural design.
3 *credits; 1st semester* (Meriwether)

4a—ARCHITECTURAL DESIGN. Principles of aesthetic design and functional planning of buildings. Drawing room eight hours a week.
Prerequisite: *A. E.* 2. 2.7 *credits; 1st semester* (Meriwether)

4b—ARCHITECTURAL DESIGN. Continuation of 4a.
Prerequisite: *A. E.* 4*b*. 2.7 *credits; 2nd semester* (Meriwether)

5—BUILDING EQUIPMENT. Theory and practice of modern building equipment.
Prerequisite: *M. E.* 103. 2 *credits; 2nd semester* (Meriwether)

6—INDEPENDENT PROBLEMS. Development of complete working drawings and specifications of a building, to be selected by the student with the approval of the instructor. Class work three hours; drawing room six hours a week.
Prerequisite: *A. E.* 4*a*. 5 *credits; 2nd semester* (Meriwether)

CIVIL ENGINEERING

Professor Terrell, Professor Carrel, Assistant Professor Chambers, Assistant Professor Shaver

5—MASONRY CONSTRUCTION. Properties of stone, brick, cement, concrete and their uses in engineering structures.
2 *credits; 2nd semester* (Chambers)

12—PLANE SURVEYING. Theory and use of the transit, level and compass in land surveys, leveling, municipal and topographical surveys. General use and care of surveying instruments, note keeping, field problems and computations. Class work two hours a week, first or second semester; field work four hours a week, first half of first semester or second half of second semester.
Prerequisite: *Math.* 18. 2.7 *credits; both semesters* (Shaver)

13—ADVANCED SURVEYING. Triangulation and base line measurements, precise and trigonometric leveling, hydrographic surveys, map projection and plotting. Topographic mapping by the Stadia method. Class work two hours a week, second semester; field work six hours a week, second half of second semester.
Prerequisite: *C. E.* 12. 3 *credits; both semesters* (Shaver)

14—TOPOGRAPHIC SURVEYING. Advanced work in topographic surveying and mapping methods, field information, methods of plotting and

calculations. Class work one hour a week, first half of first semester; field work six hours a week, first half of first semester.
Prerequisite: *C. E.* 12. 1.5 *credits; 1st semester* (Shaver)

31—HIGHWAY LOCATION, CONSTRUCTION AND MAINTENANCE. Principles of location, topographic conditions, economic considerations, benefits and cost. Materials and types of roads, and general maintenance.
2 *credits; 1st semester* (Chambers)

32—STREETS AND PAVEMENTS. Drainage, subgrade, foundations and surfacing materials, traffic census, resistance to friction, safety appliances, construction and maintenance.
Prerequisite: *C. E.* 31. 2 *credits; 2nd semester* (Chambers)

35—HIGHWAY MATERIALS. Methods of testing stone, gravel, sand, brick, culvert pipe, cement, concrete and other highway materials. Laboratory two hours a week.
Prerequisite or concurrent: *C. E.* 31. 0.5 *credit; 1st half 2nd semester* (Chambers)

36—BITUMINOUS MATERIALS. Testing of asphalts, road oils, coal tars, flux oils and dust layers. Laboratory four hours a week.
Prerequisite or concurrent: *C. E.* 35. 1 *credit; 1st half 2nd semester* (Chambers)

48—RAILROAD LOCATION, CONSTRUCTION AND MAINTENANCE. Reconnoissance and preliminary surveys, curves and earth work. Monthly and final estimates for construction. Track layouts, construction and maintenance. Special problems consisting of all necessary field and office work for complete plans for a railroad. Class work four hours a week, second semester; field work ten hours a week, second half of second semester.
Prerequisite: *C. E.* 12. 5.7 *credits; 2nd semester* (Shaver)

78—STRESSES. Elementary course in stresses in framed structures. Drawing room four hours a week.
Prerequisite: *Phys.* 2*a*. 1.3 *credits; 2nd semester* (Carrel)

81—TESTING MATERIALS. Experimental investigations and tests of woods, metals, cement, concrete and other construction materials to verify the laws governing their behavior under given conditions. Laboratory two hours a week
Prerequisites: *Math.* 20*a*, *Phys.* 2*a*. 1 *credit; both semesters* (Chambers)

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.
Prerequisite: *E. M.* 13, 101. 2 *credits; 1st semester* (Terrell)

104a—REINFORCED CONCRETE DESIGN. Designs 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.* 104*a*. 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 calculation 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.
Prerequisite: *Math.* 11, 12; *C. E.* 13. 3 *credits; 1st semester* (Terrell)

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

171—STRESSES. Analytical and graphical solution of stresses in framed structures. Class work three hours; drawing room four hours a week
Prerequisite: *Phys.* 2*a*. 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: *C. E.* 171. 1.2 *credits; 2nd half 1st semester* (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.* 173*a*. 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) Goedetic 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.* 181*a*. 4 *credits; 2nd semester* (Terrell and others)

Courses open only to Graduate Students

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

202a—CONSTRUCTION. 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 of 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

Professor Freeman, Professor Bureau, Assistant Professor Barnett,* Mr. Wilkins, Mr. Watkins, Mr. Moody,* ————.

11—ELECTRICAL CIRCUITS. The course consists of a study of the National Electrical Safety Code of the National Board of Fire Underwriters; a study of the various types of writing permissible under the code; practice in setting up the various types of wiring and a study of various types of signaling circuits used in buildings. Laboratory and lectures two hours a week. 0.7 *credit; both semesters* (Moody, Watkins)

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: *Phys.* 2*b*. 3 *credits; 1st semester* (Bureau, Watkins)

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: *Phys.* 2*b*. 4 *credits; both semesters* (————, Watkins)

106—ALTERNATING CURRENTS. The fundamental theory of alternating current circuits and apparatus. Includes study of single phase and

* On leave 1936-37.

polyphase generators, motors and transformers, converters, etc. Recitation three hours; laboratory three hours a week.
Prerequisites: *E. E.* 105. 4 *credits; 2nd semester*
Math. 20*a*. (————, 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, *or E. E.* 101. 3 *credits; 2nd semester* (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: *Phys.* 2*b*. 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, Watkins)

111b—ADVANCED ELECTRICAL LABORATORY. Continuation of E. E. 111a. Laboratory three hours a week.
1 *credit; 2nd semester* (Bureau, Moody, Watkins)

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 **(————)**

122—TRANSFORMER DESIGN. Design of a distribution transformer. Two hours a week.
Prerequisite: *E. E.* 106. 0.7 *credit; 2nd semester* (————)

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* (Moody)

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: *Phys.* 2*b*. 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 discussion 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)

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. For major work, a candidate must hold a bachelor's degree in Electrical Engineering or its equivalent.

205—ADVANCED INDUCTION MOTOR THEORY. A study of the theory underlying the characteristics of single phase and polyphase induction motors. Recitation three hours; laboratory 3 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 DRAWING

Professor Nollau, Associate Professor Horine, Miss Webb, Mr. Mock, Mr. Spicer, Mr. Farris

1a—ELEMENTARY ENGINEERING DRAWING. Freehand lettering; exercises in the use of drawing instruments and in the principles of orthographic projection. Six hours a week.
2 *credits; both semesters* (Horine, Webb, Spicer, Farris)

1b—ELEMENTARY ENGINEERING DRAWING. Continuation of Drawing 1a. Principles of auxiliary, isometric oblique projections; sections; cabinet drawing; drawings of bolts, screws, springs and pipe fittings; technical sketching; tracing; blue printing and map conventions. Six hours a week.
Prerequisite: *Drawing* 1a. 2 *credits; both semesters*
(Horine, Webb, Spicer, Farris)

2a—MECHANICAL DRAWING. For students in Industrial Chemistry. Freehand lettering, exercises in the use and care of drawing instruments, and the principles of oblique and orthographic projection. Four hours laboratory a week. 1.3 *credits; both semesters*
(Horine, Webb, Spicer, Farris)

2b—MECHANICAL DRAWING. Continuation of Drawing 2a. For students in Industrial Chemistry. Principles of oblique and orthographic projection; technical sketching; tracing; blue printing; graphic layouts of laboratory apparatus and industrial problems. Four hours laboratory a week.
Prerequisite: *Draw.* 2a. 1.3 *credits; both semesters*
(Horine, Webb, Spicer, Farris)

3—DESCRIPTIVE GEOMETRY. This work includes a discussion of descriptive geometry as a branch of pure mathematics followed by a consideration of the application of the principles of descriptive geometry as an aid to engineering drawing. Lectures and recitations are supplemented by work in the drawing room under Course 1b. Four hours a week.
Prerequisite: *Math.* 2. 3 *credits; both semesters*
(Nollau, Horine, Spicer, Farris)

12a—ENGINEERING DRAWING. For students in mechanical and electrical engineering. Application of Drawing 11a and 11b, comprising working drawings of parts of machines and complete machines, both details and assembly. Technical sketching and tracing. Six hours laboratory a week.
Prerequisite: *Draw.* 11*b*. 2 *credits; both semesters* (Nollau, Mock)

12b—KINEMATIC DRAWING. Continuation of Engineering Drawing 12a together with the introduction of problems and drawings pertaining to Kinematics. One hour lecture and five hours laboratory a week.
Prerequisites: *Draw.* 12*a*, *Phys.* 2*a*. 2 *credits; both semesters*
Concurrent: *E. M.* 12. (Nollau, Mock)

14a—ENGINEERING DRAWING. For students in Architectural and Civil Engineering. Topographic mapping, elements of highway, railroad, sewer, structural and architectural drawing. Technical sketching and methods of reproducing drawings for commercial use. Six hours laboratory a week.
Prerequisite: *Draw.* 11*b*. 2 *credits; both semesters* (Nollau, Farris)

14b—ENGINEERING DRAWING. For students in Architectural and Civil Engineering. Continuation of Drawing 14a. Problems in general drafting developed from notes and sketches. Six hours laboratory a week.
Prerequisite: *Draw.* 14*a*. 2 *credits; both semesters* (Nollau, Farris)

115—PHOTOGRAPHY. Fundamental principles of photography. Lectures on the optics and chemistry of photography together with practical demonstrations. Negative making, printing, etc. One hour lecture; one hour recitation; two hours laboratory a week.
3 *credits; 2nd semester* (Nollau, Mock)

16a—FREEHAND LETTERING. Construction and composition of Roman, English Gothic and Commercial Gothic capitals and lower case letters. Four hours laboratory a week.
1.3 *credits; both semesters* (Nollau, Horine, Farris)

16b—ADVANCED FREEHAND LETTERING. Continuation of Drawing 16a. Design and composition of letters with special emphasis given to the choice of styles in advertising design. Four hours laboratory a week.
Prerequisite: *Draw.* 16*a*. 1.3 *credits; both semesters*
(Nollau, Horine, Farris)

17a—MECHANICAL DRAWING. Special course for non-engineering students, comprising freehand lettering, use and care of drawing instruments, elementary principles of orthographic and single plane projection, topographic mapping, tracing and blueprinting. Six hours laboratory a week. 2 *credits; both semesters* (Nollau, Mock)

17b—MECHANICAL DRAWING. Continuation of Drawing 17a. Special problems designed to meet the needs of individual students. Six hours laboratory a week. 2 *credits; both semesters* (Nollau, Mock)

