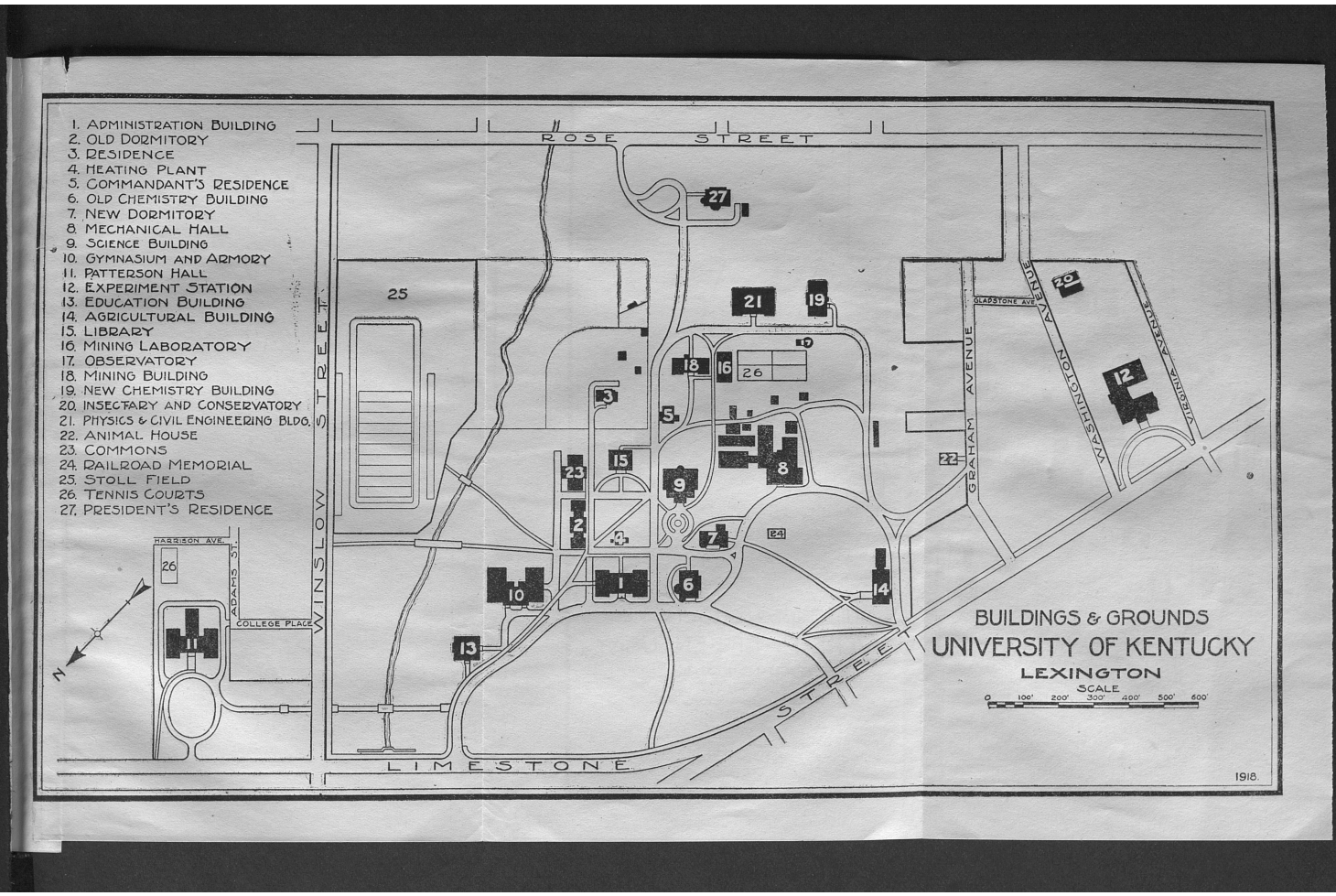
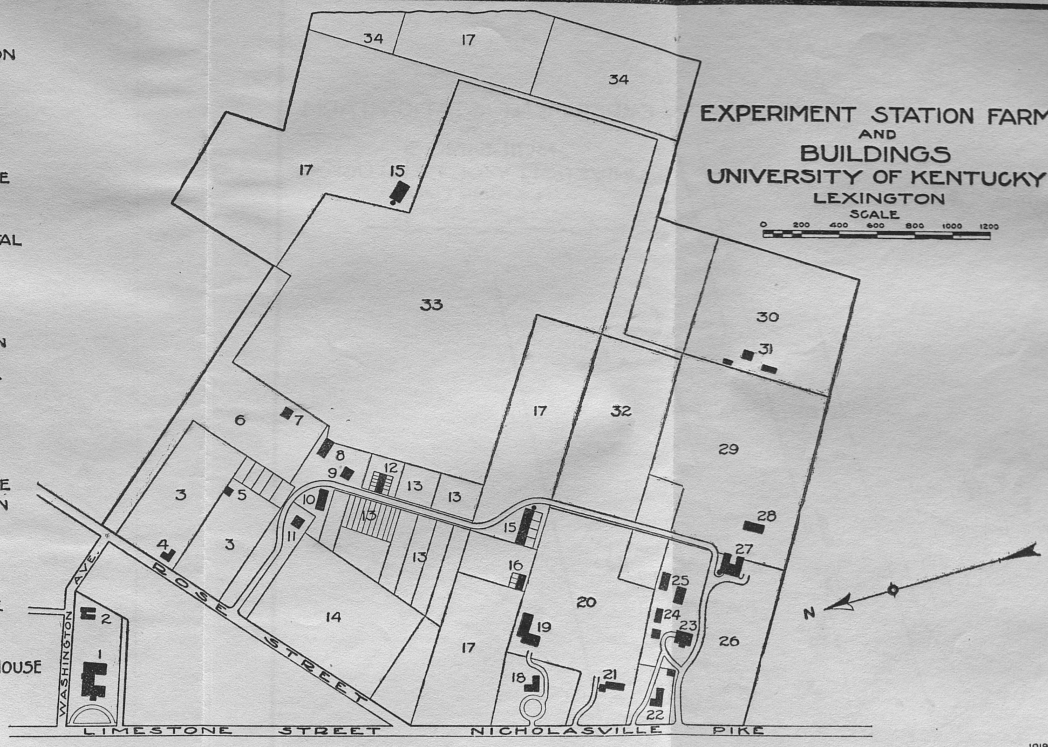

1. ADMINISTRATION BUILDING
2. OLD DORMITORY
3. RESIDENCE
4. HEATING PLANT
5. COMMANDANT'S RESIDENCE
6. OLD CHEMISTRY BUILDING
7. NEW DORMITORY
8. MECHANICAL HALL
9. SCIENCE BUILDING
10. GYMNASIUM AND ARMORY
11. PATTERSON HALL
12. EXPERIMENT STATION
13. EDUCATION BUILDING
14. AGRICULTURAL BUILDING
15. LIBRARY
16. MINING LABORATORY
17. OBSERVATORY
18. MINING BUILDING
19. NEW CHEMISTRY BUILDING
20. INSECTARY AND CONSERVATORY
21. PHYSICS & CIVIL ENGINEERING BLDG.
22. ANIMAL HOUSE
23. COMMONS
24. RAILROAD MEMORIAL
25. STOLL FIELD
26. TENNIS COURTS
27. PRESIDENT'S RESIDENCE
ROSE STREET
WINSLOW STREET
GRAHAM AVENUE
WASHINGTON AVENUE
VIRGINIA AVENUE
GLADSTONE AVE.
HARRISON AVE.
ADAMS ST.
COLLEGE PLACE
LIMESTONE
STREET
N
BUILDINGS & GROUNDS
UNIVERSITY OF KENTUCKY
LEXINGTON
SCALE
0 100' 200' 300' 400' 500' 600'
1918.

EXPERIMENT STATION FARM AND BUILDINGS UNIVERSITY OF KENTUCKY LEXINGTON

SCALE 0 200 400 600 800 1000 1200

1. EXPERIMENT STATION
2. INSECTARY
3. FORAGE PLOTS
4. RESIDENCE
5. SEED HOUSE
6. PASTURE
7. SEED STORAGE HOUSE
8. IMPLEMENT HOUSE
9. SERUM LABORATORY
10. VETERINARY HOSPITAL
11. RESIDENCE
12. PIGGERY
13. SWINE LOTS
14. SOIL EXPERIMENTS
15. STEER FEEDING BARN
16. SHEEP BARN
17. ANIMAL HUSBANDRY
18. RESIDENCE
19. BARN
20. HORTICULTURE
21. CONSERVATORY
22. DIRECTOR'S RESIDENCE
23. GENERAL UTILITY BARN
24. FEED MILL
25. TOBACCO HOUSES
26. PASTURE
27. DAIRY BARN
28. FEED STORAGE HOUSE
29. PASTURE
30. POULTRY PLANT
31. LABORATORY & FEED HOUSE
32. ORCHARD
33. AGRONOMY
34. TOBACCO PLOTS



1918.

CONTENTS

University Calendar	6
Schedule of Entrance Examinations	7
Part I Officers of Administration and Instruction	9
Board of Trustees	11
Executive Officers	12
Officers of Instruction	15
Experiment Station Staff	24
County Agricultural Agents	32
Home Demonstration Agents	34
Standing Committees of the Senate	36
Part II General Information	39
History and Equipment	41
Admission and Classification	60
Admission to Freshman Class	60
Basic Units Required by All Colleges	61
Admission by Examination	61
Description of Entrance Units	62
Admission by Certificate	72
Accredited Schools	72
Admission to Advance Standing	81
Special Students	81
Graduate Students	81
Residence and Graduation	82
Scholarships and Prizes	93
Organizations and Student Activities	99
Publications	107
Part III Colleges and Schools	109
Organization	111
College of Arts and Science	113
College of Agriculture	186
The College	197
Experiment Station	227
Extension Division	229
College of Engineering	230
College of Law	287
Graduate School	301

CONTENTS—Continued.

	Summer Session	306
	University Extension	321
Part IV	Degrees and Honors 1917-1918	331
Part V	Alumni Association	341
Part VI	Register of Students	347
Index		386

306
321
331
341
347
386

1919

MAY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1920

JANUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29						

MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

UNIVERSITY CALENDAR

1919		
Sept. 11, 12, 13	Thurs. Fri. Sat.	Examinations for entrance.
September 15, 16	Mon. to Tues. 4 p. m	Registration for first semester.
September 17	Wednesday	Instruction begins.
November 27	Thursday	Thanksgiving holiday.
Dec. 20 to Jan. 5	Saturday noon to Monday 8 a. m.	Christmas holidays.
1920		
Jan. 24 to 31	Sat. to Sat.	Mid-year examinations.
February 2	Monday	Registration for second semester.
February 3	Tuesday	Instruction resumed.
February 22	Sunday	Washington's Birthday.

Commencement Week

June 6	Sunday	Baccalaureate Sermon.
June 7	Monday	Board of Trustees meets.
June 8	Tuesday	Class Day.
June 8	Tuesday	Alumni Banquet.
June 9	Wednesday	Fifty-third Annual Commencement.

SCHEDULE OF ENTRANCE EXAMINATIONS

THURSDAY, SEPTEMBER 11, 1919

8.00 to 10.00 A. M.	German (1, 2, 3)
8.00 to 10.00 A. M.	Physical Geography
10.00 to 12.00 A. M.	Geology
10.00 to 12.00 A. M.	Physics
1.30 to 3.30 P. M.	English (Reading and Practise)
3.30 to 5.30 P. M.	English (Study and Practise)

FRIDAY, SEPTEMBER 12, 1919

8.00 to 10.00 A. M.	Algebra
8.00 to 10.00 A. M.	Plane Geometry
8.00 to 10.00 A. M.	History (Ancient, Medieval, and Modern)
10.00 to 12.00 A. M.	History (English, American and Civil Govt.)
1.30 to 3.30 P. M.	French
1.30 to 3.30 P. M.	Trigonometry

SATURDAY, SEPTEMBER 13, 1919

8.00 to 10.00 A. M.	Latin (Grammar, Composition and Caesar)
10.00 to 12.00 A. M.	Latin (Cicero and Virgil)
10.00 to 12.00 A. M.	Chemistry
1.30 to 3.30 P. M.	Botany
1.30 to 3.30 P. M.	Physiology

Part I

OFFICERS OF ADMINISTRATION AND INSTRUCTION

BOARD OF TRUSTEES

Hon. James D. Black, Governor—Ex-officio
Virgil O. Gilbert, Superintendent of Public Instruction—Ex-officio
Mat S. Cohen, Commissioner of Agriculture—Ex-officio
J. M. Elliston, Elliston (Board of Agriculture)
Richard P. Ernst, Covington (1924)
H. M. Froman, Ghent (Board of Agriculture)
R. G. Gordon, Louisville (1924)
J. R. Rash, Henderson (Board of Agriculture)
P. Preston Johnston, Jr., Lexington (1922)
J. Irvin Lyle, New York (1924)
Richard C. Stoll, Lexington (1924)
James W. Turner, Paintsville (1922)
Rainey T. Wells, Murray (1922)
Frank McKee, Versailles (1920)
W. H. Grady, Louisville (1920)

OFFICERS OF THE BOARD

Hon. James D. Black, Chairman.
Richard C. Stoll, Vice Chairman
Wellington Patrick, Secretary.

EXECUTIVE COMMITTEE

J. M. Elliston, Richard P. Ernst, R. C. Gordon, P. P. Johnston, Jr., Richard C. Stoll.

COMMITTEE ON AGRICULTURAL EXTENSION

J. D. Black, H. M. Froman, J. R. Rash, J. M. Elliston, Mat S. Cohen.

EXECUTIVE OFFICERS

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

THE UNIVERSITY

OFFICE OF THE PRESIDENT

WELLINGTON PATRICK, A. M., Secretary
PAULINE KLAREN, Clerk.

OFFICE OF THE BUSINESS AGENT

DAVID HOWARD PEAK, A. M., Business Agent
JAMES BASIL LYONS, Cashier
LINN HEMINGWAY MCCAIN, Bookkeeper
RUBY STIVERS, Bookkeeper
MINNIE PHERIGO, Bookkeeper
CARRIE BEAN, Clerk (Supply Department)

OFFICE OF THE REGISTRAR

EZRA L. GILLIS, A. B., Registrar, and Secretary of the Senate
LIZZIE LEE GRADDY, Assistant Registrar
KATHERINE W. OWENS, Chief Clerk

DEAN OF MEN

COLUMBUS RUDOLPH MELCHER, A. M.

*DEAN OF WOMEN

JOSEPHINE SIMRALL, A. B.

UNIVERSITY PHYSICIAN

JOSEPH WILLIAM PRYOR, M. D.

HIGH SCHOOL INSPECTOR

MCHENRY RHOADS, A. M., PH. M.

LIBRARIES

MARGARET ISADORA KING, A. B., University Librarian
AMY ALLEN, A. B., L. S., Head Cataloger
PEARL ALLYNE BASTIN, A. B., Assistant Librarian
VIVIAN ESTELLE DELAINE, Student Assistant
ORA LEE JONES, Student Assistant
MARGARET HELMSING TUTTLE, Student Assistant
GRACE SNODGRASS, Librarian, Experiment Station

* Appointed April 1, 1919.

UNIVERSITY Y. M. C. A.

RALPH WALDO OWENS, A. B., Secretary

RESIDENCE HALL

**ADELAIDE CRANE, Director of Residence Hall for Women
DORA K. BERKLEY, Director of Residence Hall for Women
MRS. J. M. BROWN, Supervisor of Maxwell Hall
MARGARET STEVENS, Dietitian

OFFICE OF SUPERINTENDENT OF BUILDINGS AND GROUNDS

ARCHIE O. WHIPPLE, E. M., Supt. of Buildings and Grounds
LON D. MOORE, Foreman
CHARLES AUBREY, Engineer
THOMAS AUBREY, Engineer
ISAAC C. WATKINS, Engineer
JOHN HUGHES RICE, Engineer

STENOGRAPHIC BUREAU

ASSIGNED TO DEPARTMENTS

MARY BELLE BAIRD, Stenographer (Department of Education)
JOHN ADAM BITTERMAN, Stenographer (College of Engineering)
TERESA EUGENIA BUCHIGNANI, A. B., Stenographer (College of Arts and Science)
ETHEL JELLEY, Stenographer (College of Engineering)
EDITH LOVE, Stenographer (Department of Chemistry)
MAPLE MOORES, Stenographer (Office of Registrar)
ANNE ELIZABETH SLOAN, A. B., Stenographer (College of Agri.)

ASSIGNED TO BUREAU

WELLINGTON PATRICK, A. M., Director
MRS. KATHERINE HUGHES LYON, Head Stenographer
ELMA ALLEN, Stenographer
LENNIS WURTZ, Stenographer
ISOLA F. GEORGE, Stenographer

UNIVERSITY CAFETERIA

Under the Supervision of the Home Economics Department.

** Resigned January, 1919.

THE COLLEGES

THE COLLEGE OF ARTS AND SCIENCE

PAUL BRENTICE BOYD, M. A., PH. D., Dean

THE COLLEGE OF AGRICULTURE

THOMAS POE COOPER, B. S. IN AGR., Dean and Director
The College
Experiment Station
Agricultural Extension

THE COLLEGE OF ENGINEERING

FREDERICK PAUL ANDERSON, M. E., Dean

THE COLLEGE OF LAW

WILLIAM THORNTON LAFFERTY, A. M., Dean

THE GRADUATE DEPARTMENT

GLANVILLE TERRELL, A. M., PH. D., Chairman of Committee

THE SUMMER SESSION

JAMES THOMAS COTTON NOE, A. M., Director

THE UNIVERSITY EXTENSION

WILLIAM D. FUNKHOUSER, M. A., PH. D., Chairman of Committee

OFFICERS OF ADMINISTRATION AND INSTRUCTION

In each of the following groups, the names appear in the order of academic seniority. An alphabetical list is given on page 17.