ENGINEERING MECHANICS

Professor Johnson, Professor Hawkins, Professor Jett, Mr. Conrad*

5—SLIDE RULE PRACTICE. Instruction relative to the theory of

the slide rule and exercises in the computation of numerical problems by means of the slide rule.
Prerequisite: *Math.* 17, 18. 1 *credit; both semesters* (May)

11—ANALYTICAL MECHANICS. A study of the principles of pure mechanics and the application of these principles to engineering problems. Recitation four hours a week.
Prerequisites: *Phys.* 2*a*; *Math.* 20*a*. 4 *credits; both semesters* (Johnson, Hawkins)

12—KINEMATICS. The application of the fundamental principles of physics to the movements of the different parts of machines such as link work, gears, cams, simple and epicycle trains, rolling and sliding contacts, straight line and quick-return motions. Recitation two hours a week.
Prerequisites: *Draw.* 12*a*; *Phys.* 2*a*. *Concurrent*: *Draw.* 12*b*. 2 *credits; both semesters* (Hawkins)

13—MECHANICS OF MATERIALS. The properties of materials commonly used in structural engineering and the relations of external loads on structural members (made of these materials) to the stresses and strains caused by the loads. Recitation four hours a week.
Prerequisite or concurrent E. M. 11. 4 *credits; both semesters*
Prerequisite: *Phys.* 2*a*; *Math.* 20*a*. (Johnson, Hawkins)

14—HYDRAULICS. A brief course in the flow of liquids through orifices, venturi meters, nozzles and pipes. This course omits advanced material related to the design of hydraulic structures. Recitation two hours a week for one-half semester.
Prerequisite: *Phys.* 2*a*. 1 *credti; 1st half of both semesters*
Prerequisite or concurrent: *Math.* 20*b*. (Hawkins)

15a—MACHINE DESIGN. Similar to E. M. 16 with due regard to electrical features. Lectures one hour; drafting room five hours a week.
Prerequisites: *E. M.* 12; *Draw.* 12*b*. 2 *credits; both semesters*
Prerequisite or concurrent: *E. M.* 13; *P. M.* 14. (Jett)

15b—MACHINE DESIGN. Continuation of E. M. 15a. Drafting room six hours a week.
Prerequisites: *E. M.* 11, 13, 15*a*. 2 *credits; both semesters* (Jett, ————)

16—MACHINE DESIGN. The design of machine elements with due consideration given to each of the following items: Motion and form, strength, durability and methods of manufacture or construction. The design of structural elements. Lecture one hour; drafting room eleven hours a week.
Prerequisites: *Draw.* 12*b*; *E. M.* 12. 4 *credits; both semesters*
Prerequisite or concurrent: *E. M.* 13; *P. M.* 14. (Jett, ————)

17—MACHINE DESIGN. Proceeding from the design of the simple elements of a machine, the work is progressive in character, culminating in the production of shop drawings of a complete machine. Problems pertain-

* On leave 1936-37.

ing to reciprocating engines are also introduced. Drafting room, laboratory or shop twelve hours a week.
Prerequisites: *E. M.* 13, 16. 4 *credits; both semesters*
Concurrent: *M. E.* 102. (Jett, ————)

101—HYDRAULICS. Principles of hydraulics and hydrodynamic pressure. Flow of water through orfices, nozzles, pipes and open channels, over weirs, against stationary and moving vanes. Loss from friction and other sources. Recitation two hours a week.
Prerequisite: *Phys.* 2*a*. 2 *credits; both semesters*
Prerequisite or concurrent: *Math.* 20*b*. (Hawkins)

MECHANICAL ENGINEERING

Professor O'Bannon, Professor Jett, Professor Anderson, Assistant Professor Porter, Assistant Professor May, Mr. Singer

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; *M. E.* 104*b*. 3.3 *credits; both semesters*
(O'Bannon, 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.* 101*a*. 5 *credits; both semesters*
(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 engines 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; both semesters*
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: *Phys.* 2*a*. 2 *credits; both semesters* (O'Bannon, Porter)

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: *Phys.* 2*a*; *Math.* 20*a*. 2 *credits; both semesters*
(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.* 104*a*. 2 *credits; both semesters* (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.* 104*b*. 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.* 104*b or* *M. E.* 103. 2 *credits; both semesters* (May)

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.* 104*b*, 106*a*. 2 *credits; both semesters* (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.* 104*b or M. E.* 103; *E. M.* 14. 1 *credit; 2nd half both semesters* (Porter)

108—INTERNAL COMBUSION 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.* 104*b*. 3 *credits; both semesters* (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.* 104*b*. 2 *credits; both semesters* (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: *M. E.* 106*a*. 1.3 *credits; both semesters* (May)

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 course in the Engineering Laboratories.* 2 *credits; both semesters* (O'Bannon)

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: *M. E.* 104*a*. 2 *credits; both semesters* (Porter)

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.* 112*a*. 2 *credits; both semesters*
Concurrent: *M. E.* 104*b*. (Porter)

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

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. For major work, a candidate must hold a bachelor's degree in Mechanical Engineering or its equivalent.

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* (Anderson)

201b—AUTOMOTIVE ENGINEERING. Continuation of 201a.
6 *credits; 2nd semester* (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* (O'Bannon, May)

203b—HEATING, VENTILATING AND AIR CONDITIONING. Continuation of 203a. 6 *credits; 2nd semester* (O'Bannon, 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; second semester* (Jett)

METALLURGICAL ENGINEERING

Professor Crouse, Associate Professor Beebe, Associate Professor Emrath

26—ENGINEERING METALLURGY. This is an elementary course in metallurgy designed to acquaint the user of metals with the fundamental principles employed in the production and treatment of engineering metals and alloys, such principles being a prerequisite to an intelligent use of these materials. Lectures and recitations two hours a week.
Prerequisite: *Chem.* 2*b*. 2 *credits; both semesters* (Beebe)

27—GENERAL METALLURGY. This is an elementary course in general metallurgical principles together with a consideration of fuels, refractories, furnaces, pyrometry and the several alloy types. Lectures and recitations two hours a week.
Prerequisite: *Chem.* 2*b*. 2 *credits; 2nd semester* (Crouse, Bebee)

28—METALLURGY OF COPPER AND LEAD. This course comprises a study of the principles and processes employed in the production and preparation for use of copper and lead and their alloys. Lectures and recitations two hours a week.
Prequisite: *Met.* 27. 2 *credits; 2nd semester* (Crouse)

29—METALLURGY OF THE FERROUS METALS. This course comprises a study of the principles and processes employed in the production, treatment and preparation for use of iron and steel together with a consideration of their constitution including the iron-carbon diagram. Lectures and recitations three hours a week.
Prerequisite: *Chem.* 2*b*. 3 *credits; 1st semester* (Beebe)

30—METALLURGY OF ALUMINUM AND OTHER NON-FERROUS METALS. This course comprises a study of the principles and processes employed in the production and preparation for use of aluminum and other non-ferrous metals such as gold, silver, zinc, etc., and of their respective alloys. Lectures and recitations two hours a week.
Prerequisite: *Met.* 27. 2 *credits; 1st semester* (Crouse)

40—METALLURGY OF NON-METALLICS. This course comprises a study of the more common non-metallic substances utilized in industry such as carbon, lime, clay, nitrogen, etc. Lectures and recitations two hours a week.
Prerequisites: *Met.* 27; *Min.* 20. 2 *credits; 2nd semester* (Beebe)

50—INDEPENDENT WORK ON METALLURGICAL PROBLEMS. This course is designed to be elastic enough to allow the individual student to select any feasible metallurgical problem that he may desire. The problem selected must have the approval of the Head of the Department and be under the direct supervision of one of the instructors in the Department. The work will be done primarily outside of the classroom and will be independent in character except for necessary consultations with the instructor in charge.

Prerequisites: *To be determined in each case by the Head of the Department.* 3 *credits; 2nd semester* (Crouse, Beebe, Emrath)

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. Reeitations 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: *Phys.* 2*b; Chem.* 8*; Met.* 26 *or* 27. 3 *credits; 2nd semester* (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 Beebe)

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: *Phys.* 2*b*; *Geol.* 12; *Min.* 20; *Met.* 27. 3 *credits; 1st semester* (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. 0.7 *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. 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)

207—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.* 131*b*; *Met.* 141. 6 *credits; either semester* (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.* 131*b*; *Met.* 141. 6 *credits; either semester* (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.
Prerequisites: *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.
Prerequisites: *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

Professor Crouse, Associate Professor Emrath

20—PRINCIPLES OF MINING. This course comprises a study of the economic and scientific principles involved in the valuation, development and working of ore deposits. Lectures and recitations four hours a week.
Prerequisites: *Phys.* 2*a*; *Chem.* 2*b*. 4 *credits; 1st semester* (Emrath)

21—MINE SURVEYING. This course comprises classroom and field instruction in the use of instruments and in the procedure employed in mine and mineral land surveying. Lectures and recitations two hours a week; field work four hours a week.
Prerequisite: *C. E.* 12. 4 *credits; 1st semester* (Emrath)

50—INDEPENDENT WORK ON MINING PROBLEMS. This course is designed to be elastic enough to allow the individual student to select any feasible mining problem that he may desire. The problem selected must

have the approval of the Head of the Department and be under the direct supervision of one of the instructors in the Department. The work will be done primarily outside of the classroom and will be independent in character except for necessary consultations with the instructor in charge.
Prerequisites: *To be determined in each case by the Head of the Department.* 3 *credits; 2nd semester* (Crouse, Emrath)

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.
Prerequisites: *None.* 2 *credits; 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. For major work, a candidate must hold a bachelor's degree in Mining Engineering or its equivalent.

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)

PRACTICAL MINERS' COURSE

A short course is offered for practical miners, mine foreman, and mine managers who desire to improve their knowledge of the principles that underlie correct mining. This course, which covers approximately eight weeks, is given in the summer when sufficient demand for it exists. Details concerning this course may be obtained upon application to the head of the department. Persons desiring to take the examination for Mine Foreman and for Assistant Inspector of Mines will find the course quite helpful.

PRACTICAL MECHANICS

Mr. Thurman, Mr. Saunier, Mr. Singer, Mr. Tucker, Mr. Brend, Mr. Beckley, Mr. Kettenacker, Mr. McBee, Mr. Pigman, Mr. Kennard

11—WOOD SHOP. Exercises in bench work, principles and practices in lathe work, cabinet construction, proper use and care of tools. Lectures and demonstrations four hours a week.
1.3 *credits; both semesters* (Tucker, Pigman)

12—PATTERN MAKING. Planning and practices in pattern making, principles of molding. Lectures and demonstrations four hours a week.
1.3 *credits; both semesters* (Kettenacker)

13a—FOUNDRY. Practice in molding, core making, melting and casting of iron and non-ferrous metals. Lectures and demonstrations two hours a week. 0.7 *credit; both semesters* (Kennard)

13b—FOUNDRY. Continuation of P. M. 13a. Lectures and demonstrations two hours a week. 0.7 *credit; both semesters* (Kennard)

14—MACHINE SHOP. Lectures and demonstrations in the use of various machines, including lathes, drill presses, milling machines, grinders, shapers, planers and screw machines; also machine shop practice, the building of small machines and special equipment. Four hours a week.
1.3 *credits; both semesters* (Thurman, Brend, Beckley)

15—FORGE SHOP. Designing, artistic iron work, tempering of steel, heat treatment of metals, study and general practice of forge shop work, operation of trip hammers, electric welders, universal iron worker and other tools. Four hours a week.
1.3 *credits; both semesters* (Saunier, McBee)

16—ELEMENTS OF THE AUTOMOBILE. A practical course in the study of the principles and construction of the typical automobile. Four hours a week. 1.3 *credits; both semesters* (Singer)

GRADUATE SCHOOL

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, except 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 IN ENGINEERING. The professional degrees 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 fields of their choice, extending over a period of five years, and who submit satisfactory theses as further evidence of their professional attainments.

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

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

COLLEGE OF LAW

ALVIN E. EVANS, PH. D., J. D., DEAN

INTRODUCTORY STATEMENT

HISTORY AND PURPOSE OF THE COLLEGE OF LAW

The College of Law of the University of Kentucky was organized under the provisions of an act of the legislature of the State of Kentucky passed in 1908 as one of the colleges of the State University. It was opened for the admission of students in September, 1908, and the first class graduated in June, 1910. The school has always been open to men and women students.

Within four years after the organization of the school, it became a member of the Association of American Law Schools, and it has endeavored to advance steadily the ideals of legal education in the State. In 1921, the American Bar Association made certain recommendations for standard colleges of law, and in 1924 the College of Law of the University of Kentucky was placed on the approved list by the American Bar Association, and has been ranked since 1925 as an approved law school. Beginning with the session of 1925-26, the College of Law required two years of college work for entrance. It is the purpose of the school to maintain the standards prescribed by the most competent authorities in the field of legal education in America and to give to the young men in this section of the country the opportunity to prepare themselves for the bar in the most thorough and scholarly way. It is believed that the lawyer can be worthy of the great profession he represents only if he has had adequate preliminary education and a three-year intensive study of legal principles thru the use of leading cases.

The degree of Bachelor of Laws is awarded to the student who successfully completes the standard three year course and presents 80 semester hours with an average grade of "C", including all first year courses, and who has spent three academic years in resident law study.

The design of the College of Law is to train the student in the fundamental principles of English and American common law so as to equip him to practice his profession wherever that system of law prevails and to develop a scholarly and critical attitude toward the problems of society. As most of the students intend to practice in the State of Kentucky, special emphasis is placed on the decisions of that

State, but only as representing the current of judicial authority or a dissent therefrom. The method used in all classes is the study of cases, the method of instruction followed in all the leading law schools of the country. Credit is obtained by the successful passing of written examinations at the end of each semester, and the student who successfully completes the course is awarded the degrees of Bachelor of Laws.

The ideal held before the student body is the lawyer who is honored not only as a successful practitioner before the bar, but also as a useful citizen in his community. At no time has the lawyer enjoyed a larger opportunity to serve the cause of justice and good will thru his professional skill and right motives than at present. It is the purpose of the College of Law to graduate only those who by reason of adequate preliminary education, diligence and ability in their professional studies in the law school and sound character are qualified to be lawyers in the highest sense of the term.

Instruction is not limited to those who choose the law as a profession, but is open also to students who desire to take the whole or a limited course in law as a preparation for business or public life. The study of law as it is now taught is recognized as an important part of a liberal education and as an excellent foundation for a career in financial or commercial circles.

MEMBERSHIP IN ASSOCIATION OF AMERICAN LAW SCHOOLS

The University of Kentucky College of Law is a member of the Association of American Law Schools, an association which has as its object the improvement of legal education in America and the adoption of the highest scholastic standards. It includes within its membership the leading law schools of the United States.

REQUIREMENTS OF THE AMERICAN BAR ASSOCIATION

The American Bar Association in 1921 adopted the following standards for law schools:

a. It shall require as a condition of admission at least two years of study in a college.

b. It shall require its students to pursue a course of three years' duration, if they devote substantially all of their working time to their studies, and a longer course, equivalent in the number of working hours, if they devote only part of their working time to their studies.

c. It shall provide an adequate library available for the use of the students.

d. It shall have among its teachers a sufficient number giving their entire time to the school to insure actual personal acquaintance and influence with the whole student body.

As the University of Kentucky College of Law complies with these requirements, it has been placed on the list of approved law schools prepared by the American Bar Association.

ADMISSIONS

Regular Students

The applicant for admission to the law school must have, in addition to the standard high school course that will satisfy the general requirements for admission to the University, two years of college credit (sixty semester hours exclusive of gymnasium and military science)

Pre-Law Work

In order to meet the two years of college credit required for entrance, no special course is prescribed except six college credits in English. The credits obtained in the two years of college work that are required must be sufficient to entitle the holder to admission to the junior class in the College of Arts and Sciences of the University of Kentucky. The pre-law work may be taken at the University of Kentucky or at any standard university or college. Students who expect to study law are advised to lay special emphasis on courses in English, history, economics and accounting, political science and psychology. Those who would like special advice concerning their work are invited to communicate with the dean.

Combined Courses Leading to Degrees of A. B. and LL. B.

Inasmuch as the requirements of the law school now call for a total of five years in college and law school before the degree of LL. B. can be obtained, the attention of the student is particularly called to the fact that with the addition of a single year, making six years in all, he can obtain the degree of Bachelor of Arts and also the degree of Bachelor of Laws. After the student has completed three full years of work in the Arts College, and has taken all the required subjects for the Arts degree, he should register in the law school. The first year's work in law is credited toward the A. B. degree as well as toward the

LL. B. degree, and he may thus obtain his A. B. degree after having been registered one year in the law school and completing one year's work therein; and two years later, upon completing the two remaining years in law; he will be granted the degree of LL. B., thus obtaining both degrees in six years.

FIRST YEAR SUBJECTS

First Semester	Credits	Second Semester	Credits
Property I and II	4	Pleading I and II	4
Crimes I	2	Crimes II	2
Contracts I	3	Contracts II	3
Torts I	3	Torts II	3
Domestic Relations	2	Agency	2

SECOND YEAR SUBJECTS

First Semester	Credits	Second Semester	Credits
Property III	3	Public Utilities	3
Trial Procedure I	4	Insurance	3
Constitutional Law I	2	Constitutional Law II	2
Evidence I	2	Evidence II	2
Equity I	3	Equity II	3
Legal Bibliography	1		

THIRD YEAR SUBJECTS

First Semester	Credits	Second Semester	Credits
Corporations I	3	Corporation II	2
Credit Transactions	3	Property IV	2
Administrative Law	3	Conflict of Laws	3
Wills	3	Trusts	4
Practice Court	2	Office Practice	2
Taxation	3		

Summer Session

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

The attention of students is directed to the fact that work done in the summer session may materially shorten the time required for the completion of the LL. B. degree. A student who begins his law work at the close of his sophomore year in June, 1936, by attending summer sessions for three years and also attending the regular sessions will obtain his law degree at the close of the summer session in 1938, or if he desires to obtain both the academic and law degrees he may do so in June, 1939. This saving of nine months in the case of the law degree alone and of one year in the case of both degrees is accomplished without sacrifice of standards or requirements. Students who are interested in the summer session should consult with the dean, as the particular subjects to be given are largely deter-

mined by the number of students applying for instruction therein. The following courses were offered during the summer of 1936:

FIRST YEAR SUBJECTS

Agency. Keedy's Cases. Daily. First term. Professor Moreland.

Torts I. Ames and Smith's Cases (Pound's edition). Daily. First term. Professor Roberts.

Legal Ethics. Hick's Cases. Daily. Second term. Professor Murray

Torts II. Ames and Smith's Cases (Pound's edition). Daily. Second term. Professor Randall.

SECOND AND THIRD YEAR SUBJECTS

Taxation. Magill and Maguire's Cases. Daily. First term. Professor Roberts.

Trial Procedure I. Sunderland's Cases. Daily. First term. Professor Randall.

Oil and Gas. Kulp's Cases. Daily. First term. Professor Moreland.

Trial Procedure II. Sunderland's Cases. Daily. Second Term. Professor Randall.

Damages. Crane's Cases. Daily. Second term. Professor Eblen.

Statutory Interpretation. de Sloovere's cases. Daily. Second term. Professor Murray.

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.
2 *credits; 2nd semester* (Moreland)

106a-106b—PLEADING I AND II. Sunderland's Cases.
4 *credits; 2nd semester* (Randall)

164—CONFLICT OF LAWS. Lorenzen's Cases (3d ed.).
3 *credits; 2nd semester* (Eblen)

161a-161b—CONSTITUTIONAL LAW I AND II. Dodd's Cases.
2 *credits; 1st and 2nd semesters* (Eblen)

101a-101b—CONTRACTS I AND II. Williston's Cases.
3 *credits; 1st and 2nd semesters* (Murray)

107a-107b—CRIMINAL LAW I AND II. Sayre's Cases.
2 *credits; 1st and 2nd semesters* (Moreland)

121a-121b—EQUITY I AND II. Chafee and Simpson's Cases; Chafee and Pound's Cases on Equitable Relief Against Torts, Volumes 1 and 2.
3 *credits; 1st and 2nd semesters* (Moreland)

124a-124b—EVIDENCE I AND II. Hinton's Cases.
2 *credits; 1st and 2nd semesters* (Randall)

123—NEGOTIABLE INSTRUMENTS. Britton's Cases.
3 *credits; 1st semester* (Roberts)

125a—PRACTICE COURT. Selected Cases.
2 *credits; 1st semester* (Randall)

160a-160b—PRIVATE CORPORATIONS I AND II. Casebook to be selected. Three hours a week first semester; two hours a week second semester.
3 *credits; 1st semester*
2 *credits; 2nd semester*
(Evans)

104a—PROPERTY I (Personal Property) and II (Real Property). Warren's Cases.
4 *credits; 1st semester* (Roberts)

122—PROPERTY III. Titles and Conveyancing. Warren's Cases.
3 *credits; 1st semester* (Murray)

162—PROPERTY IV. Future Interests. Powell's Cases.
2 *credits; 2nd semester* (Roberts)

166—SALES. Williston's Cases.
3 *credits; 2nd semester* (Murray)

102a-102b—TORTS I AND II. Ames and Smith's Cases (Pound's Edition).
3 *credits; 1st and 2nd semesters* (Eblen)

120a—TRIAL PRACTICE I AND II. Sunderland's Cases.
2 *credits; each semester* (Randall)

165—TRUSTS. Scott's Cases.
4 *credits; 2nd semester* (Evans)

163—WILLS AND THE ADMINISTRATION OF ESTATES. Warren's Cases.
3 *credits; 1st semester* (Evans)

ELECTIVE SUBJECTS OPEN TO SECOND AND THIRD YEAR STUDENTS

168—ADMINISTRATION OF THE CRIMINAL LAW. Keedy's Cases. The arrest; the use of force; police officers; the "third degree"; search and seizure; jurisdiction; venue; extradition; proceedings before magistrate; grand jury; indictment; prosecuting attorney arraignment; plea; trial proceedings subsequent to trial; modes of review; punishment. Special study of the jury.
2 *credits; 2nd semester* (Moreland)

167—ADMINISTRATIVE LAW. Freund's Cases on Administrative Law (2nd edition). This course deals with the nature and extent of administrative law; the constitutional limitations, procedural and substantive; legal and equitable relief against administrative action and extraordinary legal remedies.
[GIVEN ALTERNATE YEARS.] 3 *credits; 1st semester* (Black)

146—CREDITORS' RIGHTS. Hanna's Cases.
3 *credits; 2nd semester* (Roberts)

154—DAMAGES. Beale's Cases.
2 *credits; summer session* (Randall)

148—DOMESTIC RELATIONS. Jacobs's Cases.
2 *credits; 2nd semester* (Moreland)

142—INDUSTRIAL RELATIONS. Albertworth's Cases.
[GIVEN ALTERNATE YEARS] 2 *credits; summer session* (Moreland)

145—INSURANCE. Goble's Cases.
2 *credits; summer session* (Roberts)

150—INTERNATIONAL LAW. Evans' Cases.
2 *credits; 1st semester* (Vandenbosh)

144—LEGAL BIBLIOGRAPHY. Selected problems. Eldean's Finding the Law. 1 *credit; 1st semester* (Roberts)

170—LEGAL ETHICS. Organization and Ethics of Bench and Bar—Hicks. The organization of the legal profession, qualifications, admission to the Bar, discipline, duty toward the courts and toward clients, solicitation and advertising, ethical duties in civil and in criminal cases, pecuniary relations of lawyers and clients. 2 *credits; summer session* (Murray)

143—MORTGAGES. See Credit Transactions.