FRANK LEROND MCVEY, President of the University

PROFESSORS

JOSEPH WILLIAM PRYOR
HARBISON GARMAN
FREDERICK PAUL ANDERSON
CLARENCE WENTWORTH MATHEWS
ARTHUR MCQUISTON MILLER
MERRY LEWIS PENCE
ALFRED CHARLES ZEMBROD
FRANKLIN ELLIOTT TUTTLE
LEON KAUFMAN FRANKEL
WILLIAM THORNTON LAFFERTY
MRS. ROBERT LEE STOUT
JOHN JULIAN HOOPER
RALPH NELSON MAXSON
GEORGE ROBERTS
THEODORE TOLMAN JONES
GLANVILLE TERRELL
JAMES THOMAS COTTON NOE
ALFRED MEREDITH PETER
HENRY ERNEST CURTIS
JAMES OSCAR LABACH
JOB DARBIN TURNER
EDWIN STANTON GOOD
DANIEL JOSEPH HEALY
MCHENRY RHOADS
COLUMBUS RUDOLPH MELCHER
JAMES EDWARD TUTHILL
LYMAN CHALKLEY
WILLIAM EDWIN FREEMAN
*JOHN JAMES TIGERT
PAUL PRENTICE BOYD
EZRA L. GILLIS
JOSEPH MORTON DAVIS
THOMSON RIPLEY BRYANT
DANIEL VOIERS TERRELL
**FRED MUTCHLER
WILLIAM SNYDER WEBB
LOUIS EDWARD NOLLAU
EDWARD FRANKLIN FARQUHAR
LEHRE LIVINGSTON DANTZLER
THOMAS JAMES BARR
ENOCH GREHAN
DAVID HOWARD PEAK
WILLIAM DURRETT NICHOLLS
STANLEY ATWOOD BOLES
†HERBERT NATHAN ROYDEN
THOMAS POE COOPER
JOHN REGESTER HUMPHREY
MCNEAL COLE JAMES
WALTER S. ANDERSON
ROBERT LORING PONTIUS
EDWARD WIEST
CHARLES ALBERT SHULL
WILLIAM DELBERT FUNKHOUSER
CARL ALBERT LAMPERT
WALTER LEE SUMMERS
JEAN G. MACKINNON
MARK HAVENHILL
DAVID OWEN BYARS

ASSOCIATE PROFESSORS

WILLIAM JOSEPH CARREL
ELIJAH LATHAM REES
*MARY E. SWEENY
CINCINNATUS DECATUR KILLEBREW
GEORGE MARSHALL BAKER
EDMUND J. KINNEY

*On leave of absence in war service.
**Resigned.
†Retired. Effective April 30, 1919.

ASSISTANT PROFESSORS

HAROLD HARDESTY DOWNING
FRANK THEODORE MCFARLAND
JOHN SHERMAN HOPKINE
JOHN JAMES CURTIS
J. EMBRY ALLEN
GEORGE W. VAUGHN
WILLIAM E. BUTT
GEORGE HAYMAKER VANSELL
MABEL L. ROE
WILLIAM ARNOLD NEWMAN
PERRY ELMER KARRAKER
JOHN BORN DICKER
NORRIS RAYMOND ELLIOTT
EDWARD CHARLES MABIE
CLARE BROWN CORNELL
ARTHUR WALLACE CALHOUN
GEORGE RUSSELL BANCROFT
MINNA MCLEOD BECK
ERNEST ADOLPH BUREAU
*OSWIN RAY CLUTTER
MARGARET COFFIN
THOMAS ANDREW GILL
ALBERT JACKSON OLNEY
FRED C. WALTERS
FREDRICK JAMES SUTTON
CHARLES STEVENS CROUSE
**JOSEPHINE SIMRALL

INSTRUCTORS

GORDON THURMAN
EDWIN JOSEPH GOTT
CLARA WARLAND WHITE
M. HUME BEDFORD
MARGARET MCLAUGHLIN
JOHN RICHARD MITCHELL
MARY FRANCES JEWELL
MABEL HARDY POLLITT
MARSHALL NEY STATES
VIRGINIA F. ANDERSON
†EUSTACE U. BRADLEY
LINDA BERTRAM PURNELL
CHRISTINE HOPKINS
MARGARET ISADORE KING
FLORENCE M. BARRETT
‡WILLARD ROUSE JILLSON
THOMAS MCKEE ARKLE
EDWARD BARROW CROWDER
ROBERT DAWSON HAWKINS
LEVI JACKSON HORLACHER
GEORGE LEWIS JACKSON
MADGE LAMAREAUX
STEPHENS THADDEUS SAUNIER
DAVID NORTON SINGER
GUY WATSON SMITH
THOMAS E. TUCKER
LOUISE GRAY WEBB
GEORGE WESLEY WHITING
EDWARD JAMES WILFORD
J. HOLMES MARTIN
JESSIE W. STONE
CLARENCE B. KENNEY

FELLOWS

SIMEON E. LELAND, *Economics*
HARVEY P. PETTIT, *Mathematics*

SCHOLARS

SHELBY S. ELAM, *Education*

ASSISTANTS

JAY C. GRIMES, *Agriculture*
LELAH GAULT, *Chemistry*
WM. HUGH MCCORD, *Economics*
W. W. ELLIOTT, *Mathematics*

*Resigned January, 1919.
**Appointed April 1, 1919.
†On leave of absence for war service.
‡Resigned March, 1919.

ALPHABETICAL LIST OF OFFICERS OF INSTRUCTION AND ADMINISTRATION

FRANK LEROND MCVEY, B. A., PH. D., LL. D. Maxwell Place, Rose St.
President of the University

ALLEN, AMY, A. B., B. L. S. 287 South Limestone
Head Cataloguer, University Library

ANDERSON, FREDERICK PAUL, M. E. 147 Kentucky Avenue
Dean of the College of Engineering and Professor of Mechanical Engineering

ANDERSON, VIRGINIA FRANCES, B. S. IN BIOLOGY 147 Kentucky Avenue
Instructor in Art and Design

ANDERSON, WALTER S., M. A. Nicholasville Pike
Professor of Genetics

ARKLE, THOMAS MCKEE 112 Hagerman Court
Instructor in Woodshop

BAKER, GEORGE MARSHALL, M. A. 284 South Limestone
Associate Professor of Education

BANCROFT, GEORGE RUSSELL, PH. D. 646 Headley Avenue
Assistant Professor of Organic Chemistry

BARR, THOMAS JAMES, B. M. E. 454 Rose Lane
Professor of Mines and Metallurgy, Head of the Department

BARRETT, FLORENCE MARIE, A. M. 231 East Maxwell
Instructor in Romance Languages

BECK, MINNA MCLEOD, M. A. Waverly Apts., Hampton Court
Assistant Professor of Art and Design

BASTIN, PEARL ALLYNE, A. B. 325 Linden Walk
Assistant Librarian

BEDFORD, MATTHEW HUME, PH. D. Paris, Ky.
Instructor of Physical Chemistry

BOLES, STANLEY ATWOOD, M. A. 404 Rose Lane
Director of Athletics, Head of the Department of Physical Education

BOUVIER, GEORGE HENRY, Corporal, U. S. A.
Instructor in Military Science

BOYD, PAUL PRENTICE, M. A., PH. D. Waller Ave., Rodes Place
Dean of the College of Arts and Science, Head of the Department of Mathematics and Astronomy

*BRADLEY, EUSTACE U., A. B.
Instructor in English

*On leave of absence in war service.

BRYANT, THOMSON RIPLEY, B. S. IN AGR. 236 Clay Avenue
Assistant to the Dean of the College of Agriculture, Assistant Director of Agricultural Extension

BUREAU, ERNEST ADOLPH, PH. B., E. E. 448 Clifton Avenue
Assistant Professor of Electrical Engineering

BUTT, WILLIAM EDWARD, M. A. 412 Woodland Avenue
Assistant Professor of Political Science

BYARS, DAVID OWEN, (West Point) 267 South Limestone
Professor of Military Science and Tactics

CALHOUN, ARTHUR WALLACE, M. A., PH. D. 722 Cramer Avenue
Assistant Professor of Sociology

CARREL, WILLIAM JOSEPH, C. E. 328 South Upper St.
Associate Professor of Structural Engineering

CHALKLEY, LYMAN, B. L. 343 South Broadway
Professor of Law

*CLUTTER, OSWIN RAY, M. SC. 120 Warren Court
Assistant Professor of Physiological Chemistry

COFFIN, MARGARET, B. S. 135 East Maxwell
Assistant Professor of Home Economics

CORNELL, CLARE BROWN, PH. D. 15 University Place
Assistant Professor of Psychology, Acting Head of the Department

CROUSE, CHARLES STEVENS, E. M. 370 Aylesford Place
Professor of Metallurgy

CROWDER, EDWARD BARLOW 147 Alabama Avenue
Instructor in Foundry

CURTIS, HENRY ERNEST, M. S. 355 Linden Walk
Head of the Department of Fertilizer Control in the Experiment Station

CURTIS, JOHN JAMES, M. E. 344 Transylvania Park
Assistant Professor of Testing of Materials

DANTZLER, LEHRE LIVINGSTON, M. A. 200 East Maxwell
Professor of Philology, Head of the Department of English

DAVIS, JOSEPH MORTON, A. M. 340 Madison Place
Professor of Mathematics

DICKER, JOHN B. 122 Graham Avenue
Superintendent of Shops

DOWNING, HAROLD HARDESTY, B. C. E., S. M. 158 N. Ashland Avenue
Assistant Professor of Mathematics

---

*Resigned January, 1919.

ELLIOTT, NORRIS RAYMOND, B. Sc. HORT. 326 Grosvenor Avenue
Assistant Professor of Horticulture, Acting Head of the Department

ELLIOTT, WILLIAM WHITFIELD, A. B. 300 South Limestone
Graduate Assistant in Mathematics

FARQUHAR, EDWARD FRANKLIN, M. A. 629 Sayre Avenue
Professor of Literature

FRANKEL, LEON KAUFMAN, M. E. 324 Aylesford Place
Professor of Mechanics of Engineering, Head of the Department

FREEMAN, WILLIAM EDWIN, A. B., E. E 553 West Second St.
Professor of Electrical Engineering, Head of the Department

FUNKHOUSER, WILLIAM DELBERT, M. A., PH. D. 468 West Second St.
Professor of Zoology, Head of the Department

GARMAN, HARRISON, D. Sc. 638 South Limestone
Professor of Entomology, Head of the Department of Entomology and Botany in the Experiment Station

GILLIS, EZRA L., A. B. 287 South Limestone
Registrar

GILL, THOMAS ANDREW, B. A.
Assistant Director of Athletics, Field Coach

GOOD, EDWIN STANTON, M. S. Nicholasville Pike
Professor of Animal Husbandry, Head of the Department of Animal Husbandry (Beef Cattle, Sheep and Swine) in the Experiment Station

GOFT, EDWIN JOSEPH, B. S. IN AGR. 317 South Broadway
Instructor in Bacteriology

GREHAN, ENOCH, A. B. 348 Aylesford Place
Professor of Journalism, Head of the Department

GRIMES, JAY COOK, B. S. A. 217 South Limestone
Graduate Assistant in Animal Husbandry

HAVENHILL, MARK, B. S. AG., B. S. IN AG. ENG. 703 Rose Street
Professor of Farm Engineering

HAWKINS, ROBERT DAWSON, B. M. E. 411 Linden Walk
Instructor in Mechanical Engineering

HEALY, DANIEL JOSEPH, M. D. C. M. 530 Sayre Avenue
Professor of Bacteriology, Bacterioligist in the Experiment Station

HOOPER, JOHN JULIAN, B. S., M. S. A. 609 South Limestone
Professor of Animal Husbandry, Head of the Department of Dairy Husbandry in the Experiment Station, Leader in Poultry in the Extension Division

HOPKINS, CHRISTINE, A. B. — 259 East High St.
Instructor in English

HORINE, JOHN SHERMAN, M. E. — 252 East Maxwell St.
Assistant Professor in Mechanical Drawing

HORLACHER, LEVI JACKSON, M. S. A. — 333 Transylvania Park
Instructor in Animal Husbandry, Assistant in Animal Husbandry in the Experiment Station

HUMPHREYS, JOHN REGESTER — 597 Boonesboro Avenue
Head of the Department of Markets, Field Agent in Marketing

HUTSON, JOHN B., B. S. — 303 Grosvenor Avenue
Assistant in Farm Management, and Extension Specialist in Farm Management, Extension Division, College of Agriculture

JACKSON, GEORGE LEWIS, B. M. E. — 347 South Limestone
Instructor in Experimental Engineering

JAMES, MCNEAL COLE, A. B., B. S. IN AGR. — 149 Washington Ave.
Professor of Agricultural Education

JEWELL, MARY FRANCES, M. A. — 311 South Ashland Avenue
Instructor in English

*JILLSON, WILLARD ROUSE, M. S. — 442 Rose Lane
Assistant Professor of Geology

JONES, THEODORE TOLMAN, A. M. — 316 Aylesford Place
Professor of Ancient Languages, Head of the Department

KARRAKER, PERRY ELMER, M. A. — 333 Transylvania Park
Assistant Professor of Soils, Assistant Agronomist in the Experiment Station

KILLEBREW, CINCINNATUS DECATUR, M. S. — 287 S. Limestone
Associate Professor of Physics

KING, MARGARET ISADORA, A. B. — 225 S. Limestone
Librarian, Instructor in Library Science

KINNEY, EDMUND J., B. S. IN AGR. — 465 Woodland Avenue
Associate Professor of Agronomy, Assistant Agronomist in the Experiment Station

LABACH, JAMES OSCAR, M. S. — 128 S. Ashland Avenue
Chemist, Director Public Service Laboratory

LAFFERTY, WILLIAM THORNTON, A. M. — 418 Maxwell St.
Dean of the College of Law, Professor of Law

*Resigned March, 1919.

LAMAREAUX, MADGE, B. S. 231 Maxwell St
Instructor in Home Economics

LAMPERT, CARL ALBERT 361 Transylvania Park
Professor of Music, Head of the Department

MABIE, EDWARD CHARLES, M. A. 232 East Maxwell
Assistant Professor of Public Speaking

MATHEWS, CLARENCE WENTWORTH, B. S. 660 South Limestone
Professor of Horticulture, Head of the Department of Horticulture in the Experiment Station

MAXSON, RALPH NELSON, PH. D. 366 Transylvania Park
Professor of Inorganic Chemistry

MCFARLAND, FRANK THEODORE, M. S. 655 S. Limestone
Assistant Professor of Botany

MACKINNON, JEAN G., A. M. 343 South Broadway
Professor of Home Economics, Acting Head of the Department

MCLAUGHLIN, MARGUERITE, A. B. 226 East Maxwell
Instructor in Journalism

MELCHER, COOLUMBUS RUDOLPH, A. M. 132 E. Fourth St.
Professor of German Language and Literature, Head of the Department, Dean of Men

MILLER, ARTHUR MCQUISTON, A. M. 609 South Limestone
Professor of Geology, Head of the Department

MITCHELL, JOHN RICHARD, A. B. 327 South Upper St.
Instructor in Chemistry

*MUTCHLER, FRED, A. B., PH. D. 337 Transylvania Park
Director of Extension

NEWMAN, WILLIAM ARNOLD 219 Rand Avenue
Assistant Professor of Civil Engineering

NICHOLLS, WILLIAM DURRETT, M. S. AGR. 19 University Place
Professor of Farm Management, Head of the Department of Farm Management, College of Agriculture and Experiment Station

NOE, JAMES THOMAS COTTON, A. M. 231 East Maxwell St.
Professor of Education, Head of the Department

NOLLAU, LOUIS EDWARD, M. E. 309 East Maxwell St.
Professor of Drawing, Head of the Department

OLNEY, ALBERT JACKSON, B. S. 416 Transylvania Park
Assistant Professor in Horticulture

---

*Resigned March, 1919.