149—MUNICIPAL CORPORATIONS. Tooke's Cases.
2 *credits; summer session* (Evans)

152—OIL AND GAS. Kulp's Cases.
2 *credits; summer session* (Moreland)

141—PARTNERSHIP. Crane and Magruder's Cases.
3 *credits; 2nd semester* (Roberts)

150—PUBLIC UTILITIES. Robinson's Cases.
3 *credits; 2nd semester* (Roberts)

147—QUASI-CONTRACTS. Thurston's Cases.
2 *credits; summer session* (Evans)

171—RESEARCH IN THE RESTATEMENT OF THE LAW OF CONTRACTS. (By appointment.) 3 *credits; summer session* (Murray)

153—TAXATION. Magill and Maguire's Cases.
3 *credits; 2nd semester* (Eblen)

174—CREDIT TRANSACTIONS. Sturges's Cases. This course deals with real estate mortgages, suretyship, pledges, chattel mortgages, the distribution of stocks and bonds, problems of collateral banking and agricultural finance. 3 *credits; 1st semester* (Roberts)

175—OFFICE PRACTICE. No text. Drawing of deeds, contracts, leases and other papers frequently prepared; probate proceedings; examination of abstracts of title to real estate; articles of incorporation; pleadings in uncontested actions, e. g., quieting title and foreclosure of mortgages; attachment proceedings; acquaintance with records of the clerks of the several courts in this county; preparation of cases for trial; securing and retaining a clientele, principles of office management, e. g., the record of finance of the office, proper charges for work done, economy of time, comprehensive filing and records. 2 *credits; 2nd semester* (Randall)

177—STATUTORY INTERPRETATION. de Sloovere's Cases.
2 *credits; summer session* (Murray)

176—TRADE REGULATION. Oliphant's Cases.
2 *credits; summer session* (Evans)

COLLEGE OF EDUCATION

WILLIAM SEPTIMUS TAYLOR, PH. D., DEAN

INTRODUCTORY STATEMENT

ORGANIZATION

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

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

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

TEACHER'S CERTIFICATES

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

ADMISSION TO THE COLLEGE OF EDUCATION

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

a. At least two years of college work (minimum of 60 semester hours).

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

REQUIREMENTS FOR GRADUATION

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

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

Students who major in education and select their group work in Agriculture, Engineering or Home Economics will be entitled to consideration for the degree of Bachelor of Science in Education.

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

REQUIREMENTS FOR A MAJOR IN ELEMENTARY EDUCATION

A total of 127 credits with a standing of 1.

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

Electives in this field should be chosen largely from the field of English and the Social Sciences.

At least 30 semester hours must be in courses numbering above 100.

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

VOCATIONAL EDUCATION

AGRICULTURE

The Federal Vocational Education Act passed by Congress in 1917 makes provision for the training of teachers of vocational education in agriculture for schools below college grade. The University of

Kentucky has been designated as the institution in the state to train white teachers for this work.

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

Home Economics

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

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

Industry

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

CURRICULA FOR ELEMENTARY AND SECONDARY TEACHERS

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

SUGGESTED FOUR-YEAR CURRICULUM FOR TRAINING ELEMENTARY TEACHERS

FRESHMAN YEAR†

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

SOPHOMORE YEAR†

First Semester	Credits	Second Semester	Credits
Eng. 3a Survey of Eng. Lit.	3.	Art 10 Public School Art	2.
Geol. 24a Elem. of Geog.	3.	Eng. 3b Survey of Eng. Lit.	3.
Psych. 7 Child Psychology	3.	Geol. 24b Elem. of Geog.	3.
Hist. 4a Hist. of Mod. Eur.	3.	Hist. 4b Hist. of Mod. Eur.	3.
Science	3.	Science	2.
P. E. 14 Plays and Games	1.	Elective	3.
	16.		16.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 44 Fund. of Elem. Ed.	5.	Soc. 1b Prin. of Sociology	3.
Ed. 42 Teaching Arithmetic	3.	Hyg. 110 Health Education	3.
Econ. 15 Economic Problems	3.	Ed. 172 Teaching Reading	3.
H. E. 16 Elem. Nutrition	3.	Ed. 20 Industrial Arts	2.
Hist. 40 Hist. of Kentucky	2.	Ed. 196 Teaching Science	3.
		Elective	2.
	16.		16.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 173 Children's Literature	3.	*Ed. 133 Directed Teaching (either semester)	10.
*Ed. 133 Directed Teaching in Elementary Grades (either semester)	10.	Zool. 108b Heredity	2.
Ed. 118 Tests and Meas. for Elementary Teachers	2.	Ed. 127a The Elem. Curric.	3.
Electives	0.0	Electives	0.0
	15.0		15.0

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

Kindergarten majors omit Educ. 196 and Educ. 127a and take the following courses:

Ed. 174—Pre-School Theory and Management (Junior year).
Ed. 176—Pre-School Organization and Teaching (Junior year).

Kindergarten majors may substitute a music elective course for Music 4b.

† The first two years of this curriculum are included here merely for the guidance of the student. Before admission to the junior year the student must present sixty semester hours of credit and should have completed as many as possible of the requirements specified in the freshman and sophomore years of this curriculum.

REQUIREMENTS FOR HIGH SCHOOL TEACHERS

1. General Requirements — Credits

English 12

Science, selected from Biology, Chemistry, General Science, Geology, Physics 12

Mathematics (exclusive of Arithmetic) 6

or

Foreign Language* ..... 6 to 12

Social Science, selected from Economics, Government, History, Sociology	12
Psychology	3
Hygiene 9, Hygiene for Teachers	2
Physical Education 1a-b	1.4
Military Science 1a-b, 6a-b	5.6
Total	54 to 60

2. TEACHING MAJORS

First Teaching Major	24–48
Second Teaching Major	24–48

3. PROFESSIONAL MAJOR

Education 35, Introduction to Education	3
Education 122, Tests and Measurements	3
Education 105, Fundamentals of Secondary Education	3
Education 101, School Organization	3
Directed Teaching	6

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

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

COURSES RECOMMENDED FOR A MAJOR IN ENGLISH

	Credits
FIRST YEAR	
English 1a-b, English Composition	6
English 6, The Essentials of Speech	2
SECOND YEAR	
English 3a-b, English Literature	6
English 34a-b, Dramatic Production (one or both semesters)	2 or 4
Journalism 21, Etymology (English word study)	3
THIRD YEAR	
English 123a-b, American Literature	6
English (elective)	6
English 7a or b, Public Speaking	3
FOURTH YEAR	
English (elective)	6
Library Science 126, High School Library	3

COURSES RECOMMENDED FOR A MAJOR IN FRENCH

	Credits
FIRST YEAR	
French 1a-b, Elementary French	6
SECOND YEAR	
French 2a-b, Intermediate French	6
French 16a-b, Civilization of France	6

THIRD YEAR

French 6a-b, French Novel and Drama	6
French 8a. Phonetics	3
French 113a, Advanced Grammar and Composition	3
(To be taken in junior year if student teaching is done first semester of senior year.)	

FOURTH YEAR

French 113a, Advanced Grammar and Composition	3
(To be taken in first semester of senior year if student teaching is done second semester of senior year.)	
French (elective)	6

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

COURSES RECOMMENDED FOR A MAJOR IN LATIN

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

COURSES RECOMMENDED FOR A MAJOR IN MATHEMATICS

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

COURSES RECOMMENDED FOR A MAJOR IN THE BIOLOGICAL AND PHYSICAL SCIENCES

FIRST YEAR	Credits
Chemistry 1a-b, General Inorganic Chemistry	10
Botany 1a-b, General Botany	8
SECOND YEAR	
Zoology 1a-b, General Zoology	8
Physics 1a-b, General Elementary Physics	10
Chemistry 7, Organic Chemistry	4
Physiology 1a-b, General Physiology	6

THIRD YEAR

Chemistry 8, Quantitative Analysis	5
Physics 51a-b, Introduction to Physics	6
Botany 19, Dendrology	2
Botany 15, Local Flora	3
Zoology 102, Ornithology	3
Zoology 108a-b, Principles of Zoology	4

FOURTH YEAR

Physics 116a-b, Physical Manipulations	2

COURSES RECOMMENDED FOR A MAJOR IN THE SOCIAL SCIENCES

	Credits
FIRST YEAR	
History 5a-b, History of the United States	6
Political Science 51, American Government	3
History 1a, History of the Ancient World	3
SECOND YEAR	
Sociology 1a-b, Principles of Sociology	6
History 4a-b, History of Modern Europe	6
THIRD YEAR	
Political Science 155a-b, Comparative Government	6
Economics 1, Principles of Economics	3
Economics 15, Applied Economics	3
History 105, Colonial America	3
History 106, Latin America	3
FOURTH YEAR	
History 166, Division and Reunion	3
History 147, Recent History of the United States	3

COURSES RECOMMENDED FOR COMMERCE TEACHERS

	Credits
FIRST YEAR	
Commerce 2, Economic History of Europe	3
Commerce 3, Economic History of the United States	3
SECOND YEAR	
Commerce 1, Principles of Economics	3
Commerce 7a-b, Principles of Accounting	8
Commerce 8, Economic Geography	3
Commerce 9, Forms of Business Organization	3
THIRD YEAR	
Commerce 10, Principles of Marketing	3
or	
Commerce 11, Salesmanship	2
Commerce 13a-b, Secretarial Practice	10
Commerce 105, Money and Banking	3
Commerce 117, Corporation Finance	3
English 30, Business English	2
*Education 159, The Commerce Curriculum	3
FOURTH YEAR	
Commerce 14a-b, Advanced Secretarial Practice	6
Commerce 15, Applied Economics	3
Commerce 109a-b, Business Law	6
**Education 158a, Methods of Teaching Secretarial Practice	2
**Education 158b, Methods and Materials in Teaching Accounting	2

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

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* Will substitute for Education 122 in professional requirements.
** Will substitute for Education 105 in professional requirements.

COURSES RECOMMENDED FOR A MAJOR IN PHYSICAL EDUCATION

	Credits
FIRST YEAR	
Physical Ed. 1a-b, Gymnasium Practice	1.4
Physical Ed. 20, Calisthenics and Gymnastic Stunts	4
Physical Ed. 29, Practice of Organized Play	2
SECOND YEAR	
Physical Ed. 2a-b, Advanced Gymnasium Practice	1.4
Physical Ed. 36, Basketball and Football Fundamentals	4
Physical Ed. 50, Track and Field Athletics	4
THIRD YEAR	
Physical Ed. 124, History and Philosophy of Physical Education	2
Physical Ed. 128, School Programs of Physical Education	3
FOURTH YEAR	
A minimum of nine hours credit from the following courses:	
Physical Ed. 60a-b, Tutorial Work in Physical Education	2
Physical Ed. 70, Training and First Aid	1
Physical Ed. 120, Physical Diagnosis and Remedial Gymnastics	3
Physical Ed. 142, Advanced Football	2
Physical Ed. 131, Advanced Basketball	2
Physical Ed. 125, Organization and Administration of Municipal and Community Recreation	3
Physical Ed. 148, Organization and Administration of Athletics	3

COMPREHENSIVE EXAMINATION

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

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

CURRICULUM FOR TEACHERS OF HOME ECONOMICS

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

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

SENIOR YEAR

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

* May be taken either semester.
† May be taken either semester.

SUGGESTIVE ELECTIVES Crs.

Ed. 165—Problems in Vocational Education 3
Ed. 122—Tests and Measurements 3
H. E. 112—Public School Nutrition 3
H. E. 181—Institution 3
H. E. 121—Problems in Textiles 3
H. E. 116—Advanced Costume Design 3
Eng. 6—Public Speaking 3

CURRICULUM FOR MEN PREPARING TO TEACH VOCATIONAL AGRICULTURE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
*Eng. 1a English Comp.	3.	*Eng. 1b English Comp.	3.
*A. I. 21 Market Classes and Grades of Livestock	2.	*Chem. 1a Gen. Inorg. Chem.	5.
*A. I. 22 Farm Poul. Prod. (1st half semester)	2.	*Bot. 1b Gen. Botany	4.
*A. I. 23 Elem. of Dairying (2nd half semester)	2.	*Mil. Sci. 1b First Year Basic Course, Inf.	1.3
*Agron. 11 Farm Crops	3.	*Phys. Ed. 1b Gym. or Field Athletics	.7
*Bot. 1a Gen. Botany	4.	*A. I. 17 Breeds of Livestock	3.
*Freshman Assembly	.3		
*Mil. Sci. 1a First Year Basic Course, Inf.	1.3		
Phys. Ed. 1a Gym. or Field Athletics	.7		
	18.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
*Chem. 1b Gen. Inorg. Chem.	5.	*Bact. 52 Prin. of Bact.	4.
*Econ. 1 Prin. of Econ.	3.	*Geol. 3 Elem. of Geology	3.
*Hort. 1 Gen. Horticulture	4.	*Farm. Econ. 4 Agr. Econ.	3.
*Farm Engr. 10 Mech. of the Formstead	3.	*A. I. 20 Prin. of Animal Nutrition	3.
*Mil. Sci. 6a Sec. Year Basic Course, Inf.	1.5	*Agron. 1 Soils	4.
		*Mil. Sci. 6b Sec. Year Basic Course, Inf.	1.5
	16.5		18.5

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
*Farm. Econ. 113 Gen. Farm Management	3.	*Educ. 16 Educa. Psych.	3.
*Mark. and Rur. Fin. 108 Marketing	3.	*Zool. 25 Gen. Animal Biol.	3.
*Farm Engr. 8 Farm Structural Engr. (Farm Shop)	4.	Hort. 110 Veg. Gardening	3.
A. I. 19 Genetics	3.	A. I. 107 Sheep Production	3.
Agron. 115 Soil Management	3.	A. I. 13 Livestock Judging	2.
A. I. 106 Pork Production	3.	Agron. 23 Plant Pathology	4.
		Agron. 105 Advanced Crops	3.
		Agrl. Ent. 102 Adv. Agricultural Enotomology	3.
		Hort. 113 Landscape Gard.	3.
	19.	Student load of 18 hours to be chosen from this list.	

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Farm. Econ. 120 Rural Community Problems	3.	Educ. 122 Educational Tests and Meas. for High School Teachers	3.
A. I. 102 Farm Butchering and Curing of Meats	4.	A. I. 105 Beef Production	3.
Agron. 113 Methods and Results in Agron. Exper.	3.	A. I. 134 Adv. Poul. Prod.	3.
Hort. 105 Small Fruits	2.	A. I. 116 Diseases of Domestic Animals	4.
*Ag. Ed. 181 Teaching Voca. Agr. (either semester)	7.	A. I. 125 Dairy Cattle Feeding and Management	3.
Jour. 1a Reporting	3.	*Ag. Ed. 181 Teaching Voca. Agr. (either semester)	7.
Mark. and Rural Fin. 111 Agricultural Prices	3.		
	18.		18.

* Starred courses are required of students planning to teach vocational agriculture. The student should take as many of the unstarred courses as his time and ability permit. After the sophomore year the student's schedule must be approved by his adviser in agricultural education and by his adviser in agriculture. Students who become teachers are required to take Ag. Educ. 179, Determining Course-Content in Vocational Agriculture, which is offered the first 2½ weeks of the summer school. Including Ag. Ed. 179, the student must present at least 15 credits in education.

SUGGESTED CURRICULUM FOR TEACHER LIBRARIANS

FRESHMAN YEAR

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

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Eng. 3a English Lit.	3.	Eng. 3b English Lit.	3.
Hist. 5a History of the U. S.	3.	Hist. 5b History of U. S.	3.
Science	3.	Psy. 7 Psychol. of the Child	3.
Econ. 2 Econ. Hist. of Eur.	3.	Econ. 3 Econ. Hist. of U. S.	3.
*Foreign Language	3.	*Foreign Language	3.
or		or	
†Elective	3.	Science	3.
Art 17a Art Appreciation	1.	Art 17b Art Appreciation	1.
	16.		16.

JUNIOR YEAR

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

SENIOR YEAR

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

* See general requirements for high school teachers, page 263.

† Electives may be chosen from the following: English 34a, 111b, 130a, b; History 106b, 119b, 120, 147, 160; Political Science 101, 154, 155a, b, 165; Sociology 1a, b, 112, 116; Philosophy 21, 101a, b; Public Speaking 7a; Journalism 12; Education 149.

GRADUATE CURRICULA LEADING TO THE MASTER'S DEGREE

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

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

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

For Superintendents and Principals of Twelve-grade Schools—
Dr. Chamberlain, Dr. Taylor, Dr. Ross

For Elementary-school Principals and Supervisors—Mrs. Duncan, Dr. Taylor, Dr. Adams

For Secondary-school Principals—Dr. Ligon

For Critic Teachers on the Elementary Level—Mr. Williams, Mrs. Duncan, Mrs. Haines

For Critic Teachers on the High School Level—Mr. Williams, Dr. Ligon, Dr. Adams

For Teachers of Home Economics—Miss Parker, Miss Spickard, Dr. Taylor

For Teachers of Vocational Agriculture—Dr. Hammonds, Dr. Woods, Dr. Taylor

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

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

Curriculum for Superintendents and for Principals of Twelve-Grade Schools

Course	Credits
Education 202—Local School Administration	3
Education 212—The Elementary School	3
Education 214—The Secondary School	3
Education 222a—Thesis Course	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Education 231—Financing Public Education	3
Electives	9

Curriculum for Elementary-School Principals and for Supervisors

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 212—The Elementary School	3
Education 222a—Thesis Course	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Electives	15

Curriculum for Secondary-School Principals

Course	Credits
Education 214—The Secondary School	3
Education 222a—Thesis Course	3
Education 223—Educational Statistics	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Education 232—High School Administration	3
Electives	12

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

Graduate Curriculum for Critic Teachers on the Elementary Level

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 212—The Elementary School	3
Education 222a—Thesis Course	3
Education 224a—Organization and Supervision of Student Teaching	3
Education 224c—Organization and Supervision of Student Teaching	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Electives	9

Graduate Curriculum for Critic Teachers on the High School Level

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 214—The Secondary School	3
Education 222a—Thesis Course	3
Education 224a—Organization and Supervision of Student Teaching	3
Education 224b—Organization and Supervision of Student Teaching	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Electives	9

Graduate Curriculum for Home Economics Education

Graduate work in home economics education is planned primarily for students who wish to continue teaching and for those who desire to enter the field of teacher-training and supervision. The curriculum must be well-rounded and related to the student's major interest and approved by her adviser. The program for teacher-training and supervision should be preceded by experience in teaching. The adviser, with the approval of the Dean, may prescribe prerequisite undergraduate courses to be taken.

Course	Credits
Education 165b—Problems in Vocational Education	3
Education 222a—Thesis Course	3
Education 263—Current Problems in Home Economics Education	3
Education 266a or b—Seminar in Home Economics Education	3
Education 268—Home Economics Curriculum Construction	3
Electives	15

Curriculum for Teachers of Vocational Agriculture

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

Course	Credits
Education 179—Determining Content in Vocational Agriculture	3
Education 222a—Thesis Course	3
Education 287b—Selecting Teaching Materials	3
Education 287c—Evening Schools	3
Education 287d—Directing Farm Practice	3
Electives (minoring in agriculture)	15

Elementary teachers and high school teachers frequently find it desirable to supplement their professional program with additional work in education. The following curriculum has been outlined to provide an enriched background of professional training for teachers in the public and private schools of the State.

Graduate Curriculum for Teachers Who Desire to Major in Education

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 219—Great Educators and Their Work	3
Education 220—Comparative Education	3
Education 222a—Thesis Course	3
Education 223—Educational Statistics	3
Education 227a—Principles of Curriculum Construction	3
Education 227b—Techniques in Curriculum Construction	3
Education 230—Problems of Educational Sociology	3
Electives	6

CURRICULA LEADING TO THE DOCTORATE DEGREE

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

NOTE.—No course offered in the College of Education may be taken until the student has attained junior standing.

ADMINISTRATION

101—SCHOOL ORGANIZATION. A course designed to familiarize the prospective teacher with those activities of school organization and administration in which she may be expected to participate. Topics emphasized are administrative control, selection of teachers, tenure, loads, salaries, retirement, supervision, classification and promotion, attendance, community relationships, and professional ethics.
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.
Prerequisite: *Graduate standing.* 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; contractural authority and liability of boards of education; school money; the school debt; acquisition and use of school property; employment and dismissal of teachers; school attendance; rules and regulations of school boards; disclipline 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.
Prerequisite: *Graduate standing.* 3 *credits;* (McVey)

204b—THE ADMINISTRATION OF HIGHER EDUCATION. A continuation of Education 204a.
Prerequisite: *Graduate standing.* 3 *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 efforts being made to improve college instruction.
Prerequisite: *Graduate standing.* 3 *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 SCHOOL ADMINISTRATION. An independent work course for students doing their first year of graduate work in education.
Prerequisite: *Ed.* 101 *or* 202. 3 *credits* (Chamberlain)

211—THE ADMINISTRATION OF VOCATIONAL EDUCATION. A course designed for superintendents and principals of high schools. The

purpose of the course is to train for administering and supervising vocational education. Topics emphasized include aims and purposes of vocational education, relationship of vocational to other education, financing vocational education, and relationship of local and state administration.
Prerequisite: *Graduate standing.* 3 *credits* (Hammonds)

212—THE ELEMENTARY SCHOOL. (For description see Elementary Education, page 280.