PENCE, MERRY LEWIS, M. S. 364 Merino Street
Professor of Physics

PETER, ALFRED MEREDITH, D. Sc. 268 East Maxwell St.
Head of the Department of Chemistry in the Experiment Station

POLLITT, MABEL HARDY, A. M. University Campus
Instructor in Ancient Languages

*PONTIUS, ROBERT LORING, V. S. 229 Rodes Avenue
Professor of Animal Pathology, Veterinarian in the Experiment Station

PRYOR, JOSEPH WILLIAM, M. D. 261 North Broadway
Professor of Anatomy and Physiology, Head of the Department

PURNELL, LINDA B., B. S. 231 East Maxwell
Instructor in Home Economics

REES, ELIJAH LATHAM, C. E., A. M. 726 East Main St.
Associate Professor of Mathematics

RHOADS, MCHENRY, A. M., PH. M. Nicholasville Pike
Professor of Secondary Education

ROBERTS, GEORGE, M. S. 340 Transylvania Park
Professor of Agronomy, Head of the Department of Agronomy in the Experiment Station

*ROYDEN, HERBERT NATHAN, (West Point) Commandant's House
Professor of Military Science, Head of the Department

SAUNIER, STEPHEN THADDEUS 703 West High St.
Instructor in Blacksmith Shop

SHULL, CHARLES ALBERT, PH. D. 344 Harrison Avenue
Professor of Plant Physiology, Head of the Department of Botany

†SIMRALL, JOSEPHINE, A. B.
Dean of Women, Assistant Professor of English

SINGER, DAVID NORTON 404 S. Ashland Avenue
Instructor in Auto. Mechanics

SMITH, GUY WATSON, PH. D. 336 Harrison Avenue
Instructor in Mathematics

STATES, MARSHALL NEY, B. S. 351 Merino St.
Instructor in Physics

STOUT, MRS. ROBERT L. Frankfort, Ky.
Professor of Physical Education for Women

SUMMERS, WALTER LEE, A. B., LL. B., JUR. DR. 371 Linden Walk
Professor of Law

---

*Resigned. Effective April 30, 1919.
†Appointed April, 1919.

SUTTON, FREDERICK JAMES, M. S. 416 Transylvania Park
Assistant Professor of Horticulture

‡SWEENY, MARY E., M. S., M. A. Pine Grove, Ky.
Associate Professor of Home Economics

TERRELL, DANIEL VOIERS, C. E. 653 S. Limestone
Professor of Civil Engineering, Head of the Department

TERRELL, GLANVILLE, PH. D. 609 S. Limestone
Professor of Philosophy, Head of the Department

THURMAN, GORDON 131 Virginia Avenue
Head Instructor, Forge and Machine Shop

‡TIGERT, JOHN JAMES, M. A. (Oxon.)
Professor of Psychology, Head of the Department

TUCKER, THOMAS C. 634 Euclid Avenue
Instructor in Woodshop

TUTHILL, JAMES EDWARD, PH. D. 253 S. Limestone
Professor of History and Political Science, Head of the Department

TUTTLE, FRANKLIN ELLIOTT, M. A., PH. D. 125 East Maxwell
Professor of Chemistry, Head of the Department

VANSELL, GEORGE HAYMAKER, M. A. 372 South Upper
Assistant Professor of Zoology

WALTERS, FRED C., M. A. 312 Woodland Avenue
Assistant Professor of Secondary Education, Principal of the Model High School

WATKINS, ISAAC GREEN 136 Virginia Avenue
Instructor in Engineering Laboratory

WEBB, LOUISE GRAY, A. B. 656 East High St.
Instructor in Mechanical Drawing

WEBB, WILLIAM SNYDER, M. S. 363 Transylvania Park
Professor of Physics, Head of the Department

WHITING, GEORGE WESLEY, A. M. 336 Harrison Avenue
Instructor in English

WIEST, EDWARD, A. M., PH. D. 356 Woodland Avenue
Professor of Economics

WILFORD, EDWARD JAMES 927 S. Limestone
Instructor in Animal Husbandry, Assistant in Animal Husbandry in the Experiment Station

ZEMBROD, ALFRED CHARLES, M. A. 456 West Fourth St.
Professor of Romance Languages and Literature, Head of the Department

---

‡On leave of absence in war service.

ALPHABETICAL LIST OF THE EXPERIMENT STATION AND AGRICULTURAL EXTENSION STAFF

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

THOMAS POE COOPER, B. S. IN AGR.
Director of Experiment Station and Extension Division

ANDERSON, WALTER S., M. A. — Nicholasville Pike
Professor of Genetics, Assistant Animal Husbandman in the Experiment Station, Assistant in Animal Husbandry in the Extension Division

AVERITT, SAXE DABNEY, M. S. — 304 East Maxwell
Chemist, Department of Chemistry in the Experiment Station

BACON, PHILIP EDLOE — 414 Rose Lane
Inspector of Creameries in the Experiment Station

BARRETT, FRANK N., B. S. IN AGR. — 266 South Limestone
Assistant in Boys' Club Work in the Extension Division

BLUMENTHAL, PHILIP LEE, PH. D. — Phoenix Hotel
Chemist, Department of Chemistry in the Experiment Station

BROWN, LINWOOD ARNOLD, PHARM. D., PH. C. F. A. A., 211 Bell Court East
Special Drug Chemist, Public Service Laboratories in the Experiment Station

BRUECKNER, ARTHUR LOUIS, B. S. IN AGR. — Experiment Station Farm
Assistant in Animal Pathology in the Experiment Station

BRYANT, THOMSON RIPLEY, B. S. IN AGR. — 236 Clay Avenue
Assistant to the Dean, Assistant Director of Agricultural Extension Division

BUCKNER, GARRETT DAVIS, PH. D. — 128 East Fourth St.
Chemist, Department of Chemistry in the Experiment Station

*CREGOR, N. MINTON, B. S. IN AGR.
Inspector, Food and Drug Department in the Experiment Station

CHAPIN, ARTHUR S.,
Assistant in Poultry in the Extension Division

CURTIS, HENRY ERNEST, M. S. — 355 Linden Walk
Head of the Department of Fertilizer Control in the Experiment Station

DIDLAKE, MARY LEGRANDE, M. S. — 481 East Main St.
Assistant Entomologist and Botanist in the Experiment Station

---

*Food and drug inspection work discontinued June 18, 1918.

DURHAM, MINNIE PARKER — Paducah, Ky.
District Agent Home Demonstration Work in the Extension Division

ELLIOTT, NORRIS RAYMOND, B. S. IN HORT. — 326 Grosvenor Ave.
Assistant Professor of Horticulture, Acting Head of the Department of Horticulture in the Experiment Station, Leader in Horticulture in the Extension Division

EWAN, AVORY EARLY, B. S. IN AGR. — 708 South Limestone
Superintendent of Experiment Fields in the Experiment Station

FELTNER, JAMES M. — London, Ky.
Assistant in Boys' Club Work in the Extension Division

GARMAN, HARRISON, D. SC. — 628 South Limestone
Professor of Entomology, Head of the Department of Entomology and Botany in the Experiment Station

GOOD, EDWIN STANTON, M. S. — Nicholasville Pike
Chairman of Animal Husbandry Group, Professor of Animal Husbandry, Head of the Department of Animal Husbandry (Beef Cattle, Sheep and Swine), in the Experiment Station, Leader in Animal Husbandry in the Extension Division

HANKINS, ORVILLE G., B. S. IN AGR. — 333 Transylvania Park
Assistant in Boys' Club Work in Extension Division

HARMS, AMANDA HELEN, B. S. — 228 Lexington Ave.
Assistant Pathogenic Bacteriologist, Department of Animal Husbandry in the Experiment Station

HATHAWAY, CARRIE LEE — 481 East Main St.
Seed Analyst in the Experiment Station

HEALY, DANIEL JOSEPH, M. D., C. M. — 530 Sayre Avenue
Professor of Bacteriology, Bacteriologist, Department of Chemistry in the Experiment Station

HOOPER, JOHN JULIAN, M. S. A. — 609 South Limestone
Professor of Animal Husbandry, Head of the Department of Dairy Husbandry in the Experiment Station, Leader in Poultry in the Extension Division

HORLACHER, LEVI JACKSON, B. S. IN AGR. — 333 Transylvania Park
Instructor in Animal Husbandry, Assistant in Animal Husbandry in the Experiment Station

HUGHES, MORGAN O. — Bowling Green, Ky.
Special Agent in the Extension Division

HUMPHREY, JOHN REGESTER — 597 Boonesboro Ave.
Professor of Marketing, Head of the Department of Markets in the Experiment Station, Specialist in Markets in the Extension Division

HUTSON, JOHN B., B. S. IN AGR. — 303 Grosvenor Ave.
Assistant in Farm Management in the Extension Division

ILER, WAYNE DICKERSON — 655 Maxwellton Court
Assistant Chemist, Department of Chemistry in the Experiment Station

*INGRAM, ELMER
Inspector, Feeds and Fertilizers in the Experiment Station

JEWETT, HOWARD HERMAN, M. A. — 152 East High St.
Research Assistant Entomologist and Botanist in the Experi-periment Station

JONAS, MRS. MARGARET D. — Louisville, Ky.
District Agent Home Demonstration Work in the Extension Division

JONES, ROGER WALTER — 216 Bell Court East
Inspector, Feeds and Fertilizer in the Experiment Station

KARRAKER, PERRY ELMER, M. A. — 333 Transylvania Park
Assistant Professor of Soils, Assistant Agronomist in the Experiment Station

KERCHER, OTIS, B. S. IN AGR. — 326 Grosvenor Ave.
State Leader, Boys' Club Work in the Extension Division

KINNEY, EDMUND J., B. S. IN AGR. — 465 Woodland Ave.
Associate Professor of Agronomy, Assistant Agronomist in the Experiment Station, Specialist in Agronomy in the Extension Division.

LABACH, JAMES OSCAR, M. S. — 128 S. Ashland Ave.
Director, Public Service Laboratories in the Experiment Station

LEE, OWEN SCOTT, B. S. — 359 Aylesford Place
Assistant Chemist, Department of Fertilizer Control in the Experiment Station

LOGAN, LULIE, A. B. — Leestown Pike
District Agent Home Demonstration Work in the Extension Division

†MCFARLIN, JOHN WILLIAM, B. S.
Chief Food Inspector, Food and Drug Department in the Experiment Station

---

*On leave of absence.
†Food and drug inspection work discontinued June 18, 1918.

McHARGUE, JAMES SPENCER, M. S. 411 Transylvania Park
Chemist, Department of Chemistry in the Experiment Station

MARTIN, JAMES HOLMES, B. S. IN AGR. 327 South Upper St.
Instructor in Poultry, Assistant in Poultry, Department of Animal Husbandry in the Experiment Station

MATHEWS, CLARENCE WENTWORTH, B. S. 660 South Limestone
Professor of Horticulture, Head of the Department of Horticulture in the Experiment Station.

MERRIMAN, FRANCIS E., B. S. IN AGR. Louisville, Ky.
District Agent, County Agent Work in the Extension Division

MILTON, ROY HARLAN, B. S. IN AGR. 424 Woodland Ave.
Superintendent of Experiment Station Farm

MORGAN, GEOFFREY, 365 Aylesford Place
State Agent, County Agent Work, Extension Division

MUTCHLER, FRED, PH. D. 337 Transylvania Park
Director of Extension Division

NELSON, BOLLING G. Hopkinsville, Ky.
District Agent, County Agent Work in the Extension Division

NICHOLLS, WILLIAM DURRETT, M. S. A. 19 University Place
Professor of Farm Management, Head of the Department of Farm Management in the Experiment Station, Leader in Farm Management in Extension Division

NISWONGER, HOLLY RAY, M. A. 550 East Main St.
Assistant in Horticulture, Extension Division

NUTTER, JOHN WILLIAM 257 South Limestone St.
Superintendent of Dairy Farm, Department of Animal Husbandry in the Experiment Station

OLNEY, ALBERT JACKSON, B. S. 416 Transylvania Park
Assistant Professor of Horticulture, Assistant Horticulturist in the Experiment Station

PERRY, HOMER, B. S. IN AGR. 414 Columbia Ave.
Seed Analyst in the Experiment Station

PERRY, MARGARET J. 414 Columbia Ave.
Seed Analyst in the Experiment Station

PETER, ALFRED MEREDITH, D. SC., F. A. A. 268 East Maxwell
Professor of Soil Technology, Head of the Department of Chemistry in the Experiment Station

PINNELL, WALTER REDMON, M. D. 251 Delmar Ave.
Special Bacteriologist, Public Service Laboratories in the Experiment Station

PONTIUS, ROBERT LORING, V. S. 229 Rodes Ave.
Professor of Animal Pathology, Veterinarian in the Experiment Station

*PORTER, CHILTON SCOTT, A. B., PH. G. 430 East Maxwell
Drug Inspector, Food and Drug Department in the Experiment Station

RATLIFF, DOROTHY 209 East High St.
Specialist in Cheese Work in the Extension Division

RHOADS, WAYLAND, B. S. IN AGR. Nicholasville Pike
Beef Cattle Specialist in the Extension Division

*ROACH, GEORGE MALCOLM
Inspector, Food and Drug Department in the Experiment Station

ROBERTS, GEORGE, M. S. 340 Transylvania Park
Professor of Agronomy, Head of the Department of Agronomy in the Experiment Station, Specialist in Agronomy in the Extension Division

RODES, WILLIAM, M. S. 152 East High St.
Chemist, Department of Fertilizer Control in the Experiment Station

ROE, MABEL LEWIS, PH. D. 450 S. Ashland Ave.
Assistant Plant Pathologist in the Experiment Station

SHEDD, OLIVER MARCH, M. S. 348 Linden Walk
Chemist, Department of Chemistry in the Experiment Station

SIMMONS, WILLIAM HERBERT, V. S. 321 Clifton Ave.
Specialist in Veterinary Science in the Extension Division

SLABE, D. D. 326 Grosvenor Ave.
Poultry Specialist in the Extension Division

SPEARS, HOWELL DAVIS, M. S. 466 West Sixth St.
Chemist, Department of Feed Control in the Experiment Station

SPEED, JAMES Phoenix Hotel
Editor

---

*Food and drug inspection work discontinued June 18, 1918.

SUGG, JOHN A., JR.,
Assistant in Boys' Club Work in the Extension Division

SUTTON, FREDERICK JAMES, M. S. IN AGR. 416 Transylvania Park
Assistant Professor of Horticulture, Assistant Horticulturist in the Experiment Station, Assistant in Horticulture in the Extension Division

TERRELL, WILLIS GRANVILLE 137 East Second St.
Inspector, Feeds and Fertilizers in the Experiment Station

TURNER, JOB DARBIN, B. PED., LL. B. 135 Washington Ave.
Head of the Department of Feed Control in the Experiment Station

VAUGHN, ERLE CLEVELAND, A. B. 304 S. Limestone
Assistant Entomologist and Botanist in the Experiment Station

WEAVER, LELAND E., B. S. IN AGR. 302 Grosvenor Ave.
Assistant in Poultry in the Extension Division

WILFORD, EDWARD JAMES, B. S. IN AGR. 927 S. Limestone
Instructor in Animal Husbandry, in charge of Meat Laboratory; Assistant in Animal Husbandry in the Experiment Station

WOLCOTT, MRS. HELEN, M. D. 338 Grosvenor Ave.
State Agent Home Demonstration Work in the Extension Division

WYATT, GEORGE T. Olmstead, Ky.
District Agent, County Agent Work in the Extension Division

*YAXIS, GEORGE T., M. S. A.
Assistant in Animal Husbandry in the Experiment Station

---

*Resigned June 1, 1918.

Clerical Staff

ADAMS, HAZEL — 629 Chestnut St.
Clerk in the Extension Division

CASWALL, ETHEL V. T. — 333 Grosvenor Ave.
Clerk, Department of Chemistry in the Experiment Station

CASWALL, JESSIE FRAZER — 333 Grosvenor Ave.
Clerk, Department of Agronomy

CRAIN, LOTTIE — 219 East High St.
Clerk in the Extension Division

DAVIESS, MARY ELLA — 124 Hagerman Court
Clerk, Department of Animal Husbandry in the Experiment Station

DRAKE, MRS. ELLA FOLEY
Clerk, Department of Animal Husbandry in the Experiment Station

DUCKWALL, RUTH — Patterson Hall
Clerk, Department of Farm Management in the Experiment Station

ENGLERT, MARY — Paducah, Ky.
Clerk in the Extension Division

GALLOWAY, ELIZABETH — Bowling Green, Ky.
Clerk in the Extension Division

GRANDUCCI, LAURA CATHERINE — 242 South Limestone
Clerk, Department of Animal Husbandry in the Experiment Station

GRAVES, CELESTINE — Hopkinsville, Ky.
Clerk in the Extension Division

GINOCCHIO, OLEVA LOUISE — 240 Lexington Ave.
Secretary to the Dean and Director

HUSTON, MABEL — 257 South Limestone
Clerk, Public Service Laboratories in the Experiment Station

JONES, MRS. ANNA BERRY — 720 East High St.
Secretary to the Director of Extension

KIDD, SUSAN COGAR — 326 Harrison Ave.
Secretary to the Director of Extension

LIPPS, THERRESSA — 550 Rose St.
Clerk in the Extension Division

LISTON, LILLIE FRANCES — 270 S. Limestone
Secretary, Creamery License Section in the Experiment Station

LYMAN, MANILA — 266 S. Limestone
Clerk, Department of Animal Husbandry in the Experiment Station

McCULLOUGH, ANNE
Clerk, Department of Administration in the Experiment Station

MEIER, KATHERINE — 442 N. Limestone
Clerk in the Extension Division

RYAN, MARGARET C. — 135 Walton Ave.
Clerk, Boys' Club Work in the Extension Division

SNELL, MARY F. — 137 East Fourth St.
Clerk in the Extension Division

SNODGRASS, GRACE — 431 East Sixth St.
Librarian in the Experiment Station

SOMMER, GERTRUDE — Louisville, Ky.
Clerk in the Extension Division

TERRY, LILA BEATRICE, A. B. — 114 Woodland Ave.
Clerk, Department of Entomology and Botany in the Experiment Station

UTTERBACK, FANNIE WALLACE — 447 Davidson Court
Clerk, Department of Feed Control in the Experiment Station

WALLIS, ANNA, A. B. — 326 Aylesford Place
Clerk, Department of Fertilizer Control in the Experiment Station

WHITE, ELSIE — 148 Fourth St.
Clerk in the Extension Division

WILSON, HELEN AVERITT — 218 Ashland Ave.
Clerk in the Extension Division

WYATT, MRS. G. T. — Paducah, Ky.
Clerk in the Extension Division

COUNTY AGRICULTURAL AGENTS

NAME	OFFICIAL STATION	COUNTY
Allen, Arch M.	Morganfield	Union
Amburgey, Maryland	Monticello	Wayne
Amburgey, L. M.	Catlettsburg	Boyd
Baker, Guerney C.	Louisa	Lawrence
Bate, R. O.	Cynthiana	Harrison
Bradford, Lawrence A.	Carrollton	Carroll
Browder, W. W.	Hartford	Ohio
Bowles, Kimber J.	West Liberty	Morgan
Carman, Armiel	Clinton	Hickman
Caudill, H. D.	Whitesburg	Letcher
Clough, Robert S.	Benton	Marshall
Cunningham, O. L.	Burkesville	Cumberland
Davis, James S.	Pineville	Bell
Frye, P. M.	Booneville	Owsley
Garvin, A. L. (Colored)	Harrodsburg	Mercer
Gentry, J. C.	Harrodsburg	Mercer
Gordon, Angus N.	Henderson	Henderson
Gordon, Morris M.	Fulton	Fulton
Graddy, Ivan C.	Greenville	Muhlenberg
Harrison, H. H.	Stanton	Powell
Harth, Joseph	Hardinsburg	Breckinridge
Hensley, B. S.	Paintsville	Johnson
Hill, Chas. L.	Calhoun	McLean
Horning, J. O.	Morgantown	Butler
Hunter, John A.	Scottsville	Allen
Johnson, Richard T.	Prestonsburg	Floyd
Jones, T. H.	Beattyville	Lee
Kuykendall, J. E. (Colored)	Bowling Green	Warren
Kilpatrick, E. J.	Paducah	McCracken
Kirk, George G.	Maysville	Mason
Laine, Henry A. (Colored)	College Hill	Madison
Lowry, S. J.	LaGrange	Oldham
McSwain, Horace E.	Vanceburg	Lewis
Mayhew, Earl	Harlan	Harlan
Miller, J. L.	Campbellsville	Taylor
Mitchell, B. H.	Mayfield	Graves
Morgan, L. F.	Jackson	Breathitt
Morgan, Samuel	Grayson	Carter
Morgan, Ralph J.	Lexington	Fayette

NAME	OFFICIAL STATION	COUNTY
Nance, Gordon B.	Smithland	Livingston
Owsley, W. W.	Springfield	Washington
Pullen, J. Stanley	Munfordville	Hart
Reynolds, W. R.	Tyner	Jackson
Robbins, L. S.	Lexington	Fayette
Rudder, Roscoe R.	Williamsburg	Whitley
Sandlin, L. D.	Manchester	Clay
Spence, Robt. F.	Berea	Madison
Spickard, F. H.	Dixon	Webster
Sutton, W. D.	Burlington	Boone
Swanner, R. B.	London	Laurel
Taylor, John T.	Louisville Care Board of Trade	Jefferson
Taylor, Chas. L.	Bardstown	Nelson
Trice, Walter G.	Bowling Green	Warren
Tye, William	Barbourville	Knox
Varney, A. H.	Pikeville	Pike
VanNalta, L. S.	Lawrenceburg	Anderson
Warren, R. L.	Shelbyville	Shelby
Wicklund, C. A.	Independence	Kenton
Whitehouse, J. W.	Owensboro	Daviess
Whitlow, Rodney	Russellville	Logan
Wilson, W. C.	Somerset	Pulaski
Wilkey, C. R.	Cadiz	Trigg
Winton, Berlie	Hawesville	Hancock
Worthington, J. W.	Alexandria	Campbell

HOME DEMONSTRATION AGENTS

District Agents

NAME	OFFICIAL STATION	COUNTY
Durham, Minnie Parker	Box 247 Paducah	McCracken
Jonas, Mrs. Margaret D.	Room 9, Bd. of Trade, Louisville	Jefferson
Logan, Lulie	Experiment Station, Lexington	Fayette

Agents

Ashbrook, Artie	Mayfield	Graves
Beardsley, Mrs. Sue	Harrodsburg	Mercer
Brunhoff, Else	Y. W. C. A. Annex, Louisville	Jefferson
Carter, Leona B.	West Liberty	Morgan
Coakley, Mrs. Frances (Col.)	615 Ohio St., Paducah	McCracken
Crowder, Mrs. Margaret	Bardstown	
Crutcher, Mary C.	Maple St., Winchester	Clark
Deitemeier, Wilhelmine	2519 Homestead Place, Cincinnati, O.	Kenton
Evans, Mrs. Octavia	Owensboro	Daviess
Fouse, Mrs. Lizzie (Col.)	219 N. Upper St., Lexington	Fayette
Goddard, Mrs. Anna B.	Harrodsburg	Mercer
Goldnamer, Lillie C.	Elizabethtown	Hardin
Golsan, Mrs. Martha M.	406 Pleasant St., Paris	Bourbon
Grubbs, Mrs. Jennie C.	Junction City	Boyle
Hall, Jacqueline	213 N. Walnut St., Cynthiana	Harrison
Harbison, Mrs. Mary	Shelbyville	Shelby
Hatton, Mrs. Geo. P.	Manchester	Clay
Hill, Mrs. M. L.	Russellville	Logan
Hills, Helen S.	Care Mrs. W. J. Hills, Paducah	McCracken
Kline, Mrs. W. H.	Smithland	Livingston

NAME	OFFICIAL STATION	COUNTY
Letcher, Jane Ingram	Morganfield	Union
Lowry, Mrs. C. B.	258 Market St., Lexington	Fayette
Lyle, Mrs. Ozema Tully	Paducah	McCracken
McDowell, Mary	Shelbyville	Shelby
Meguiar, Maude	Franklin	Simpson
Perkins, Mrs. R. C.	Williamsburg	Whitley
Potter, Mrs. Martha M.	Bowling Green	Warren
Ratliff, Dorothy	Experiment Station, Lexington	Fayette
Rawlings, Mrs. Dan	Corbin	Whitley
Settle, Lucy Belle	LaCenter	Ballard
Sonnerday, Dora	2344 Ohio Ave., Cincinnati, O.	
Spiller, Mattie L. (Col.)	22 E. Ninth St., Covington	Kenton
Truman, Lillian S.	Experiment Station, Lexington	Fayette
Wadlington, Rheda	Govt. Bldg., Ashland	Boyd
Weever, Mrs. Susan G.	Henderson	Henderson
Wilson, Margaret	Fulton	Fulton

STANDING COMMITTEES OF THE SENATE

ATHLETICS

Professors Freeman (Chairman), Curtis, Lafferty, D. V. Terrell, Summers.

BULLETINS

Professors Dantzler (Chairman), Gillis, Wiest, Associate Professor Baker, Mr. Patrick.

CHAPEL EXERCISES

Professors Melcher (Chairman), Davis, Lampert, Assistant Professor Cornell.

COMMENCEMENT EXERCISES

Professors Farquhar (Chairman), Funkhouser, Assistant Professor Mabie, Major Byars.

ENTERTAINMENT

Professors Zembrod (Chairman), Melcher, Miss Jewell, Major Byars.

GRADUATE STUDY

Professors G. Terrell (Chairman), Tuttle, Tuthill, Good, Freeman.

LIBRARY

Professors Tuttle (Chairman), G. Terrell, Tuthill, Hooper, W. S. Anderson, Noe.

MILITARY AFFAIRS

Major Byars (Chairman), Assistant Professor Downing, Associate Professors Kinney, Killebrew.

ORATORY AND DEBATE

Assistant Professor Mabie (Chairman), Professors Noe, Dantzler.

STUDENT PUBLICATION

Professors Grehan (Chairman), Farquhar.

STUDENT WELFARE

Professors Melcher (Chairman), Pryor, Barr, Mrs. Stout.

STUDENT LOAN FUND

Assistant Professor Butt (Chairman), Professors Hooper, Frankel, Assistant Professor McFarland.

Y. M. C. A.

Professors Melcher (Chairman), Roberts, Bryant, Maxson, Tigert.

PROPOSED SENATE LEGISLATION

Professors G. Terrell (Chairman), Tuttle, Boyd, Gillis.

EXTENSION

Professors Funkhouser (Chairman), Jones, Rhoads, Noe, Grehan, Mr. Speed.

APPOINTMENTS

Professors Rhoads (Chairman), Noe, Gillis.

THE UNIVERSITY COUNCIL

The Council consists of the President (Chairman), the Deans of the colleges, the Chairman of the Graduate School Committee, the Dean of Men, the Dean of Women, the Registrar (secretary ex-officio), the Director of the Experiment Station, the Director of Extension, together with two members elected annually by the Senate. The members are: The President of the University, Deans Anderson, Boyd, Cooper, Lafferty, Norwood, D. V. Terrell, Simrall, Melcher, and Professors Good, G. Terrell, Tuttle, Gillis. The Registrar is ex-officio Secretary.

THE UNIVERSITY SENATE

The Senate is the legislative body of the University. It consists of the President, the Deans of the various colleges, the Director of the Experiment Station, the Director of Extension, the Dean of Men, the Dean of Women, the Registrar, Professors, Associate Professors, the Business Agent, the Librarian, and Assistant Professors.

BOARD OF CONTROL—PATTERSON HALL

Mrs. Shelby T. Harbison (Chairman), Mrs. Chas. J. Smith, Mrs. A. M. Harrison.

The President is ex-officio member of all committees.

Part II
GENERAL INFORMATION

HISTORY AND EQUIPMENT

History

AGRICULTURAL and Mechanical Colleges in the United States Owe their origin to an act of Congress entitled "An act donating public lands to the several states and territories which may provide Colleges for the benefit of agriculture and the mechanic arts," approved July 2, 1862. The amount of land donated was 30,000 acres for each representative in the National Congress. Under this allotment Kentucky received 330,000 acres. Several years elapsed before the Commonwealth established an agricultural and mechanical college under this act. When established it was not placed upon an independent basis, but was made one of the colleges of Kentucky University, now Transylvania University, to which institution the annual interest of the proceeds of the congressional land-grant was to be given for the purpose of carrying on its operations. The land scrip had meanwhile been sold for fifty cents an acre, and the amount received—$165,000—invested in six per cent. Kentucky State bonds, of which the State became custodian in trust for the college.

The connection with Kentucky University continued until 1878, when the act of 1865, making it one of the colleges of said university, was repealed; and a commission was appointed to recommend to the legislature of 1879-80 a plan of organization for the institution, including an agricultural and mechanical college, such as the necessities of the Commonwealth required.

The city of Lexington offered to the Commission (which was also authorized to recommend to the General Assembly the place which, all things considered, offered the best and greatest inducements for the future and permanent location of the college) the city park, containing fifty-two acres of land within the limits of the city, and thirty thousand dollars of city bonds for the erection of the buildings. This offer the county of Fayette supplemented by twenty thousand dollars in county bonds, to be used either for the erection of buildings or for the purchase of land. The offers of Lexington and the county of Fayette were accepted by the General Assembly.

By the act of incorporation and the amendments thereto, constituting the charter of the Agricultural and Mechanical College of Kentucky, liberal provision is made for educating, free of tuition, the energetic young men and women of the Commonwealth whose

means are limited. An act of the General Assembly of the Commonwealth of Kentucky, approved March 16, 1908, changed the style and title of the institution from Agricultural and Mechanical College to that of State University, Lexington, Kentucky. The General Assembly, by an act approved March 15, 1916, modified the title to University of Kentucky, Lexington, Ky. The University, with the additional departments which have, from time to time, been opened as the means placed at the disposal of the trustees allowed, is doing a great work in advancing the educational interests of Kentucky. Being entirely undenominational in its character, it appeals with confidence to the people of all creeds and of no creed, and will endeavor, in strict conformity with the requirements of its organic law, to afford equal advantages to all, exclusive privileges to none. The liberality of the Commonwealth, in supplementing the inadequate annual income arising from the proceeds of the land scrip invested in State bonds, has enabled the trustees to begin and carry on, upon a scale commensurate with the wants of our people, the operation of the institution whose management and oversight have been committed to them by the General Assembly of Kentucky.

Scope of Studies

In the act of Congress making provision for the class of institutions to which the University belongs, it is declared that "their leading object shall be, without excluding other scientific and classical studies, and including military, to teach such branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." To the three departments of agriculture, the mechanic arts, and military science, contemplated in the act as indispensable, an experiment station has been added by the United States, and liberal provision has been made for instruction in all branches of science and in the classics, so that this institution is far more than an agricultural and mechanical college, embracing as it does, not merely the three original departments, but many others.

Kentucky Agricultural Experiment Station

The Agricultural Experiment Station of the University was established by the Executive Committee of the Board of Trustees, September, 1885, when the department was organized and a director appointed. In 1886 the Experiment Station was recognized and named by the General Assembly of Kentucky. In 1887 it became the bene-

ficiary of the first annual appropriation of $15,000, under the Hatch Act providing for the establishment of agricultural experiment stations for the states and territories. In 1906 an act of Congress, for the more complete endowment of agricultural experiment stations, known as the Adams Act, appropriated to each state and territory $5,000 for the year ending June 30, 1906, and the same sum with an increase of $2,000 per annum for five years, after which the maximum of $15,000 should continue without change. In 1912 the Kentucky Legislature voted an appropriation of $50,000 annually for the benefit of the Experiment Station.

The work of the Experiment Station is directed to two objects: 1. To a constant succession of experiments made by specialists, in order to learn which application of science will insure the best returns from the farm, the garden, the orchard, the vineyard, the stockyard, and the dairy; 2. To the publication of bulletins announcing such results of the experiments as are found to be valuable to the people of Kentucky who seek profit from any of the prime sources of wealth—the soil, the flock and the herd.

The results of experiments have been published in thirty annual reports, two hundred and fifteen bulletins and twenty circulars; general appreciation of their utility is shown by the fact that, while no bulletins are sent except upon application, the present mailing list of the Experiment Station contains about twenty thousand names, and is constantly increasing.

The Experiment Station is well equipped as to buildings and apparatus and owns a good experiment farm of 240 acres, conveniently situated. It has a staff of 90 persons engaged in eleven departments of research and in correspondence with other stations and with farmers thruout the State. The Kentucky Agricultural Experiment Station is not only an important adjunct to the University in the education of students for the leading industrial pursuits, but it is also, thru its continual diffusion of knowledge to a large proportion of our population, an institution of great usefulness to the Commonwealth.

Location

The University is located in the former city park, in the southern part of the city of Lexington and near the Cincinnati Southern Railway. The site is elevated and commands a good view of much of the city and of the surrounding country.

Lexington, now a growing city of forty thousand inhabitants, is in the heart of the far-famed Blue Grass region, a region distinguished

for fertility and healthfulness, wealth and beauty. Numerous schools and churches, an intelligent and refined population, well paved streets, handsome buildings, extensive water works and an unsurpassed system of street electric railways, make Lexington attractive as a seat of learning and place of residence, while the splendid stock farms scattered over the large body of fertile country around it afford advantages hardly equaled elsewhere for the student who desires to become familiar with the best breeds of horses, cattle, sheep and swine in America. Moreover, with railroads diverging in seven directions, Lexington is the railroad center in Kentucky and is in direct connection with Louisville, Maysville, Huntington and Chattanooga, and with more than seventy counties of the Commonwealth. And when to the electric railways now in operation to Georgetown, Paris, Versailles, Frankfort and Nicholasville, those projected to Winchester and Richmond will be added, the hourly trains of these roads will enable students residing near them to attend the University conveniently from their homes.

Grounds

The campus of the University consists of sixty-five acres of land, located within the corporate limits of Lexington. The South Limestone electric car line extends along the western border of the campus, affording opportunity to reach in a few minutes any part of the city. The campus is laid out in walks, drives and lawns, and is planted with a choice variety of native and exotic trees, and shrubs, to which additions are constantly being made. Four acres, forming the northeast portion of the campus, enclosed and provided with grand stands, are devoted to the field sports of the students.

The Mulligan tract of thirteen acres on Rose street was purchased by the University in 1917. About three-quarters of a mile south of the campus, on the Nicholasville pike, is the Experiment Station farm, consisting of two hundred and forty-three acres. Here the field experiments of the Station are conducted, and students have opportunities to witness tests of varieties of field crops, dairy tests, fertilizer tests, fruit spraying tests—in short, all the scientific experiments of a thoroly organized experiment station. The front of the farm is pasture and orchard. The rear portion is divided off into two one-tenth acre plots, for convenience in making corn tests.

Buildings

Administration Building—This is a structure of stone and brick, 140x68 feet. It contains the general administrative offices as well as the chapel in which the students and the faculty meet for convocation,

and in which are held public gatherings and such other meetings as bring together the entire student body. The remaining space in this building is occupied by recitation rooms.

Chemistry Buildings—The Department of Chemistry is housed in two buildings. The Old Experiment Station Building, seventy feet in length by fifty-four feet in width and two stories high, is devoted to advanced work in chemistry. The new building, with its fine lecture hall, recitation rooms and laboratory, is used exclusively for the large classes in general chemistry. It is the first part of a projected larger building.