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.
Prerequisite: *Graduate standing.* 3 *credits* (Chamberlain)

214—THE SECONDARY SCHOOL. (For description see Secondary Education, page 285.

225—SUPERVISION OF INSTRUCTION. Topics considered are the development of supervision, purpose of supervision, organization for supervision, planning supervision, use of classroom visitation and demonstration lessons, use of teachers' meetings and individual conferences, use of the course of study, use of tests and measurements, equipment and supplies, the teacher, and the pupil. The student should have had Education 202 or its equivalent before enrolling in this class.
Prerequisite: *Graduate standing.* 3 *credits* (Hill)

231—FINANCING PUBLIC EDUCATION. Topics covered are budgetary procedure, school costs, school indebtedness, state finance, fiscal reports, and accounting procedures. These topics are treated primarily from the viewpoint of the superintendent of schools. The student should have had Education 202 or its equivalent before enrolling in this class.
Prerequisite: *Graduate standing.* 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.
Prerequisite: *Graduate standing.* 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 Uni-

versity; 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: *Ed. 290a and 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 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)

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 the 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.
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 and 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 and 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.
2 *credits* (Lawrence)

159—THE COMMERCE CURRICULUM. Business subjects offered in the high school are examined critically to determine their content and the place each should occupy in high school curricula. A course of study is developed for each subject.
Prerequisite: *Junior standing.*
3 *credits* (Lawrence)

192—METHODS AND MATERIALS IN GENERAL BUSINESS. Objectives of the general business course are studied critically and a syllabus prepared for teaching this subject.
Prerequisite: *Junior standing.*
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.
Prerequisite: *Graduate standing.*
3 *credits* (Lawrence)

EDUCATIONAL PSYCHOLOGY

16—EDUCATIONAL PSYCHOLOGY. Application of psychology to the problems of learning and teaching, from the standpoint of the teacher.
Prerequisite: *One semester of Psychology.*
3 *credits* (Ross)

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—FOUNDATIONS 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 TESTS AND MEASUREMENTS. A critical study of certain problems in measurement. Individual work.
Prerequisites: *Education* 122. 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

20—INDUSTRIAL ARTS FOR ELEMENTARY GRADES. This is a practical course involving the use of tools and various materials suitable for use in the elementary school. It is intended for grade teachers who wish to make industrial arts an integral part of the elementary school curriculum.
2 *credits* (Haines)

42—ARITHMETIC IN ELEMENTARY GRADES. A study of children's interests in, and needs for arithmetic—evaluation of practices and materials; organization of subject matter; activities involving arithmetic; drill; problem solving; diagnosis and remedial instruction; and testing.
3 *credits* (Duncan)

44—FUNDAMENTALS OF ELEMENTARY EDUCATION. This course is a prerequisite to practice teaching and is to prepare the student to take part in actual classroom teaching. The course is planned:

(1) To give a background for, and an understanding of, the organization and point of view of the modern elementary school.

(2) To help the students by reading and class discussion in directing learning of the skills and knowledge needed by elementary school children.

(3) To help the student evaluate theories and methods of teaching in the light of observation of good teaching.

(4) To help the student to understand the relationship of the home, school and community and to see the need for the cooperation of these agencies for the best development of the child.

(5) To help develop an attitude of industry, open-mindedness, initiative, cooperation and responsibility toward the teaching profession.

5 *credits* (Haines)

133—DIRECTED TEACHING IN THE ELEMENTARY SCHOOL. Supervised teaching in Kindergarten or Grades I to VI. Open only to seniors. The student must spend from 9:00 a. m., until 2:00 p. m., in the classroom for the semester. One hour per day additional (2:00 p. m., to 3:00 p. m.) is spent in conference and discussion with the critic teacher and supervisor. The student may take only two additional courses (3 credits each) this semester and these classes must be taken either the first, seventh, or eighth hours. A student who has had three credits in practice teaching may take this course with reduced hours and reduced credits. This course is designed to give the student experience with and practice in the program for the whole day in a modern elementary school.

Prerequisite: *Senior standing in the Elementary Curriculum.* 10 *credits; both semesters* (Duncan and Training Teachers)

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.

Prerequisite: *Junior standing in Elementary Curriculum.* 3 *credits* (Duncan)

173—TEACHING LITERATURE TO CHILDREN. A study of the literature for children from kindergarten to Grade VI. Reading 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.)

Prerequisite: *Junior standing in Elementary Curriculum.* 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.

Prerequisite: *Junior standing in Elementary Curriculum.* 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 material, 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* (Martin)

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.
Prerequisite: *Graduate standing.* 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.
Prerequisite: *Graduate standing.* 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. 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* (Duncan)

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 contributors to society of the men and women in education who have served best.
Prerequisite: *Graduate standing.* 3 *credits* (Patrick)

220—COMPARATIVE EDUCATION. A course giving comparisons of systems of education.
Prerequisite: *Graduate standing.* 3 *credits* (Taylor)

HOME ECONOMICS EDUCATION

160—TECHNIQUE OF TEACHING HOME ECONOMICS. A study of methods of teaching as applied to home economics.
Prerequisite: H. E. 26, 6*a and b*, 29, 3, 51; *Ed.* 147. 3 *credits* (Parker or Spickard)

162—DIRECTED TEACHING IN HOME ECONOMICS. Practical application of methods in teaching various phases of home economics.
Prerequisite: *Ed.* 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: *H. E.* 115 *or equivalent.* 3 *credits* (Parker or Spickard)

165a-b—PROBLEMS IN VOCATIONAL EDUCATION. This course deals with the problems involved in teaching vocational homemaking in day, part-time, and evening schools. 3 *credits each* (Parker or Spickard)

178—METHOD OF TEACHING HOME MANAGEMENT AND FAMILY RELATIONS IN JUNIOR AND SENIOR HIGH SCHOOL. The course deals with the selecting of subject matter and methods suitable for junior and senior high school pupils.
Prerequisites: *H. E.* 42 *and experience in teaching.* 3 *credits* (Parker or Spickard)

261—HOME ECONOMICS SUPERVISION. A course planned pri-

marily to help prepare teacher trainers and supervisors of home economics education

Prerequisites: *Ed.* 160 *and* 162, *experience in teaching and approval of instructor.* 3 *credits; either semester* (Parker or Spickard)

263—CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. A study of some recent developments in the field of home economics education.

Prerequisites: *Ed.* 160 *and* 162; *experience in teaching.* 3 *credits* (Parker and Spickard)

266a-b—SEMINAR IN HOME ECONOMICS EDUCATION. Provision is made in each course for students to make individual investigations and report on special problems in home economics education.

Prerequisite: *Graduate standing.* 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 economics.

Prerequisite: *Ed.* 160 *and* 162. 3 *credits* (Parker or Spickard)

PHILOSOPHY OF EDUCATION

35—INTRODUCTION TO EDUCATION. This deals with the teacher, the teaching process, the school as a social agency and the philosophy of education.

3 *credits* (Adams)

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

3 *credits* (Patrick)

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.

Prerequisites: *Graduate standing and at least* 12 *hours in education.* 3 *credits* (Adams)

205—REVIEW OF CURRENT EDUCATIONAL LITERATURE. An extensive study of current educational literature as found in educational periodicals.

Prerequisites: *Graduate standing and* 12 *hours in education.* 3 *credits* (Adams)

222a—THESIS COURSE. This course is intended to acquaint the stu-

dent with the various techniques of research and to aid him in methods of attack on his own particular problems.
Prerequisite: *Graduate standing and* 12 *hours in education.* 3 *credits* (Taylor)

222b—THESIS COURSE. Continuation of 222a.
Prerequisites: *Graduate standing and* 12 *hours in 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: *Graduate standing, teaching experience and* 12 *hours in education.* 3 *credits* (Adams)

227b—TECHNIQUES IN CURRICULUM CONSTRUCTION. This course has to do with the techniques being used to determine content of courses of study.
Prerequisites: *Graduate standing, teaching experience,* 12 *hours in education.* 3 *credits* (Adams)

228a-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.
Prerequisites: *Graduate standing and* 12 *hours education, including Ed.* 114. 3 *credits* (Adams)

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—FUNDAMENTALS OF SECONDARY EDUCATION. Deals with laboratory methods of instruction. Units: fundamental processes, control, operation, administration.
Prerequisite: *Education* 101. 3 *credits* (Ligon)

109—PRINCIPLES OF SECONDARY EDUCATION. This course is planned to give an overview of the field of secondary education. The principal topics of this course are (1) historical background; (2) scope and functions of secondary education; (3) characteristics and needs of secondary school pupils; (4) curriculum making; (5) extra-curricular activities; (6) changing conceptions of secondary education; (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.

Prerequisites: *Junior standing and* 12 *hours in Education.* — 3 *credits* (Ligon)

153—DIRECTED TEACHING IN ENGLISH. For Seniors. Topics: Course of study, minimum essentials, materials, methods, testing. Part I, languages and composition; Part II, literature. Observation and practice five hours, conference two hours.

Prerequisites: *Education (See Professional Major) and* 18 *hours in English.* — 6 *credits* (Anderson)

154—DIRECTED TEACHING IN FOREIGN LANGUAGES. For seniors. Topics: Aims and objectives, course of study, methods, tests, equipment, analysis of textbooks. Observation and practice five hours, conference two hours.

Prerequisites: *Education (See Professional Major) and* 18 *hours in subject to be taught.* — 6 *credits* (West)

155—DIRECTED TEACHING IN THE SCIENCES. For seniors. Topics: Aims and objectives, courses of study, methods, tests, equipment. General science, biology, physics and chemistry. Observation and practice five hours, conference two hours.

Prerequisites: *Education (See Professional Major, and* 18 *hours in subject to be taught.* — 6 *credits* (Kemper)

156—DIRECTED TEACHING IN MATHEMATICS. For seniors. Topics: Course of study, materials, methods, testing. Observation and practice five hours, conference two hours.

Prerequisites: *Education (See Professional Major) and* 18 *hours in mathematics.* — 6 *credits* (Mitchell)

157—DIRECTED TEACHING IN THE SOCIAL STUDIES. For Seniors. Topics: Objectives, preparation of the teachers, courses of study, methods, supplementary materials, visual instruction, testing and professional helps. Observation and practice five hours, conference two hours.

Prerequisites: *Education (See Professional Major) and* 18 *hours in subject to be taught.* — 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; 2nd semester* (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.
Prerequisite: *Graduate standing.* 3 *credits* (Ligon)

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)

307—RESEARCH PROBLEMS IN SECONDARY EDUCATION. This course is designed for students who want to work on special problems.
Prerequisite: *Master's degree or equivalent.* 3 *credits; both semesters* (Ligon)

COLLEGE OF COMMERCE

EDWARD WIEST, A. M., PH. D., DEAN

INTRODUCTORY STATEMENT

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

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

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

REQUIREMENTS FOR GADUATION

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

GENERAL–BUSINESS CURRICULUM

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

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

SENIOR YEAR

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

Total credits, 127.

INDUSTRIAL–ADMINISTRATION CURRICULUM

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

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

SENIOR YEAR

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

Total minimum credits, 142.

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

COMBINED COMMERCE–LAW COURSE

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

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

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Property I and II	4.	Pleading I and II	4.
Torts I	3.	Torts II	3.
Contracts I	3.	Contracts II	3.
Domestic Relations	2.	Agency	2.
Criminal Law I	2.	Criminal Procedure II	2.
	14.		14.