Mechanical Hall—This building is of native limestone and brick. It is designed to take care of the work in the College of Mechanical and Electrical Engineering. Shops, laboratories, recitation rooms, lecture rooms, drawing rooms and apparatus are provided to give comprehensive training in the science of dynamic engineering.

Engineering Woodshop—This is a handsome brick building, 240x40 feet, that has recently been completed. It will be used as a new woodshop for the College of Engineering.

Science Hall—This building, erected for the departments of natural science, is three stories in height, 96x97 feet, of pressed brick and trimmed with Bowling Green stone. The first and second stories are occupied by offices, laboratories and lecture rooms, the latter being equipped with opera chairs, projection lanterns and other suitable furnishings. The third floor is occupied by the College of Law.

Gymnasium and Armory—This structure of pressed brick and Bedford stone, 100x157 feet, with the central part three stories high, the right wing one and the left two, stands north of the Administration Building. The first floor of the central portion contains the Armory, the offices of the Commandant, and the Physical Director for Men. The second floor is occupied by the Y. M. C. A. Hall, and the Trustees' Room. The third floor is divided into two literary halls for men and the Alumni Hall. All these rooms are commodious and well adapted to their purposes. In the basement of the left wing are baths, lockers for men, wash stands, closets, and a swimming pool. The second floor, the gymnasium proper, is equipped with first class apparatus. The right wing, Buell Armory, which is 48x96 feet, is used as a drill room during bad weather.

Education Building—This building was erected for the use of the Department of Education. The structure is of pressed brick and Bedford stone, and the design follows the most approved style of modern school architecture. The first and second floors contain class-rooms, a department library-room and two offices.

Library—This building is the gift of Andrew Carnegie. It is located on the court between the Administration Building and the ex-President's home, is fifty-six feet square, two stories high, including the tall basement of range-ashlar, is built of pressed brick, and trimmed with terra cotta.

Agricultural Hall—This building, for the erection of which provision was made by the Board of Trustees at their meeting in December, 1906, was completed and occupied in the early summer of 1908. It is three stories in height, 45x100, constructed of pressed brick and Bedford stone and is designed to be a wing of the larger structure which the College of Agriculture will eventually require.

The basement contains the dairy laboratory, an office and a food and textile laboratory for the Home Economics Department, potting and propagating room and heating plant. On the first floor are the offices of the Departments of Horticulture and Home Economics, a practice dining room and two food laboratories. On the second floor are the offices of the Dean, the Departments of Animal Husbandry and Farm Management, two clothing laboratories, and a lecture room. The third floor is given over to the work of the Agronomy Department and contains a laboratory for teaching soil physics and soil fertility, a general crops laboratory, a lecture room and an office. A photographic laboratory and a dark room are also on this floor. A modern iron-frame laboratory greenhouse for the study of living plants and for experiments is attached to the rear of the Agricultural Building.

Civil Engineering and Physics Building—This building was planned for the technical work of the Department of Civil Engineering and the Department of Physics. It is a three-story brick structure 79x127 feet, trimmed with cut stone and occupies the highest point on the University campus. It has floor space of about 40,000 square feet and contains offices, lecture rooms and laboratories to meet the growing needs of the department for which it was planned.

Mining Engineering Buildings—These consist of two buildings, constructed of pressed brick with oolitic limestone trimmings, set at right angles to each other and separated with a passageway twenty-five feet wide. The main building is 45x100 feet, two stories high, with basement ten feet high. This is used for class rooms, reading room, etc. It also contains the State Geological Museum and the offices of the State Department of Mines, with offices for the Chief Inspector of Mines and the First Assistant Inspector. The second building is 40x80 feet, and two stories high. It is devoted to laboratory work and is one of the largest mining laboratories in the country.

Observatory—The astronomical observatory is located on the south-

eastern side of the University campus. It is a substantial brick structure housing an eight-inch equatorial refractor and other necessary appliances for observational work.

Dormitories—The two large brick dormitories on the campus have recently been remodeled for use as classrooms.

President's Residence—The President's residence is a large two-story brick building east of the Physics Building; it was purchased from the Mulligan heirs in 1917 and has been enlarged and repaired.

President Emeritus Patterson's Home—This is a commodious two-story brick structure to the east of the Library.

Patterson Hall—This building, the residence of the women students of the University, is a large and handsome three-story brick structure of a hundred and fifty feet front built on a fine site of about three acres fronting two hundred and ten feet on South Limestone street, on which is a line of the City Electric Railway. Within an eighth of a mile of the University on the south, a half mile of the court house, principal hotels and the postoffice on the north, and within easy walking distance of the city churches, Patterson Hall is, for all purposes, admirably located. The building is heated by steam, lighted by electricity and supplied with hydrant and cistern water. It has a front veranda of 14x68 feet, wide halls, a wardrobe in every bedroom, and conveniently located bath rooms. With walks, drives and numerous old forest trees, the spacious front lawn, one of the most beautiful in Lexington, is an inviting place. Ample provision has been made for exercise on the rear lawn, on which are tennis courts and croquet grounds. The gymnasium for women is also contained in the building.

Scovell Hall—This handsome structure is located on South Limestone street, one-fourth of a mile from the campus, and was completed in the winter of 1904. The building is two stories high with a basement and is constructed of pressed brick with oolitic limestone trimmings. The foundation is of Kentucky gray limestone faced with broken ashlar oolitic limestone. A large portico, with columns extending from the first line to the pediment on a level with the cornice, forms an attractive feature of the building. The cornice is massive, with large brackets. The general design of the building is colonial, adhering mainly to classic proportions. The original building was 114x60 feet. A large addition to this building, running 92 feet parallel to Washington Avenue and 115 feet parallel to Limestone street, was completed in 1913. This addition provides from forty to fifty additional work rooms and contains 20,700 feet of floor space.

Buildings on Experiment Station Farm—The farm buildings include four dwelling houses, including the residence of the Dean and

Director, a modern and thoroly equipped dairy farm, a general utility barn, two tobacco barns, two beef cattle barns, one sheep barn, one barn for the study and treatment of live stock, one hog house, numerous small individual hog houses, a seed house for the storage and study of farm crops, a hog cholera serum laboratory, hyperimmune sheds, a new and commodious conservatory, a farm gas engine laboratory, a stock-judging pavilion, an abattoir for student instruction, manure sheds, etc.

The Library

The University Library embraces all the books belonging to the colleges and schools of the University. These consist of the General Library, the Law Library, the Experiment Station Library and the various department libraries. The total number of volumes is 33,869, divided as follows:

General Library	17,706
Department Libraries	11,520
Experiment Station Library	6,975
Total	36,201

The University Library is a government depository and receives all the official publications of the United States Government.

The Experiment Station Library is regarded as a branch of the general library and is administered under the direction of the University librarian. In it are placed depository catalogs of the publications of the U. S. Department of Agriculture and of the Experiment Stations of the various states.

Three hundred and twenty-four periodicals are regularly received by the General Library and one hundred and fifty-three by the experiment station library.

Laboratories

Agronomy—The Department of Agronomy has laboratories on the third floor of the Agricultural Building for instructional work in farm crops and in soils. The farm crops laboratory is equipped, and samples of farm crops are provided for laboratory work in farm crops. The soils laboratory is equipped for work in soils physics and soil fertility, and contains the usual apparatus found in such laboratories. The Department also has a laboratory on the first floor of Scovell Hall equipped for research work in certain lines of soil technique. This laboratory is available for a limited amount of advanced instructional work.

Animal Industry Group—A stock pavilion 68x112 ft. having a show arena 68x85 ft., with a seating capacity of 400, is used for the judging

of pure-bred live stock and the various market classes and grades of animals. This arena is so arranged that carcasses of beef, pork and mutton, suspended from an overhead track, may be used for comparative studies. This building contains two class rooms, as well as a small incubation room to be used in connection with the laboratory work of one of the poultry courses.

The meat laboratory contains separate rooms for slaughtering, chilling, rendering and the blocking and cutting of meats. The laboratory also provides for the curing of meats. The cooler is chilled by the refrigerating machine which operates a cooler for serum in the hog cholera serum laboratory, and an ice tank with a capacity of 1,500 lbs. of ice a day. The study of carcasses is facilitated by a track scale.

In the basement of the Agricultural Building are situated the two dairy laboratories of the Animal Husbandry Department. In one of the laboratories the students are taught to test milk and cream for its butter fat content and also to determine the acidity of milk and to use the lactometer. In the second laboratroy the students are taught to make butter and cheese. The laboratories contain various kinds of separators, churns, butter workers, Babcock testers and other kinds of dairy equipment. Also the cows and dairy utensils at the dairy farm of the Experiment Station are utilized in teaching students. A three-story building on the farm of the Kentucky Agricultural Experiment Station is utilized in teaching students poultry husbandry. In the basement there is an 1,800 egg Mammoth incubator and various smaller incubators. The second floor contains rooms for the weighing and storage of feeds. The third floor is arranged as a class room for poultry instruction. The other equipment at the poultry farm consists of many different types of poultry houses and about 600 chickens and turkeys, all which constitute laboratory equipment for the teaching of poultry husbandry.

The biological laboratory of the Department of Veterinary Science, consisting of hyperimmune sheds and infection cots, was erected out of funds provided for in the act of 1912. The laboratory is a two-story brick building, with Bedford stone trimmings. The first floor contains a general preparation room, in which the hogs are washt and weighed; a large operating room, where the serum is drawn from the hyperimmunes; an enclosed room for the final bleeding of hyperimmunes; a room for the washing and sterilization of all instruments and utensils; and a room for the final preparation and bottling of serum. The second floor contains an office for the veterinarians in charge and a well equipped pathological and bacteriological laboratory for the study and

investigation of the diseases of farm animals. The basement contains two cold storage rooms in which the serum is stored; a room in which to mix the serum; a boxing and shipping room, and a room for the heating plant. The first floor and basement are made of reinforced concrete, and everything is arranged and managed in a sanitary manner. The hyperimmune sheds consist of concrete pens, having a capacity of from three to five hogs each.

In 1907 the Department of Animal Husbandry equipped a laboratory for the study of infectious abortion in cows and mares. The equipment consists not only of bacteriological but also biological apparatus, and the laboratories contain a great many of the modern inventions that are necessary for the scientific study of germ diseases. In addition to the general outlay of glassware, surgical instruments, stains, etc., the equipment consists of two gas incubators, one electric incubator, two high speed and one low speed centrifuges, various hot air and steam sterilizers, an autoclave, etc.

Botany—The Department of Botany occupies laboratories and class rooms on the first floor of the building formerly known as the old dormitory. One laboratory is a large room with seating capacity of about fifty students, and is equipped with tables, microscopes, lockers, and other apparatus for the work in general botany, and the more elementary specialized courses. A smaller laboratory is specially equipped for advanced work in plant physiology, and contains sterilizers, ovens, and much special apparatus. In addition there is a store room, dark room for photographic and lantern slide work, and private laboratory for research. The Department possesses an herbarium of about 8,000 specimens, and a small departmental library supplied with the principal journals.

Chemistry—A well furnished laboratory with balance room, nitrogen room, apparatus room and convenient office, comprising, in all, 1,300 square feet of floor space on the second floor of Scovell Hall, is devoted to the general chemical work of the Station, including analysis of soils, limestones and other materials of interest in agriculture, as well as research work. The laboratory is well supplied with the usual equipment for agricultural chemical analysis. Two other laboratories, covering, together, 900 square feet of space on the same floor, are devoted entirely to chemical research relating to agriculture. The department also has the use of a part of the Experiment Station conservatory and of three rooms in the basement for store rooms and work rooms.

In addition to the regular equipment for carrying on what may be designated routine work in general and analytical chemistry, the

Department of Chemistry in the College of Arts and Science is supplied with power machines for crushing and grinding coal and ores and for air pressure and vacuum work; electric combustion furnaces and large electric muffle; physico-chemical apparatus; platinum ware; apparatus for testing lubricating and burning oil for viscosity and flash point; apparatus according to Hempel, Orsat and others for the analysis of gases. In the department library will be found complete sets of the following periodicals: American Chemical Journal, Berichte der deutschen chemischen Gesellschaft, Journal of the Chemical Society (London), Journal of Industrial and Engineering Chemistry. Chemical Abstracts. Incomplete sets of the following magazines are being added to as rapidly as available funds will permit: Journal of the American Chemical Society, Zeitschrift fuer analytische Chemie, Chemical News, Journal of the Society of Chemical Industry, Journal Bulletin de la Societe Chimique (Paris), Inorganic chemistry is represented by such works as Messian, Traite de Chimie Minerale, 5 vols.; Dammer, Handbuch der anorganischen Chemie, 5 vols.; and many others less pretentious; Beilstein, Handbuch der organischen Chemie, 4 vols. in nine; Richter, Lexikon der Kohlenstoff-Verbindungen, 5 vols; Allen, Commercial Organic Analysis, 4 vols. in eight; and many other smaller works are for reference in the study of organic chemistry. The principal books on analytical, physical and technological chemistry and other branches of the subject are well represented.

Civil Engineering—The laboratory equipment consists of field instruments, described under apparatus materials laboratory road, cement and asphalt laboratories, also standard rattler for testing paving brick and apparatus for making tests of water and sewage.

The cement laboratory occupies a room in the Civil Engineering Building, and is provided with slate tables, testing machines, molding machines, standard steaming apparatus, copper drying apparatus, scales and such other accessories as are needed in making complete tests of cement and sand.

The Department of Civil and Highway Engineering has a fully equipped laboratory for testing crusher rock, sand, cement, brick, wood and block, stone, asphalt, coal tar products, and all kinds of road oils and dust preventives. This laboratory is in operation thruout the year and free tests will be made when materials are sent prepaid by any county or state official.

Entomology and Botany—The laboratories of the Department of Entomology and Botany of the Experiment Station occupy rooms on the second floor of the building on the corner of South Limestone

Street and Washington Avenue. They consist of a large general laboratory devoted to both entomology and botany in which are incubators, an autoclave, a steam sterilizer, a hot air sterilizer, microscopes and other apparatus required for the study of living things, both animals and plants. Adjoining this laboratory is a subdivision devoted to photography, in which are cameras suited to making enlargements and lantern slides, and others constructed for use with the miscroscope. The third room is occupied with the insect collections and is used as a private laboratory by the Head of the Department and assistants who are engaged in research work. A fourth laboratory is devoted to seed testing and is equipped with electric incubators, blowers for the removal of impurities, a refrigerator, chemical balance and other appliances employed in the testing of seeds either for purity or germination.

An herbarium, a reference collection intended primarily for use in prosecuting a study of the botany of Kentucky, is one of the best, if not the best in the State. It is placed in a large room on the same floor, used also as an assembly room on special occasions.

An out-laboratory, constituting an important part of the equipment of the Department, is an insectary, consisting of a head house and conservatory devoted to the study of the life-histories of plants and insects and of remedies for their injuries.

The office work for all these laboratories is done in the rooms adjoining them, which are furnished with a very good collection of technical works devoted to entomology and botany, including sets of most of the special serials.

Entomology and Zoology—The laboratories of the Department of Entomology and Zoology of the College of Arts and Science are devoted largely to instruction work and are located on the first floor of the Natural Science Building on the University campus. They consist of two large laboratories, one devoted chiefly to zoology, and the other to entomology. The lecture room of the Department seats about sixty students. A small private laboratory for making preparations and for the use of advanced students adjoins the lecture room; a collection room in which are cases containing types of skeletons of vertebrate animals is used also partly for advanced students.

The office of the department is on the same floor, and is furnished with a small working library devoted very largely to zoological and entomological subjects.

The laboratories are equipped with compound microscopes, microtomes, water baths, charts, a lantern and desks, and other equip-

ment regarded as necessary for giving students both a practical and theoretical acquaintance with entomology and zoology.

Experiment Fields—The Department of Agronomy has an extensive system of experiments in crop production and soil fertility in the State. Fifty-six acres of the Experiment Station farm are devoted to this work. Experiment fields are maintained at London, Berea, Lincoln Ridge (Shelby County), Greenville, Russellville, Paducah, Mayfield, and Campbellsville. There are more than a thousand plots on these fields devoted to the study of soils and crops under the various conditions represented by these different parts of the State. The results of this work are presented to the students in agriculture.

Feed Control—Under an act of the General Assembly of Kentucky of 1906, known as the Kentucky Concentrated Commercial Feeding Stuffs Law—a law regulating the manufacture and sale of commercial feeding stuffs in Kentucky—the feeding stuffs laboratory was established. This laboratory consists of a suite of four rooms and is located in the Kentucky Experiment Station Building. It is equipped with the latest improved scientific apparatus necessary for carrying on the work of the Department of Feed Control.

Fertilizer Control—The fertilizer laboratory is located in the southeast corner, second floor, of the Kentucky Agricultural Experiment Station Building. It is well lighted and consists of a laboratory proper 26x24 feet, and a balance room and office adjoining, 18x8 feet. The equipment comprises an electric furnace, electric oven, Kjeldahl nitrogen distilling and digestion apparatus, hot water baths and all the other necessary apparatus and appliances used in fertilizer work. Three chemists are actively engaged in analyzing fertilizers, and over fifteen hundred analysis were made during 1915. Commercial fertilizers are analyzed for their content of nitrogen, phosphoric acid and potash.

Public Service Laboratories

The Kentucky Legislature of 1918, merged the Department of Food and Drug Inspection under the State Board of Health, as far as the executive part of the act was concerned, leaving all the laboratory control work of the Board of Health to be done by the Agricultural Experiment Station. The Public Service Laboratories, a part of the Experiment Station organization, has been established to carry on the analytical work prescribed by law.