Total, 127.

The Combined Commerce-Law Course is intended for students who wish to complete the requirements for the two degrees of Bachelor of Science in Commerce and Bachelor of Laws in six years. First-year law subjects are included in the senior year of this curriculum. During the fifth and sixth years the student completes the remaining law courses necessary to receive the degree of LL. B.

SECRETARIAL-TRAINING COURSE

FRESHMAN YEAR

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

SOPHOMORE YEAR

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

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 107 Statistical Method	3.	Com. 11 Salesmanship	2.
Com. 105 Money and Banking	3.	Com. 117 Corp. Finance	3.
Soc. Prin. of Sociology	3.	Com. 13b Secretarial Prac.	5.
Com. 13a Secretarial Pract.	5.	Elective in English	3.
Com. 6 Secretarial Acc.	3.	Electives	3.
	17.		16.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 109a Business Law	3.	Com. 109b Business Law	3.
Com. 14a Office Management	3.	Com. 14b Office Management	3.
Com. 104 Public Finance	3.	Electives including two Commerce Courses	9.
Electives	6.		
	15.		15.

Total, 127.

CURRICULUM FOR COMMERCE TEACHERS

Students preparing to teach business subjects in the high school should take enough work in education to meet the requirements for teachers' certificates. Attention is called to a special curriculum for the training of commerce teachers offered by the College of Education. It is possible for students registered for either the General-Business Curriculum or the Secretarial-Training Curriculum to prepare for teaching by electing required courses in education.

SPECIALIZATION IN ACCOUNTING

To secure adequate preparation for accountancy the student should follow the General-Business Curriculum and take as electives about all the advanced accounting courses offered. Contracts and other law courses are also suggested as electives.

SPECIALIZATION IN STATISTICS

Students planning to prepare for the profession of statistician should pursue the General-Business Curriculum and elect advanced

courses in mathematics and advanced work in statistics offered by the College of Commerce and by the Department of Mathematics in the College of Arts and Sciences.

PREPARATION FOR PUBLIC SERVICE

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

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

OTHER FIELDS OF SPECIALIZATION

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

DESCRIPTION OF COURSES

1—PRINCIPLES OF ECONOMICS. An examination of the fundamental principles of economics and the application of these principles to practical problems. Not open to freshmen.
3 *credits; 1st and 2nd semesters* (Wiest and others)

2—ECONOMIC HISTORY OF EUROPE. A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, industry, and finance. Open only to freshmen and sophomores. 3 *credits; 1st semester* (Jennings and others)

3—ECONOMIC HISTORY OF THE UNITED STATES. A brief sketch of economic life in the colonies, followed by a more detailed account of the national evolution in agriculture, manufacture, transportation, commerce and finance. Open only to freshmen and sophomores.
3 *credits; 2nd semester* (Jennings and others)

6—SECRETARIAL ACCOUNTING. A study of accounting systems for

the professions, small businesses, and institutions, where the secretary ordinarily keeps the records.
Prerequisite: *Course 7a.* 3 *credits; 2nd semester* (Lawrence)

7a—PRINCIPLES OF ACCOUNTING. Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation two hours; laboratory four hours a week.
Not open to freshmen. 4 *credits; 1st semester* (Haun and Lawrence)

7b—PRINCIPLES OF ACCOUNTING. Continuation of 7a. Recitation two hours a week; laboratory four hours a week.
Not open to freshmen. 4 *credits; 2nd semester* (Haun and Lawrence)

8—ECONOMIC GEOGRAPHY. A brief study of the earth's physical characteristics and their relation to man's activities, including the effects of climate, natural resources and means of transportation upon the development of social, political and economic phases of life.
3 *credits; 1st semester* (Carter)

9—FORMS OF BUSINESS ORGANIZATION. A study of business organization primarily from a social point of view. The course traces the origin and development of forms of business organization; treats of advantages and disadvantages of the various forms; includes a study of the trust or combination movement and its effect upon society.
3 *credits; 2nd semester* (Tolman and others)

10—PRINCIPLES OF MARKETING. A functional study of the market organization. Considerable time is given to the discussion of retail types such as the general store, chain store, department store and mail order house. Special attention is devoted to market finance, market risk, market news, competition and prices, market price, price maintenance, unfair competition, and the cost of marketing.
Prerequisite: *Course* 1. 3 *credits; 2nd semester* (McIntyre)

11—SALESMANSHIP. Among the problems considered are the formulation of selling policies, the actual selling process, the creation of effective demand, sales campaigns, selecting and training salesmen and kindred subjects.
Prerequisites: *Courses* 1 *and* 10. 2 *credits; 1st semester* (McIntyre)

12—ECONOMIC GEOGRAPHY OF NORTH AMERICA. A detailed study of the agricultural, mineral, lumber, fishery and other economic resources of North America. The emphasis is placed upon the resources of the United States, the various geographical sections being intensively studied. 3 *credits; 2nd semester* (Carter)

13a—SECRETARIAL PRACTICE. This course offers training in the theory of shorthand and is supplemented with some discussion of secretarial duties. Credit for this course will not be given until 13b is completed. Recitation four hours a week; laboratory two hours a week.
Prerequisite: *Two years of college work.* 5 *credits; 1st semester* (Lawrence)

13b—SECRETARIAL PRACTICE. Continuation of 13a. Much atten-

tion is given to the principles of speed writing. Practice material is selected which will give the student an idea of the form and general lay-out of business papers. Recitation four hours a week; laboratory two hours a week.
Prerequisite: *Course* 13*a or its equivalent.* 5 *credits; 2nd semester* (Lawrence)

14a—ADVANCED SECRETARIAL PRACTICE. This course includes advanced dictation with a minimum achievement of 90 words a minute and the development of skill and speed in transcribing from shorthand notes. It also includes filing and general office practice.
Prerequisites: *Courses* 13*a and* 13*b or their equivalent.* 3 *credits; 1st and 2nd semesters* (Lawrence)

14b—ADVANCED SECRETARIAL PRACTICE. Continuation of 14a with the attainment of a speed in dictation of 100 to 125 words a minute in shorthand.
Prerequisites: *Courses* 13*a and* 13*b or their equivalent.* 3 *credits; 2nd semester* (Lawrence)

15—APPLIED ECONOMICS. Fundamental aspects of money and banking, industrial efficiency, marketing, transportation, public utilities, public finance, social control, et cetera.
3 *credits; 2nd semester* (Sullivan and others)

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 Sullivan)

106a—ADVANCED ACCOUNTING. Principles of valuation and income determination. Statement arrangement. Corporation accounting. Manufacturing accounts. Advanced partnership accounting.
Prerequisites: *Courses* 7*a and* 7*b.* 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.
Not open to freshmen and sophomores. 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.
Prerequisite: Two years of Commerce course. 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: Courses 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 and 7b. 3 *credits; 1st semester* (Haun and Beals)

119—RETAIL MERCHANDISING. Selecting a business location, in-

ternal layout, departmentalization, merchandising control, store policies toward the public, training and management of personnel, and related subjects.
Prerequisites: Courses 1 *and* 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—CREDIT 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* 106*a and* 106*b*. 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* 106*a and* 106*b*. 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, manufacturers, 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 organizations; 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 methods of surveying, analyzing and actual investigation of problems of business management. It is intended for mature students who have had a thorough training in commerce and who are capable of doing research work under the guidance of the instructor. The work will involve the statistical analy-

sis of data secured through interviews, questionnaires and otherwise, and the use of the results in determining a satisfactory solution.

Open only to seniors in the College of Commerce who are required to take either this course or 137, *and to graduate students who have had the necessary prerequisite training.* — 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.

Prerequisites: *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 critical examination of current literature on economic problems and policies.
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 the 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)

Courses in Mathematics of Finance, Advertising, Personnel Administration and Business English are given by the departments of Mathematics, Psychology and English in the College of Arts and Sciences.

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, Mathematics, Physics, Political Science and Psychology. Minor work may be carried in any department offering graduate courses.

ADMISSION TO GRADUATE STANDING

Graduates of institutions accredited by the University may be admitted to the Graduate School upon the presentation of a certificate of graduation and an official transcript of undergraduate courses taken. The status of the institution is to be ascertained from the Registrar of the University. Graduates from non-accredited institu-

tions are encouraged to secure a bachelor's degree from an accredited institution.

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

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

REGISTRATION

The first steps in the procedure for admission to the Graduate School is the filing of a formal application with the Registrar. Applicants from institutions other than this University are also required to file an official transcript showing (a) all undergraduate work covered, (b) graduate work taken, if any, and (c) degrees received.

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

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

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

FEES

Registration and laboratory fees for full-time work are the same as for undergraduate students in the college in which the major work is done. Part-time graduate students who are legal residents of the state pay $5.00 per credit hour. Non-residents pay $6.00 per credit hour.

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.

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

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

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

Credits

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

Courses

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

Residence

The minimum residence 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 the Dean of the Graduate School to be bound and placed in the University Library and the other to the major professor to be retained by the department concerned.

Language Requirement

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

Examinations

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

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

The professional degree of Master of Arts in Education is open to students who have reached the degree of B. A. or 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, except that the language requirements 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 IN ENGINEERING. The professional degree of Civil Engineer (C. E.), Electrical Engineer (E. E.), Mechanical Engineer (M. E.), Metallurgical Engineer (Met. E.), or Mining Engineer (E. M.) will be granted only to graduates of the University of Kentucky, College of Engineering, who present satisfactory evi-

dence of professional work of creditable quality in the engineering fields of their choice, extending over a period of five years, and who submit satisfactory theses as further evidence of their professional attainments.

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

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

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

A candidate holding the B. S. degree in one field of engineering may apply for the professional degree in another field of enginering, 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 examinations in the subjects, presents a satisfactory dissertation, and is deemed worthy of recognition as a scholar of high attainments in his chosen province.

The Doctor's degree is intended to represent not a special amount of work covering a special time, but the attainment, thru long study, of independent and comprehensive scholarship in a special field. Such scholarship should be shown by a thoro acquaintance with present knowledge in his special field of learning and a marked capacity for research.

REQUIREMENTS FOR APPLICANT

Admission

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

In order to be accepted as an *applicant* for the degree of Doctor

of Philosophy the student must present evidence that he has completed an undergraduate course and has received his baccalaureate degree from a college of recognized standing.

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

Classification

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

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

Courses of Study

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

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

The applicant's principal work must be in the major subject. Altho no absolute regulations are laid down in respect to the time to be devoted to the major and minor subjects, it may be stated in general that the major subject should represent two-thirds of the student's entire time.

Any regular graduate course may be assigned as part of the applicant's work by his special committee. Only courses numbered above

100 in the University catalog are considered as of graduate status. The number and extent of such courses is determined by the special committee.

REQUIREMENTS FOR CANDIDATES

Residence

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

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

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

Language Requirements

The applicant must give evidence of having a good reading knowledge of, and of being able to translate at sight, at least two modern foreign languages. This proficiency is determined by examinations conducted by the respective language departments. Ordinarily French and German are expected to be offered, but other languages may be substituted on recommendation of the special committee if it is considered that such languages are of greater importance in the special field of work. The language requirements must be satisfied before the applicant can be admitted to the qualifying examination.