The laboratory work under the law includes: epidemiology, or the detection of contagious and infectious diseases; pathology, serology, or work along lines of serum testing; blood testing, as for instance

the Wesserman reaction and the typhoid (Widal reaction) diagnosis; sputa for tuberculosis, and other exudate examinations; sanitary bacteriology, or bacteriological examination of all substances that enter into food for human consumption, as for instance milk and water for harmful types of bacteria; the chemistry of food and drugs both from a standpoint of aduiteration or misbranding under the law, and from a view point of wholesomeness to the consumer; and research work along such lines as may be suggested from time to time.

The bacteriological laboratory contains all modern equipment for the examination of foods, waters and pathological specimens in the main laboratory, low temperature incubators, dust proof closet and similar equpiment in the smaller laboratory.

The laboratories for the chemical examination of foods, waters, etc., consist of one large laboratory fully equipped, and a small laboratory for research investigations, poison cases, etc., balance room and offices.

The laboratories for the drug work consist of laboratory, office and balance room, adequate to handle all matter of this nature.

The laboratories for food technology contain an electric baking oven, and other necessary apparatus for supplementing the chemical and bacteriological examinations of bakery products by practical tests.

The basement floor contains a large commercial oven and other baker's apparatus fitted up for the purpose of demonstrating on a large scale and for educational work. The laboratory arrangement and equipment of the department are among the best of those to be found in the country.

Geology—The department occupies one-half of the second floor of the Natural Science Building. The geological laboratory contains a study collection consisting of representative specimens of fossils and minerals. The mineralogical laboratory is arranged in its furnishings with special reference to its use as a mineral-testing laboratory. The geological lecture room, furnished with folding lecture-room seats, lantern-stand, sliding blackboard, wall screen and means for quickly darkening the room, is admirably adapted to recitation and lecture uses. The collections in mineralogy and paleontology are arranged and classified with special reference to their use in class instruction.

Home Economics

The Department of Home Economics is located in the Agricultural Building. Its laboratories for food and clothing are completely equipped in every way. There is a large laboratory for general cookery, where practice demonstrations can easily be given. The Experimental Cookery and Dietetics laboratory offers opportunity for advanced work along

food lines. Adjoining these two food laboratories is a small dining room for practice purposes. The same amount of space is devoted to clothing work. A large, well lighted laboratory is used for the class work in dressmaking and tailoring. There is also a room planned especially for millinery and costume design classes. In addition to these practical laboratories, there is a large research laboratory where the bacteriological and chemical aspects of food and clothing can be studied.

The Department also maintains a six-room house, which is used as a practical housekeeping experiment. Two senior girls live here for a month under the direction of one of the instructors of the department, and during this month, do all the work connected with the house. This includes not only the cooking and cleaning, but also the planning of meals, the buying of supplies, and the payment of all bills.

Two cafeterias have been established on the University campus, under the direction of the Department of Home Economics. This gives opportunity for its students to gain experience in cafeteria management.

Horticulture—A greenhouse plant was erected in the summer of 1914 for the Department of Horticulture of the Experiment Station. It is of semi-iron construction of most approved design, 28 x 85 feet. The greenhouse is equipped with an overhead sprinkling device and is utilized for purposes of propagation, forcing of vegetables and flowers, and other experiment purposes. Adjoining the greenhouse on the north is an attractive service building 26 x 33 feet constructed of Greendale Rug brick with tile roof. This building contains an office and work room on one side, and a photographic laboratory on the other, with quarters on the second floor for an attendant, while in the basement is installed a very efficient hot water heating plant.

Journalism—The equipment of the Department of Journalism consists of typewriters, desks, individual writing tables, typewriter tables, exchange tables, city editor's table and chairs. For assignments and corrected work a system of reporters' books is used, and announcements of general interest are placed on blackboards. The usual newspaper supplies, a large number of newspapers and up-to-date periodicals, and a library of latest and best works on journalistic subjects are at the disposal of the students.

Mechanical and Electrical Engineering—The laboratories of the College of Mechanical and Electrical Engineering are equipped for experimental work in steam, electrical, gas, and automobile engineering and in testing of materials. For complete information see state-

ments under College of Engineering. This college has a completely equipped wood shop, forge shop, machine shop and foundry.

Mines and Metallurgy—For lecture room illustrations and demonstrations the equipment includes two excellent electric light stereopticons and a reflectoscope, with a large number of special slides; many charts, photographs and blue-prints, illustrating mining methods, mining machinery, and metallurgical operations; large Keuffel & Essar working models of verniers and slide rules; a working model of a shaft hoist with safety catches; examples of mining tools; three handsome cases showing various sorts of "DuPont" explosives; wire rope and electric wire boards; Koerting and Buffalo Forge Company mine-spraying devices; safety lamps of various types; apparatus for instruction in methods of detecting mine gasses and testing safety lamps; apparatus for studying coal dust explosions; types of acetylene mine lamps; a very complete working model of a Cameroon mine pump; types of mine telephones; a pneumatic mine signal; diamond core-drill bits; a small Sirocco mine fan; and instruments for measuring ventilation A number of large photographs framed, showing coal mining operations, have been presented to the College by Prof. R. D. Quickel, fuel agent for the Cincinnati Southern Railroad.

The metallurgical laboratory is provided with several gasoline assay furnaces; a plant of gas assay furnaces; two coke (or charcoal) assay furnaces; two laboratory electric furnaces; crushing, grinding and sampling apparatus; apparatus for "barrel" chlorination; an Abbe double Trojan ball mill; apparatus for studying the cyanide and amalgamation processes; furnaces for the studying of smelting processes and of the heat treatment of iron and steel; apparatus for the study of wet processes for the extraction of non-ferrous metals; of pyrometry and of metallography. Calorimeters for the study of fuels and a special furnace for testing clays are also at the command of the College.

It is intended that the mining laboratory shall not only serve the purpose of instruction, but that it shall prove helpful, as a testing laboratory, to those engaged in the coal, lead, zinc, and spar districts of the State. The present equipment includes, among other things, a standard, full-sized Wilfley concentrating table; an Allis-Chalmers Company three-stamp mill; a Hallet hand jig; a Jarvis jig; a Vezin jig; a Monroe laboratory slime table; a Monroe laboratory classifier; apparatus for instruction in flotation processes of ore separation; a Dings electro-magnetic separator; a Blake-Morscher electro-static separator; various types of mine car wheels; a Wood rock drill; a Hardscog hammer drill; a Nixon rachet coal drill; a Harrison coal-cutting machine, for use in demonstrating the use of compresst air in mining

operations; several sets of steel mine timbers (Carnegie Steel Co.), including lining sufficient to illustrate an entry protected according to advanced methods; a Dayton automatic mine door complete; a 6-ton mine locomotive, placed on deposit by the General Electric Company, which is used in the study of the construction of such electric motors; a Campbell coal-washer; a complete model of the St. Bernard Mining Company's coal washery; and a complete ventilating fan and fan house. The fan has been so installed that various problems relating to mine ventilation may readily be studied.

The College owns a Flues "Proto" apparatus. In addition, two sets of Draeger apparatus, provided for the State Mine Inspectors, have been placed in one of the basement rooms of the main building. The latter sets include four oxygen helmets and accessories complete, charging pumps, a mouth-breathing apparatus, electric lamps and charging devices, a water gauge, and a pulmotor. The room has been fitted up so that training may be given in mine rescue work. Instruction in the use of the apparatus is given to mining students and to visiting miners from time to time.

Physics—The Department of Physics occupies the southern half of the new three-story brick building, planned and constructed to meet the needs of this department and the Department of Civil Engineering.

On the first floor are the main office, two large laboratories for advanced work in General Physics and in Heat, a small laboratory, an apparatus room, photographic rooms, and a study room for girls.

On the second floor are situated a large laboratory for elementary work, a reading room, the main apparatus room, and the principal lecture room. The lecture-table is supplied with water, gas, direct and alternating currents, vacuum, and compresst air. A projection outfit has been installed for picture projection and to show refraction, diffraction, interference, polarization, spectra, etc. An interserometer has recently been acquired for measuring light. Stone shelves project externally from some of the windows of this room and other rooms in the building to receive instruments for experimentation with sunlight.

On the third floor are two rooms for lectures and recitations, an office, an optic room, an apparatus room, a store-room, and photographic room.

The basement is well lighted, and has splendid work rooms, all to be finished with concrete floors, giving stability for precision measurements. There are two large rooms for laboratory purposes, a battery room, and a work shop. At present the shop contains the experimental switchboard, a motor (7½ h. p.) generator (5 kw. 125

v.), a smaller motor-generator, tanks for vacuum and compresst air, a compression and exhaust pump driven by an electric motor. A two-wire circuit and a three-wire circuit (partly installed) will extend from the switchboard thru pipe conduits to every work room.

Physiology—The laboratory is provided with a Bausch and Lomb incubator, microscopes, microtomes, paraffin bath, etc. Tables are provided for individual students. Each table is equipped with the apparatus necessary for experimental work in physiology. Students also have access to and use the kymograph, artificial circulation scheme (Porter's), capillary electrometer, artificial eye (Kuhne's), heart-holder, ergograph, rheochord, plethysmograph, etc.

The department is supplied with all kinds of models, such as an Auzoux papier mache manikin, Auzoux's models of the eye in full and in section, models of the ear, larynx, side of the face, hand, etc., skeletons in full and in section; complete disarticulated skeletons for the individual use of students; a spaced skull; a Thoma-Zeiss Haemacytometer; a Dudgeon's and a Marey's Sphygomograph; charts of all kinds, miscroscopes, etc. Microscopic slides are exhibited showing the process of karyokinesis.

Museums

Geology—The Department of Geology is supplied with collections in mineralogy and paleontology, arranged and classified with especial reference to their use in class instruction. There are also a number of reports, both state and national, maps, charts, models, lantern slides and photographic views.

Herbarium—The Department of Entomology and Botany of the Experiment Station possesses an herbarium which is a reference collection, intended primarily to prosecute the study of the botany of Kentucky.

Kentucky Geological Survey—The Museum of the Kentucky Geological Survey occupies commodious quarters in the Mining Engineering Building. The exhibits represent the mineral survey of the State. Notable among the collections are the Kentucky clays, pottery, iron ores and oils.

Drafting Rooms

Civil Engineering—In the Civil Engineering Building are three large well-lighted drafting rooms, provided with individual tables containing lockers for each student's outfit and cabinets for drawing boards. The walls of the drafting rooms are decorated with photographs of actual constructions. A large collection of standard drawings of bridges, buildings, stadiums, railroad construction, sewer

construction, water works, power plants, and irrigation structures are also available for examination.

Mechanical and Electrical Engineering—Three well-lighted and convenient drafting rooms are provided, one for freshmen, one for sophomores and juniors, and one for seniors.

Gymnasium

The gymnasium, with a floor space of 48 x 95 feet, contains all the apparatus and necessary equipment for carrying on the work of the department. There is an overhead canvas covered running-track of approximately twenty-four laps to the mile. There is also a large room devoted to boxing, wrestling, and handball on this floor.

In the basement of the left wing are the baths, lockers, wash-stands, closets, and a swimming pool.

Athletic Field

The new Athletic Field is one of the largest and finest in the entire South. It contains two gridirons for football, a baseball diamond and a running track. These are so arranged that one sport does not interfere with another, the football gridirons lying entirely without the baseball diamond. The running track circles the main gridiron for a quarter of a mile and has a straightway of 220 yards. This field was graded and equipped recently at a great expense. The construction of an asphalt street on Winslow has made the field complete and perfect in all its arrangements.

ADMISSION AND CLASSIFICATION

Students will be admitted to the University as their previous training warrants. They will be admitted to the freshman class, to advanced standing, to special courses as special students, or admitted as graduate students.

ADMISSION TO THE FRESHMAN CLASS

An applicant for admission to the freshman class of any of the Colleges of the University must offer credit for fifteen units* of high school or other secondary school work, so chosen as to include the nine and one-half 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 conditionally.

ENTRANCE SUBJECTS

The units offered for admission to the freshman class must be taken from the list as given below. The numbers indicate the units that may be offered in each subject:

English	3	to 4	Zoology	½	to 1
Algebra	1	to 2	Psychology or Pedagogy		½
Plane Geometry		1	Political Economy		½
History	1	to 3½	Agriculture		½
Solid Geometry		½	Domestic Science†	½	to 1
Trigonometry		½	Commercial Geography		½
French	1	to 3	Commercial Arithmetic		½
German	1	to 3	Surveying		½
Spanish	1	to 3	Bookkeeping		½
Greek	1	to 3	Manual Training		½
Latin	1	to 4	Drawing		½
Civil Government		½	Physiology	½	to 1
Botany	½	to 1	General Science	½	to 1
Chemistry	½	to 1	Teaching of 6 months or more, holding first class certificate		1
Physics		1			
Physical Geography	½	to 1			
Geology	½	to 1			

* A unit represents a subject pursued five periods a week for one year. Graduates of first-class high schools who have had four full years' work in English of five recitations a week may offer four units in English. No subject offered as an entrance requirement can be counted again in the total credits for the completion of a college course.

† Additional credit may be offered for work in domestic science taken in vocational schools.

BASIC UNITS REQUIRED BY ALL COLLEGES

The following subjects are required for entrance by all Colleges of the University:

English	3
Algebra	1
Plane Geometry	1

The 10 elective units offered must be chosen from the list on the preceding page. Only four units may be allowed for vocational subjects.

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 in these subjects to make up the deficiency, which may delay his graduation.

Students may be admitted to the freshman class in one or two ways, either on examination or on presenting a certificate from an approved school. Each of these methods is described on the following pages.

ADMISSION BY EXAMINATION

If not a graduate of an accredited high school the student must present entrance credits for 15 units, including those prescribed, and pass examinations in four subjects as follows:

1. **English** (including composition)
2. **Mathematics** (algebra and plane geometry)
3. **Two subjects** of at least one unit each to be selected by the student from the following subjects: Latin, German, French, Spanish, History, Physics, Chemistry, Biology.

If the student is not a graduate of the school from which he comes, he will not be admitted to entrance examinations within one year after leaving such school unless he presents a statement of honorable dismissal.

Examinations for admission will be held at the University on Wednesday, Thursday, Friday and Saturday, September 11-13, inclusive.

All persons who wish to enter the University for the first semester's work, except those whose entrance credits have been accepted by the Committee on Entrance, must take these examinations. They will present themselves at the office of the Registrar at 8:00 a. m. Wednesday, September 11. They will then receive directions concerning the places at which their examinations will be held. For the hours of the examinations, see schedule.

DESCRIPTION OF ENTRANCE UNITS

English. The units in English are based upon the requirements of the College Entrance Examination Board. English 1 and 2 are both included in the specified entrance requirements and are estimated together as three units. First-class high schools maintaining a course in the history of literature in addition and whose graduates have the full course with five recitations a week may be allowed four units for entrance in English.

The complete report of the National Conference on uniform Entrance Requirements in English, which has been adopted as the requirements for college entrance in this subject, follows:

The study of English in school has two main subjects: 1. Command of correct and clear English, spoken and written. 2. Ability to read with accuracy, intelligence and appreciation.

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, sentences and paragraphs, should be thoroly mastered; and practice in composition, oral as well as written, should extend thruout the secondary school period. Written exercises may well comprise letter-writing, narration, description, an easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

The second object is sought by means of two lists of books, headed respectively *Reading* and *Study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of the authors whose works he reads, and with their place in literary history.

1. *Reading—One and one-half units.* The aim of this course is to foster in the student the habit of intelligent reading, and to develop a taste for good literature by giving him a first-hand knowl-

edge of some of its best specimens. He should read the books carefully, but his attention should not be so fixt upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group 1.

a—Classics in translation—The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings and Daniel, together with the books of Ruth and Esther. The *Odyssey*, with the omissions, if desired, of Books I, II, III, IV, V, XV, XVI, XVII. The *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI. The *Aeneid*, the *Odyssey* and the *Iliad* should be read in English translations of recognized literary excellence. For any selection from this group a selection from any other group may be substituted.

b—Shakspere—*Midsummer Night's Dream*, *Merchant of Venice*, *As You Like It*, *Twelfth Night*, *The Tempest*, *Romeo and Juliet*, *King John*, *Richard II*, *Richard III*, *Henry V*, *Coriolanus*, *Julius Caesar*, *Macbeth*, *Hamlet*. The last four subjects may be selected if not chosen for study 2.

c—Prose Fiction—Malory: *Morte d'Arthur* (about 100 pages). Bunyon: *Pilgrim's Progress*, Part 1. Swift: *Gulliver's Travels* (Voyages to Lilliput and to Brobdingnag). Defoe: *Robinson Crusoe*, Part 1. Goldsmith: *Vicar of Wakefield*. Francis Burney: *Evelina*. Scott's Novels: *Any one*. Jane Austen's Novels: *Any one*. Maria Edgeworth: *Castle Rackrent*, or *The Absentee*. Dickens' Novels: *Any one*. Thackeray's Novels: *Any one*. George Eliot's Novels: *Any one*. Mrs. Gaskell: *Cranford*. Kingsley: *Westward Ho!* or *Hereward the Wake*. Reade: *The Cloister and the Hearth*. Blackmore: *Lorna Doone*. Hughes: *Tom Brown's School Days*. Stevenson: *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*. Cooper's Novel: *Any one*. Poe: *Selected Tales*. Hawthorne: *The House of the Seven Gables* or *Mosses from an Old Manse*. A collection of *Short Stories* by various standard writers.

d—Essays, Biography, etc.—Addison and Steele: *The Sir Roger de Coverley Papers*, or Selections from the *Tatler* and *Spectator* (about 200 pages). Boswell: Selections from the *Life of Johnson* (about 200 pages). Franklin: *Autobiography*. Irving: Selections from the *Sketch Book* (about 200 pages), or *Life of Goldsmith*. Southey: *Life of Nelson*. Lamb: Selections from the *Essays of Elia* (about 100 pages). Lockhart: Selections from the *Life of Scott* (about 200 pages). Thackeray: Lectures on *Swift*, *Addison* and *Steele*, in the *English Humorists*.

Macaulay: Any one of the following essays: *Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederick the Great, Madame d' Arblay.* Trevelyan: Selections from the *Life of Macaulay* (about 200 pages). Ruskin: *Sesame and Lilies*, or Selections (about 150 pages). Dana: *Two Years Before the Mast.* Lincoln: Selections, including at least the two *Inaugurals*, the *Speeches in Independence Hall* and at *Gettysburg*, the *Last Public Address*, the *Letter to Horace Greeley*, together with a brief memoir or estimate of Lincoln. Parkman: *The Oregon Trail.* Thoreau: *Walden.* Lowell: *Selected Essays* (about 150 pages). Holmes: *The Autocrat of the Breakfast Table.* Stevenson: *An Inland Voyage* and *Travels with a Donkey.* Huxley: *Autobiography* and Selections from *Lay Sermons*, including the addresses on "Improving Natural Knowledge," "A liberal Education," and "A Piece of Chalk." A collection of *Essays* by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and later writers. A collection of letters by various standard writers.

e—Poetry—Palgrave's *Golden Treasury* (*First Series*): *Books II* and *III*, with special attention to Dryden, Collins, Gray, Cowper, and Burns. Palgrave's *Golden Treasury* (*First Series*): *Book IV* with special attention to Wordsworth, Keats and Shelley (if not chosen for study under 2). Goldsmith: *The Traveler* and *The Deserted Village.* Pope: *The Rape of the Lock.* A collection of English and Scots Ballads, as, for example, some Robin Hood ballads (*The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Sir Patrick Spens*), and a selection from later ballads. Coleridge: *The Ancient Mariner, Christabel*, and *Kubla Khan.* Byron: *Childe Harold, Canto III or IV.* and *The Prisoner of Chillon.* Scott: *The Lady of the Lake* or *Marmion.* Macaulay: *The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry.* Tennyson: *The Princess*, or *Gareth and Lynette, Lancelot and Elaine, The Passing of Arthur.* Browning: *Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Reil, Pheidippides, My Last Duchess, Up at a Villa—Down in the City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—Instans Tyrannus.* Arnold: *Sohrab and Austum*, and *The Forsaken Mermaid.* Selections from *American Poetry*, with special attention to Poe, Lowell, Longfellow, and Whittier.

2. *Study—One and one-half units.* This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The

books provided for study are arranged in four groups, from each of which one selection is to be made.

a—Drama—Shakspere: *Julius Caesar, Macbeth, Hamlet.*

b—Poetry—Milton: *L'Allegro, Il Penseroso,* and either *Comus* or *Lycidas.* Tennyson: *The Coming of Arthur, The Holy Grail, The Passing of Arthur.* The selections from Wordsworth, Keats and Shelley in *Book IV* of Palgrave's *Golden Treasury* (*First Series*).

c—Oratory—Burke: Speech on *Conciliation with America,* Macaulay's Two Speeches on *Copyright* and Lincoln's *Speech at Cooper Union,* Washington's *Farewell Address,* and Webster's *First Bunker Hill Oration.*

d—Carlyle: *Essay on Burns,* with a selection from *Burns' Poems.* Macaulay: *Life of Johnson.* Emerson: *Essay on Manners.*

Examination—However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling or other essentials of good usage.

The examination will be divided into two parts, one of which will be on grammar and composition, the other on literature.

In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages of modern English which one should know in distinction from current errors. The main test in composition will consist of one or more essays, developing a theme thru several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make his own selections. He will not be expected to write more than four hundred words an hour.

The examination in literature will include:

A. General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under 1, *Reading,* above. The candidate will be required to submit a list of the books read in preparation for the examination certified by the principal of the school in which he was prepared, but this list will not be made the basis of detailed questions.

B. A test on the books prescribed for study, which will consist of questions upon their content, form and structure, and upon the meaning of such words, phrases and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may be asked concerning the

lives of the authors, their other works, and the periods of literary history to which they belong.

Recommendations—

1. That colleges so desiring may set an examination requiring no prescribed books, but testing the same general kind of preparation as that indicated in the foregoing requirements.

2. That individual colleges take such steps as may be found necessary to ascertain whether candidates for entrance possess an adequate equipment in oral English.

3. That schools should recommend a supplementary list for additional reading. This list may well include suitable selections from contemporary literature and books of local interest.

4. That colleges accept *three* or *four* units of credit for admission in English, the number of credits within these limits to be determined by the preparation of the applicants. It is not recommended that four units of credit be given for the amount of work now submitted for three units. This recommendation has for its object the advancement of English teaching in the secondary schools.

Mathematics. The basis for the determination of units in mathematics must be quantity and quality of the work done rather than the time element. For the average student, however, four years' time will be required to do the work here outlined. Two years should be devoted to algebra, a year to plane geometry, and a half year each to solid geometry and plane trigonometry. These subjects may very well be taken in the order named. Some prefer to give one year in algebra, followed by a year in plane geometry; this followed by a return to algebra for a year, the solid geometry and trigonometry coming in the order above indicated. In either plan the use of algebra should be emphasized in the work in geometry. The outline for the four years' work follows:

1. *Algebra—One to two units.* The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations, radicals, including extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal containing one unknown; simultaneous quadratic equations; problems depending upon quadratic equations; the binomial theorem for positive integral exponents, the formulas for the nth term and

the sum of the terms or arithmetical and geometrical progressions, with appliances.

2. *Plane Geometry—One unit.* The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and measurement of the circle. The solution of numerous original exercises, including loci problems, application of line and plane surfaces.

3. *Solid Geometry—One-half unit.* The usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; application to the measuration of surface and solids.

4. *Trigonometry—One-half unit.* Plane trigonometry should include the definitions and relations of the six trigonometric functions as ratios, the theory of logarithms and the use of tables, the proof of important formulas and considerable practice in trigonometric transformations; the solution of right and oblique triangles.

Latin. For one-half of the reading specified below in any author, equivalents in Nepos, Sallust, Ovid, and other Latin authors, may be offered. In connection with all the readings, there should be constant practice in sight translation and prose composition.

The four units that may be offered in Latin are as follows:

1. *Grammar and Composition—One unit.* The inflections; the simpler rules for composition and derivation of words; syntax of cases and verbs; structure of sentences in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive. Translation into Latin of detached sentences and easy continuous prose based upon Caesar and Cicero.

2. *Caesar—One unit.* Any four books of the Gallic War.

3. *Cicero—One unit.* Any six orations from the following list, or equivalents: The four orations against Catiline, Archias, the Manilian Law, Marcellus, Roscius, Milo, Sestius, Ligarius, the fourteenth Phillipic.

4. *Virgil—One unit.* The first six books of the Aeneid, and so much prosody as relates to accent, versification in general, and the dactylic hexameter.

Greek. The three units that may be offered in Greek are as follows:

1. *Grammar and Composition—One unit.* The common forms, idioms, constructions, and the general grammatical principles of

Attic Greek prose. Translation into Greek of detached sentences and very easy continuous prose based upon the Anabasis.

2. *Xenophon—One unit.* The first four books of the Anabasis. In connection with the reading there should be constant practice in sight translation and prose composition.

3. *Homer—One unit.* The first three books of the Iliad (omitting II, 494 to end) and the Homeric constructions, forms and prosody. In connection with the reading in Greek there should be constant practice in sight translation and in prose composition.

German. The three units that may be offered in German are as follows:

1. *First Year—One unit.* During the first year the work should comprise: a—careful drill in pronunciation; b—the memorizing and frequent repetition of easy colloquial sentences; c—drill in the rudiments of grammar, that is upon the inflection of the articles, of such nouns as belong to the language of every-day life, adjectives, pronouns, weak verbs, and the more usual strong verbs; also in the use of the more common prepositions, the simpler uses of the model auxiliaries, and the elementary rules of syntax and word order; d—abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; e—the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

2. *Second year—One unit.* During the second year the work should comprise: a—the reading of form 150 to 200 pages of literature in the form of easy stories and plays; b—accompanying practice, as before, in the translation into German of easy variations upon the matter read and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selections directed to the ends of enabling the pupil, first to use his knowledge with facility, in the formation of sentences, and secondly, to state his knowledge correctly, in the technical language of grammar.

3. *Third year—One unit.* The work should comprise, in addition to the elementary courses, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special

reference to the infinitive and subjunctive), and likewise in word-order and word-formation.

French. The three units which may be offered in French are as follows:

1. *First year—One unit.* During the first year the work should comprise: a—careful drill in pronunciation; b—the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; c—abundant easy exercises, designated not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; d—the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentence read (the teacher giving the English), and in reproducing from memory sentences previously read; e—writing French from dictation.

2. *Second year—One unit.* During the second year the work should comprise: a—the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; b—constant practice, as in the previous year, in translating into French easy variations upon the texts read; c—frequent abstracts, sometimes oral and sometimes written, of portions of the texts already read; d—writing French from dictation; e—continued drill upon the rudiments of grammar, with constant application in the construction of sentences; f—mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

3. *Third year—one unit.* This should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproduction from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Spanish. The two units that may be offered in Spanish are as follows:

1. *First year—One unit.* During the first year the work should comprise: a—careful drill in pronunciation; b—the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives and pronouns, and elementary rules of syntax; c—exercises containing illustrations

of the principles of grammar; d—the reading and accurate rendering into good English of 100 to 175 duodecimo pages or graduated texts, with translations into Spanish of easy variations of the sentences read; e—writing Spanish from dictation.

2. *Second year—One unit.* During the second year the work should comprise: a—the reading of from 250 to 400 pages of modern prose from different authors; b—practice in translating Spanish into English, and English variations of the text into Spanish; c—continued study of the elements of grammar and syntax; d—mastery of all but the rare irregular verb forms and of the simpler uses of the modes and tenses; e—writing Spanish from dictation; f—memorizing of easy short poems.

History. Preparation in history will be given credit upon the basis of time devoted to the study of each branch of the subject, rather than upon the amount of ground covered. It is recommended that not less than one year be given to any of the courses outlined below. The training in history should require comparison and the use of judgment on the pupil's part, rather than the mere use of memory. The use of good text-books, collateral reading, practice in writing, and accurate geographical knowledge are essential. General History will not be accepted as an entrance subject.

1. *Ancient History* (to 800 A. D.)—*One unit.*
2. *Medieval and Modern History—One unit.*
3. *English History—One unit.*
4. *American History and Government—One unit.*

Physics. *One unit.* The preparation in physics should include individual laboratory work, comprising at least four exercises, illustrating the different phases of the subject; instruction by lecture; table demonstrations, to be used mainly as a basis for questioning upon the general principles involved; and the study of at least one standard text-book, to the end that the pupil may have gained comprehensive and connected views of the most important facts and laws of elementary physics. Original note-books must be submitted.

Chemistry. *One half to one unit.* The preparation in chemistry should be conducted upon the same general plan suggested for work in physics. Original note-books must be submitted.

Physical Geography. *One-half to one unit.* The preparation in physical geography should include the study of at least one of the modern text-books, accompanied by field work. Original note-books must be submitted.

Physiology. *One-half to one unit.* The preparation in physiology should include a study of the nature of foods and their history in the body; the essential facts of digestion, absorption, circulation, secre-

tion, excretion, and respiration; the motor, nervous, and sensory functions; and the structure of the various organs by which these operations are performed. A note-book with careful outline drawings of the chief structures studied anatomically together with explanations of these drawings, and the study of a good text-book are essential.

Botany. *One-half to one unit.* The preparation in botany should include a study of the structure and elementary physiology of the seed plants, ecology, the natural history of the plant groups, and classification. The laboratory method of instruction should be emphasized, but no further than can be done with a simple magnifier. Accurate drawings and concise note-book should be prepared by the student.

Zoology. *One-half to one unit.* The preparation in zoology should be along the same lines as those laid down for botany. It should be such as to render the student familiar with the salient characteristics of each of the animal sub-kingdoms. This can be accomplished only by a laboratory study of at least one type animal under such sub-kingdom.

Geology. *One-half to one unit.* The study of geology should include an examination into the causes now in operation as throwing light on those which have operated in the past, followed by a sketch of historical geology. This will involve a presentation of the following topics: atmospheric agencies; the work of underground and surface waters; the work of the sea; internal geological agencies, such as volcanic activity, earthquakes, and slow movements of the earth's crust; structural geology, or the study of rock forms; and finally, physiographic geology, or the interpretation of land forms in the light of their geological history. The text should be supplemented by an examination of rocks, minerals, fossils and by field work, and the pupil should record his observations in a note-book.

Drawing. *One-half to one unit.* The student should be able to show ability to sketch free-hand geometrical figures, such as circles, spirals, polygons, pyramids and cylinders; also common objects, such as chairs, tables, animals, bones, flowers. He should be able to copy, by enlarging or reducing its dimensions, the picture of any ordinary object.

Bookkeeping. *One-half unit.* A full term's course must be taken in this subject with recitations five times a week. When a commercial course is given and more time required for this subject, an additional half unit may be allowed.

Vocational Subjects. *Four units.* The subjects of manual training, domestic science, agriculture, commercial geography, commercial arithmetic, may be valued at one unit each when the work done in each is equivalent to a full term of eighteen or twenty weeks with five full recitations, Not more than one unit may be offered for any one sub-

ject in home economics. If subjects are given once or twice a week only, not less than ninety hours may be offered. The work in each subject should include a regular text-book course and this should be directed toward practical application and use.

ADMISSION BY CERTIFICATE

Persons who desire to enter the University by certificate instead of by examination must have their credits certified by the Superintendent or Principal of the school in which they may be secured. Blank forms for such certificates will be furnished by the Registrar of the University on application. These certificates should be properly made out, signed, and should be mailed to the Registrar as early as possible and not later than September 1. Only graduates of accredited schools or those who have completed the accredited course will be admitted upon certificate. A diploma, such as is given at graduation to high school pupils, cannot be substituted for this certificate.

ACCREDITED SCHOOLS

Schools, whether public or private, may be accredited, provided they meet the following requirements:

High schools and other schools doing preparatory work now on the accredited list and that may hereafter be placed thereon may be designated by two forms of classification. The first division, or Class A, may include all the schools which meet the following requirements:

Requirements for Class A

1. The school must offer a standard four-year course of study and require full fifteen entrance credits for graduation therefrom.

2. Three qualified teachers must be employed who devote all their time to high school work.

3. The pupil enrollment must not exceed thirty pupils for each teacher.

4. Two-thirds of the teachers employed must possess an academic scholarship equivalent to graduation from a standard college.

5. A minimum period of forty minutes must be given each recitation.

6. School must be in session not less than thirty-six weeks during the year.

7. The equipment for teaching science must not be less than $150 in value, and the library for reference purposes should not be less in value than $75, exclusive of public documents.

8. Classes must not be too large to properly handle the subject matter of the recitation.

9. The school sentiment both of the school and the community must be harmonious and progressive.

10. The work in school must be approved as satisfactory.

Requirements for Class B

1. The school must maintain a four-year course of study requiring fifteen college entrance credits for graduation.

2. Two qualified teachers must be employed who devote all their time to high school work.

3. The school year must not be less than thirty-six weeks.

4. An average recitation period of forty minutes must be maintained.

5. The equipment for the teaching of science must not be less than $75 in value, and the library for reference purposes must not be less than $60 in value, exclusive of public documents.

6. The enrollment must be limited to thirty pupils for each teacher.

7. The school sentiment must be normal.

8. The work must be approved as satisfactory.

9. The academic scholarship of all teachers must meet the requirements of the State law—high school graduation plus two years in college or normal school, or the equivalent thereof.

A list of accredited schools is prepared by the Committee on Accredited Relations of the Association of Kentucky Colleges, which committee employs all sources of information as to extent and character of work done and courses offered. In every instance the endorsement of the State High School Inspector is indispensable.

A school applying for admission to either accredited list is required to furnish information concerning its work on a blank form furnished by the Association. It is also required to sign an agreement not to make any change in the course of study which will lower in any way the character of the work done without notification to the State Supervisor of High Schools.

No high school will be accepted for accredited relations which does not keep in permanent form a complete record of all work done in school.

The Committee on Accredited Schools favors granting credit by the high school for home project work done out of school hours, provided such project work was performed in accordance with a definite plan, and that satisfactory evidence be given by the pupils that the

project had a definite value and was performed under competent supervision and direction.

After September 1, 1919, no school should be considered for accredited relations which does not require full fifteen college entrance credits for graduation therefrom.

Four units will be allowed for vocational subjects.