Qualifying Examinations

Applicants for the degree of Doctor of Philosophy are required to pass a Qualifying Examination. This examination shall be taken during the second semester of the second year of residence. The examination shall be both oral and written and shall cover both major and minor subjects. It shall be prepared and given to the applicant by a committee of five to be appointed by the Dean of the Graduate School. The language requirements must have been met before the qualifying

examination is taken. No applicant may proceed to his final examination until one year of work has been completed after he has passed the qualifying examination. If the applicant fails to pass the qualifying examination, no re-examination shall be allowed except upon the recommendation of the special committee and the approval of the Graduate Committee. If the applicant passes the qualifying examination he is then considered as a candidate for the degree and may make formal application for this rating.

DISSERTATION

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

PRINTING OF DISSERTATION

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

Or—

The candidate may have the dissertation printed at his own ex pense in which case he must present one hundred copies to the University before the degree is granted. If the candidate has the dissertation printed at his own expense, he will be expected to use good substantial paper and sightly typography. A page four by six inches with outside margin of at least one inch is recommended. The dissertation must have a cover and title page and the latter, in addition to the title and the name of the author, must bear the following inscription:

"A dissertation submitted in partial fulfillment of the require-

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

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

APPLICATION

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

FINAL EXAMINATION

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

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

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

RECOMMENDATIONS

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

FELLOWSHIPS AND SCHOLARSHIPS

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

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

Scholars and fellows will be expected to devote their whole time to graduate work, and no teaching or other departmental work may

be required of them. Students employed as assistants in departments should as a rule take two years' requirement.

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

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

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

GRADUATE STUDENTS NOT CANDIDATES FOR A DEGREE

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

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

Should a graduate student who has not arranged for his work with a view 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 provides ways and means for securing prominent men for addresses on various subjects of interest.

SUMMER SESSION

JESSE E. ADAMS, PH. D., Director

The Summer Session of the University of Kentucky has been organized to serve the teachers, principals and superintendents of schools in Kentucky and to afford all persons desiring further education and training an opportunity for summer study. The rapid growth of the high school program in Kentucky has created a demand for a large number of professionally trained teachers. The expansion of the curricula in the light of new objectives in education will require teachers trained in the theory and practice of modern education. The Summer Session of the University has been organized in a large part to satisfy this demand.

The program of the Summer Session for 1937 will be greatly enlarged to meet the needs of both undergraduate and graduate students. A larger selection of courses is offered in undergraduate work. The graduate program is more comprehensive and embraces work adapted to the needs of public school teachers and administrators, and to normal school and college teachers. Work is offered in Agriculture, Arts and Sciences, Education, Law, Engineering, and Commerce, with special courses offered in the fields of public health, economics, and library science.

The entire plant of the University, including laboratories, libraries, and buildings, is available for summer session use. In addition to the regular faculty of the University, specialists of national reputation will be brought for the 1937 program.

For information in detail write for Bulletin of the Summer Session.

DEPARTMENT OF UNIVERSITY EXTENSION

LOUIS CLIFTON, A. M., DIRECTOR

PURPOSE OF UNIVERSITY EXTENSION

The object of this department is to provide at the smallest possible expense and in the most practical manner, the highest type of education possible to the citizens of the Commonwealth who are unable to attend educational institutions. It is believed that the University of Kentucky should be in close relationship with the homes of the state to the end that any citizen might feel free to call upon the University for any assistance which the institution can render.

The Department of University Extension operates through six bureaus as follows:

1. A Bureau of Correspondence and Class Study.—Offering courses in Botany, Economics, Education, English, French, German, Greek, Latin, Hygiene, Mathematics, Mining, Philosophy, Political Science, Psychology, Sociology, Spanish, and courses in high school subjects.
2. A Bureau of Lectures.—Offering single lectures or a series of lectures; speakers for teachers' meetings, commencement addresses, memorial and dedication exercises, civic and women's clubs, etc.
3. A Bureau of School Relations.—Providing assistance in debating and other forensic activities to the schools, and encouragement of vocal and instrumental music. This service is given chiefly through the Kentucky High School Forensic League and the Kentucky High School Music Festival.
4. A Bureau of General Information and Welfare.—Acting as a clearing house for inquiries of the people of the state in general matters.
5. A Woman's Club Service.—Furnishing club programs and package library materials as well as helps for clubs.
6. A Bureau of Visual Aids.—Furnishing educational motion picture films and other visual aids service to schools and clubs.

A separate bulletin for correspondence study is published.

Part V

THE ALUMNI ASSOCIATION

THE ALUMNI ASSOCIATION

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

The Alumni Office is located on the campus, and alumni students, and friends of the University are welcome at all times. The annual business session of the Association is held during commencement and the Executive Committee meets on the first Monday of each month except during June, July and August. By legislative act alumni representation has been secured on the Board of Trustees so that they may have a direct influence in the administrative affairs of the University.

ALUMNI REPRESENTATIVES ON BOARD OF TRUSTEES

James Park, Lexington, Kentucky
Louis Hillenmeyer, Lexington, Kentucky
George H. Wilson, Lexington, Kentucky

OFFICERS OF THE ASSOCIATION, 1935-36

Keen Johnson, '22, President
Mrs. David Phelps, '07, Vice President
R. K. Salyers, Ex. '28, Secretary
James Shropshire, '29, Treasurer

EXECUTIVE COMMITTEE, 1935-36

L. K. Frankel, '00
Dr. George H. Wilson, '04
Wayland Rhoads, '15
Lulie Logan, '13
Ray Moss, '10
Dr. E. C. Elliott, '02
Marguerite McLaughlin, '03
Charles I. Dawson, '98
Maury Crutcher, '17
G. Davis Buckner, '08
Lee McClain, '19
Willy King, '27
Marcus Redwine, '19
Mrs. T. R. Underwood, '19

ENROLLMENT REPORTS

DISTRIBUTION OF ENROLLMENT FOR THE YEAR ENDING JUNE 30, 1936

(Including the Summer Session of 1935)

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													550	529	550	529	1079
Seniors	132	127	35	38	62		34		44	234	87	19			394	418	812
Juniors	204	177	45	39	90		39	2	44	213	95	24			517	455	972
Sophomores	190	121	71	45	117		66	1	32	81	124	36			600	284	884
Freshmen	276	161	94	28	146	1			29	52	183	56			728	298	1026
Specials	31	88	3	1	1	1	6		7	43	5	7			53	140	193
Auditors	4	35		3					1	2	1	2	3		9	42	51
Transients*	21	93	1				9		4	47	2			1	37	141	178
Total	858	802	249	154	416	2	154	3	161	672	497	144	553	530	2888	2307	5195

All duplicates have been excluded.

UNIVERSITY EXTENSION	390	957	1,347
UNIVERSITY HIGH SCHOOL	169	135	304
Grand Totals	3,447	3,399	6,846

* Students taking work to apply on a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE FIRST AND SECOND SEMESTERS OF 1935-36

BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													169	116	169	116	285
Seniors	112	87	31	29	57		29		28	104	82	17			339	237	576
Juniors	190	133	43	34	87		37	2	27	54	93	22			477	245	722
Sophomores	187	111	71	45	116		62		26	40	124	35			586	231	817
Freshmen	270	141	93	28	144	1			24	45	183	54			714	269	983
Specials	5	16	2	1		1	5		2	7	4	5			18	30	48
Auditors	4	32		2							1	1	3		8	35	43
Transients*	4	67	1				1		2	5					8	72	80
Total	772	587	241	139	404	2	134	2	109	255	487	134	172	116	2319	1235	3554

All duplicates have been excluded.

* Students taking work to apply on a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE FIRST SEMESTER OF 1935-36
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													133	87	133	87	220
Seniors	103	85	28	24	51		24		27	78	72	10			305	197	502
Juniors	145	117	37	31	63		33	2	16	38	68	18			362	206	568
Sophomores	190	102	60	42	102		55	1	18	38	127	40			552	223	775
Freshmen	258	143	92	30	173	1			22	38	176	51			721	263	984
Specials	5	16	2	1		1	3		1	5	3	2			14	25	39
Auditors	4	23									1	1			5	24	29
Transients*		51			1		1			1	1				3	52	55
Total	705	537	219	128	390	2	116	3	84	198	448	122	133	87	2095	1077	3172

* Students taking work to apply on a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE SECOND SEMESTER OF 1935-36
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													119	91	119	91	210
Seniors	94	83	26	27	48		24		24	78	77	16			293	204	497
Juniors	177	118	38	30	84		32	2	26	48	89	21			446	219	665
Sophomores	159	97	65	43	109		61		25	35	109	28			528	203	731
Freshmen	221	128	72	25	121	1			20	41	153	46			587	241	828
Specials	1	1				1	4		2	3	2	4			9	9	18
Auditors	2	15		2									3		5	17	22
Transients*	4	41	1				1		2	5					8	46	54
Total	658	483	202	127	362	2	122	2	99	210	430	115	122	91	1995	1030	3025

* Students taking work to apply toward a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE SUMMER SESSION OF 1935
BY COLLEGES, CLASSES AND SEX
First and Second Terms

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													423	440	423	440	863
Seniors	41	61	11	17	6		10		32	173	12	4			112	255	367
Juniors	61	65	8	13	18		12		23	179	19	9			141	266	407
Sophomores	34	15	6	5	7		19	1	9	51	5	2			80	74	154
Freshmen	24	23	3	1	11				8	8	6	5			52	37	89
Specials	27	70	1		1		2		5	38	2	3			38	111	149
Auditors		3		1					1	2		1			1	7	8
Transients*	19	29					9		2	44	2			1	32	74	106
Total	206	266	29	37	43		52	1	80	495	46	24	423	441	879	1264	2143

All duplicates have been excluded.

* Students taking work to apply toward a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE FIRST TERM OF THE SUMMER SESSION OF 1935
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													343	315	342	315	657
Seniors	33	53	9	11	4		8		29	155	7	3			90	222	312
Juniors	51	50	7	14	13		10		22	148	20	9			123	221	344
Sophomores	25	13	6	5	3		22		8	43	4	2			68	63	131
Freshmen	22	20	3	1	9				5	7	5	4			44	32	76
Specials	26	60	1		1		2		5	19	2	2			37	81	118
Auditors		1		1					1	2		1			1	5	6
Transients*	16	20					7		2	26	2			1	27	47	74
Total	173	217	26	32	30		49		72	400	40	21	342	316	732	986	1718

* Students taking work to apply toward a degree in another institution.

DISTRIBUTION OF ENROLLMENT FOR THE SECOND TERM OF THE SUMMER SESSION OF 1935
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates	----	----	----	----	----	----	----	----	----	----	----	----	205	203	205	203	408
Seniors	23	38	7	8	4	----	7	----	16	85	8	3	----	----	65	134	199
Juniors	35	34	4	2	12	----	9	----	6	78	11	2	----	----	77	116	193
Sophomores	23	6	2	2	4	----	11	1	5	28	3	1	----	----	48	38	86
Freshmen	12	4	2	----	7	----	----	----	4	6	2	3	----	----	27	13	40
Specials	3	14	----	----	----	----	2	----	1	22	1	3	----	----	7	39	46
Auditors	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	2	2
Transients*	11	17	----	----	----	----	5	----	1	26	----	----	----	----	17	43	60
Total	107	115	15	12	27	----	34	1	33	245	25	12	205	203	446	588	1034

* Students taking work to apply toward a degree in another institution.

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