The list as at present constituted follows:

ACCREDITED PUBLIC HIGH SCHOOLS

Class A

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Alexandria	County High School	Miss C. Reiley
Anchorage	Graded High School	Clarence Eackley
Ashland	High School	J. W. Bradner
Auburn	County High School	J. D. Spears
Augusta	High School	J. Spencer Singleton
Bellevue	High School	Vaught Mills
Bowling Green	West Ky. Normal	H. H. Cherry
Bowling Green	High School	T. C. Cherry
Catlettsburg	High School	A. W. Glasgow
Central City	High School	T. S. Williams
Carrollton	High School	W. F. O'Donnell
Carlisle	High School	R. D. Squires
Corydon	High School	Ernest W. Gibson
Covington	High School	H. C. Cox
Cynthiana	High School	R. I. Cord
Danville	High School	L. C. Bosley
Dawson Springs	High School	J. C. Jenkins
Dayton	High School	R. H. Brown
Earlington	H. S. (Atkinson Mem'l)	C. E. Dudley
Elizabethtown	High School	J. C. Pirtle
Elkton	High School	Miss Annie Wells
Eminence	High School	Edgar Sanders
Falmouth	High School	G. H. Wells
Flemingsburg	High School	Hardenia Marshall
Fort Thomas	High School (Highlands)	C. R. Rounds
Frankfort	High School	J. W. Ireland
Franklin	High School	E. B. Weathers
Fulton	High School	J. C. Cheek
Georgetown	High School	L. G. Wesley
Glasgow	High School	E. B. Terry
Greenville	High School	C. H. Jaggers

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Hardinsburg	High School	F. J. Bowlds
Harrodsburg	High School	J. G. Prather
Hartford	High School	J. A. Bruner
Henderson	High School	J. W. Welch
Hickman	High School	J. M. Calvin
Hodgenville	High School	N. A. Rauson
Hopkinsville	High School	J. C. Waller
La Center	High School	W. H. Sugg
La Grange	High School	R. H. Shipp
Lancaster	High School	P. H. Hopkins
Lawrenceburg	City High School	C. O. Ryan
Lawrenceburg	County High School	Mrs. R. Kavanaugh
Lebanon	High School	J. R. Sterett
Lexington	High School	M. A. Cassidy
Louisa	High School	E. M. Kennison
Louisville	Girls' High School	H. B. Moore
Louisville	Boys' High School	J. B. Carpenter
Ludlow	High School	W. D. Reynolds
Madisonville	High School	R. H. Gatton
Marion	High School	V. L. Christian
Mayfield	High School	C. T. Cannon
Mayslick	County High School	G. E. Everett
Maysville	High School	W. J. Caplinger
Midway	High School	John Howard Payne
Middlesboro	High School	T. W. Oliver
Monticello	High School	J. T. Miracle
Mt. Sterling	High School	W. O. Hopper
Morganfield	High School	R. T. Whittinghill
Murray	High School	J. W. Jones
Newport	High School	R. F. Gaither
Nicholasville	High School	H. L. Smith
Owensboro	High School	J. L. Foust
Owenton	High School	H. W. Puckett
Paducah	High School	Ralph Yakel
Paris	High School	L. J. Kirkpatrick
Pineville	High School	B. W. Sherrill
Princeton	High School	J. N. Duniven
Richmond	Caldwell High School	D. W. Bridges
Richmond	Model High School	R. A. Edwards
Richmond	Eastern Ky. Normal	T. J. Coates
Shelbyville	High School	J. T. Hazelrigg

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Shepherdsville	Graded High School	J. L. Sanders
Somerset	High School	J. P. W. Brouse
Springfield	High School	G. C. Colvin
Stanford	High School	M. L. Caneer
Sturgis	High School	A. L. Morgan
Winchester	High School	H. A. Harris
Winchester	County High School	J. L. Bosley
Wingo	High School	E. H. Smith
	Class B	
Adairville	County High School	E. H. Ellis
Arlington	High School	Hardin Graves
Athens	County High School	Frances Scott
Bardstown	High School	J. S. Irvine
Bardwell	County High School	Mrs. Eliza Curtsinger
Barlow	High School	S. C. Finch
Beaver Dam	West Ky. Seminary	E. E. Tartar
Bedford	Trimble County High	Mark S. Godman
Benton	High School	O. L. Mullikin
Barbourville	High School	H. M. Oldfield
Bethlehem	County High School	K. B. Wheeler
Bloomfield	High School	George W. Peck
Bradfordville	Graded High School	Miss Olivia Bristow
Brandenburg	County High School	Mrs. E. Gregory
Brodhead	High School	E. A. Strange
Brookville	High School	R. Y. Maxey
Buffalo	High School	G. L. Crume
Burlington	County High School	J. A. Caywood
Burgin	High School	Miss Lucile Sharp
Burkesville	High School	C. A. Tanner
Burnside	High School	F. V. McChesney
Butler	High School	E. H. Reed
Cadiz	High School	N. D. Bryant
Calhoun	High School	D. B. Lutz
Campbellsville	County High School	J. P. Boling
Caneyville	High School	E. E. Bratcher
Clay	High School	I. J. Marrs
Clinton	Graded High School	J. W. Brinkley
Corbin	High School	J. L. Pinkenton
Corinth	Graded High School	William Moore
Crutchfield	County High School	Nina Kimbro

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Cuba	County High School	Myra Peck
Fulghum	County High School	A. M. Wilson
Farmington	County High School	Mrs. W. T. Pearson
Cloverport	High School	O. F. Galloway
Columbia	High School	R. R. Moss
Dixon	High School	Woodfin Huston
Dry Ridge	County High School	Louis Clifton
Edmonton	County High School	A. B. Thompson
Erlanger	County High School	J. A. Buck
Fordsville	High School	Warren Payton
Ghent	High School	Clay Tharp
Glendale	High School	J. A. Howard
Greendale	High School	Anna D. Warren
Grayson	High School	J. W. Lusby
Guthrie	High School	Mrs. M. S. Muirhead
Hardin	High School	J. H. Fitch
Harlan	County High School	F. D. Perkins
Hawesville	Beechmont High School	E. P. Kelly
Hazard	County and City H. S.	F. A. Cosgrove
Heath	County High School	J. S. Ragsdale
Horse Cave	High School	Mary W. Moss
Howes Valley	High School	J. R. Wilson
Hustonville	High School	J. W. Davis
Hyden	County High School	J. H. Asher
Independence	Graded High School	J. C. Arnold
Junction City	High School	E. L. Grubbs
Kirkville	County High School	B. F. Edwards
Lebanon Junction	High School	A. A. Allison
Leitchfield	High School	P. B. Boyd
Lewisburg	County High School	L. E. Hurt
Lexington-Picadome	County High School	Miss M. McCubbing
Little Rock	Graded High School	Byron M Roberts
Livermore	High School	W. L. Matthews
London	Graded High School	M. H. McNutt
Lowes	County High School	J. E. Coleman
Mackville	County High School	A. B. Crawford
McHenry	Central Park	F. G. Burd
Middleburg	High School	G. O. Bryant
Minerva	County High School	John Hurst Adams
Morgantown	High School	C. L. Manning

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Mt. Olivet	County High School	E. E. Allison
Mt. Sterling	County High School	M. J. Goodwin
Mt. Vernon	County High School	C. V. Lucy
New Castle	High School	Oscar Shemwell
Olmstead	County High School	.....
Owensboro	County High School	O. E. Baird
Owingsville	City High School	C. F. Martin
Paint Lick	County High School	L. H. Lutes
Paintsville	High School	W. B. Ward
Pembroke	High School	L. G. Johnson
Perryville	County High School	O. B. Fallis
Pikeville	County & City H. S.	T. J. Hendrick
Providence	High School	W. Fred Hume
Russell Cave	County High School	Miss Susie Clay
Sedalia	High School	J. S. Brown
Sebree	High School	J. L. Chambers
Sharpsburg	Graded High School	C. P. Caywood
Smith's Grove	County High School	J. R. McCoy
Stamping Ground	Graded High School	Thornton Peck
St. Helens	High School	Mrs. Sylvia Russell
Science Hill	Graded High School	H. T. Gibson
Scottsville	Graded High School	L. N. Richards
Taylorsville	Graded High School	D. J. Wright
Tompkinsville	High School	W. R. Meers
Union	Graded High School	Mrs. Pratt H. McKee
Union City	County High School	Chester A. Long
Uniontown	Graded High School	Ira N. Harris
Upton	Graded High School	Elizabeth Lane
Utica	County High School	R. L. McFarland
Vanceburg	County & Graded	Leland Cook
Versailles	High School	R. G. Lowrey
Vine Grove	High School	S. G. Boyd
Waco	County High School	B. F. Edwards
Walton	County High School	L. S. Rhoades
Warsaw	High School	F. G. Connolly
Water Valley	County High School	Robert Edwin Hatton
West Liberty	High School	H. C. Wilson
Whitesville	County High School	M. F. Hawkins
Williamstown	High School	Henry Newton
Wickliffe	High School	J. D. Falls

ACCREDITED PRIVATE SCHOOLS

Class A

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Barbourville	Union College	E. T. Franklin
Berea	Academy	F. E. Matheny
Berea	Normal School	C. N. McAllister
Bowling Green	Ogden College	W. M. Pearce
Campbellsville	Russell Creek Academy	Romulus Skaggs
Columbia	Lindsey-Wilson	R. V. Bennett
Corbin	St. Camillus Academy	Sister Hilda
Danville	Ky. College Prep.	Miss Ruth Andrus
Elkton	John Lock School	Keener L. Rudolph
Frenchburg	High School	Rev. W. J. Giffin
Georgetown	Cardome Academy	Sister Agatha
Jackson	Collegiate Institute	J. C. Hanley
Lexington	Hamilton College	T. H. Hendricks
Lexington	Sayre College	Dr. Venable
Lexington	University Training	A. C. Kuykendahl
London	Sue Bennett Memorial	A. W. Mohn
Lyndon	Ky. Military Institute	Col. G. A. McGowan
Louisville	Collegiate School	Miss Ada Blake
Louisville	Training School	W. H. Pritchett
Louisville	St. Xavier	Brother Benjamin
Louisville	Ky. Home School for Girls	Miss Anderson
Louisville	Presentation Academy	Sister Imelda
Millersburg	Female College	Rev. C. C. Fisher
Millersburg	Military Institute	Col. C. M. Best
Midway	Female Orphans' School	Miss E. Johnson
Morehead	Normal School	Rev. J. W. Hatcher
Nazareth	Nazareth Academy	Sister M. Ignatius
Nerinx P. O.	Loretto Academy	Sister M. Victor
Newport	Academy Notre Dame	Sister Catherine
Paducah	St. Mary's Academy	Sister Dula
Pikeville	Pikeville Academy	Rev. J. F. Record
Russellville	Bethel College Prep.	Geo. F. Dasher
Russellville	Logan College Academy	Rev. A. P. Lyon
Shelbyville	Science Hill Academy	Mrs. W. T. Poynter
St. Catherine	St. Catherine's Academy	Sister M. Joseph
St. Mary's	St. Mary's College	Rev. M. Jaglowicz
St. Vincent	Academy	Sister Agnes Teresa
Stanton	Stanton College	Willis Crafts
Versailles	Margaret College	Rev. Geo. H. Harris
Williamsburg	Cumberland College	E. E. Wood
Wilmore	Asbury College Academy	John Paul

Class B

LOCATION	NAME OF SCHOOL	SUPT. OR PRIN.
Barbourville	Baptist Institute	R. L. Ogle
Campbellsburg	High School	Rev. R. A. Huey
Clinton	Marvin Prep.	George W. Evans
Guerrant	Highland	Mrs. Rose Wells
Hazel Green	Hazel Green Academy	J. T. McGarvey
Hindman	Settlement School	Miss Emma Parker
Lexington	St. Catherine Acad.	Sister Constance
Louisville	Holy Rosary Academy	Sister Dolores
Nicholasville	Boys' School	T. B. Threlkeld
North Middletown	Classical & Business	J. C. Christopherson
Richmond	Madison Institute	J. B. Cassidy
Salyersville	Magoffin Institute	Dr. H. E. Brown

Recapitulation

Public Schools

Class A	80	
Class B	111	
		191

Private Schools

Class A	41	
Class B	12	
		53
		244

Growth of Accredited Schools

As shown by reports of the High School Inspector made in January of this year indicated in this table:

	Public	Private	Total
1910	54	29	83
1911	69	32	101
1912	85	33	118
1913	100	34	134
1914	123	38	161
1915	134	41	185
1916	149	45	194
1917	171	50	221
1918	185	52	237
1919	191	53	244

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, or by credits satisfactory to the committee on advanced standing. An official statement must be submitted to this committee certifying in detail the work for which credit is desired.

ADMISSION AS SPECIAL STUDENTS

A graduate of another university or college may enter the University to pursue any special work. Other persons may be admitted as special students under the following conditions:

a—They must be at least twenty years of age.

b—They must show the Committee on Entrance good reason for not taking a regular course.

ADMISSION AS GRADUATE STUDENTS

The Graduate School is open to students, without distinction of sex, who are graduates of this or any other university or college of recognized standing. In exceptional cases, other persons of proper age and attainments may be admitted as students. Application for admission to this school should be made to the Chairman of the Graduate School Committee, and should be accompanied by official certificates attesting the candidate's completion of an under-graduate course.

For further information, see statement of the Graduate School.

RESIDENCE AND GRADUATION

University Session

The session of the University begins September 15, 1919, and ends June 9, 1920. The first semester ends January 31, 1920; the second semester begins February 2, and ends June 9, 1920.

Entrance Examinations

Entrance examinations will be held the week preceding the opening of the first semester and on the other dates arranged by the Entrance Committee. See the schedule in the first part of the catalog.

Registration

Students are required to register in person, as follows: In 1919-20 they will register for the first semester on September 15 and 16. The second semester begins February 2.

Students who do not register on the appointed days must wait until a later time that shall be designated by the Registrar.

Fees

Incidental fee. Each student will be required to pay an incidental fee as follows:

College of Arts and Science, $12.50 a semester.

College of Agriculture, $12.50 a semester.

Colege of Engineering, $15.00 a semester.

College of Law, $20.00 a semester.

Student Activities. Each student will be charged a fee of $4.50 a semester for student activities.

Late registration fee. Students entering the University after the regular registration period will be charged an additional fee of $1.00.

No student will be permitted to matriculate later than two weeks after the regular registration period without special permission of the heads of the departments concerned.

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

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

Fee for change in classification. After five days following the reg-

ular registration period, a fee of $1.00 will be charged for any change in schedule.

Late entrance examination fee. A fee of $5.00 will be charged for admission to entrance examination after the regular examination period. However, if examinations are desired on only a part of the 15 units, $1.00 a subject up to $5.00 will be charged.

Special examination fee. A fee of $1.00 will be charged for a special examination.

Laboratory Deposit. Each student taking laboratory work is required to make a deposit of $2.50 to cover breakage. The residue of this amount will be returned at the end of the year.

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. Poor, but passing, valued at 0 points for each credit.
E. Failure, valued at 0 points for each credit.
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*.

Reports to Parents

Written examinations are held in all classes at the close of the first and second semesters. Reports are sent at these times to the parent or guardian of each student to indicate as nearly as possible the quantity and quality of work done. In addition to these, mid-semester reports are made of all freshmen and of those who are doing unsatisfactory work. Special reports are sent on request at any time.

Delinquent Students

Students doing unsatisfactory work are reported each week to the Registrar, who arranges the names by colleges and presents them to the Council. Such a student is put under the special supervision of his dean. If after a suitable time it becomes apparent that no improvement is to be hoped for, the student is dropped.

Any student whose standing is found delinquent at the end of the

semester in one-third of his scheduled credits is placed on probation for the whole of the next semester. His parents are informed of the fact, and during the period of probation he is under the special week to week supervision of his dean. If at the end of this semester of probation he is found delinquent in one-half of his scheduled credits, he is dropped.

Suspension of Irregular Students

When a student becomes irregular in attendance, the Registrar may suspend him from all classes until he has made satisfactory explanation to the Discipline Committee.

Deficiencies in English

Any instructor who finds the written work of any student seriously defective in English is expected to report the case, together with specimen papers, to a committee consisting of the Dean and the Professor of English, who shall have power to require additional work in composition without credit.

Physical Education

All students are required to take Physical Education two hours a week during their first year in the University. If at any time thereafter the Head of the Department of Physical Education and the Medical Examiner certify to special need for further training in individual cases, the work is to continue.

Students physically disabled may be excused from Physical Education upon the written recommendation of the University medical examiner, by the Dean of the College of Arts and Science.

Students who take part in any athletic sport will be excused from physical education during the season usually allotted to that sport. If a student be found delinquent in practice work, said student shall be required to substitute work in the gymnasium.

Students who, for special reasons, are unable to take Physical Education, may be excused by the Council.

Military Science

All men students are required to drill three hours each week during their freshman and sophomore years.

Any student who is physically unfit to perform miltary service under the United States Army regulation may be excused by the Dean of the College of Arts and Science, upon the written recommendation of the University medical examiner.

Students who, for special reasons, are unable to drill, may be excused by the Council.

Rules Governing Athletic Teams

Eligibility requirements for participation by any student in intercollegiate athletic contests, are as follows:

1. Presentation of not less than fourteen Carnegie entrance units.
2. Matriculation in person within thirty days (ten days shall be the limit for football men) after the beginning of the regular University year (not counting the days set apart for the matriculation and classification of students.)
3. Pursuit of a course involving at least ten hours of lectures and recitations, counting two hours of laboratory or practical instruction as equivalent to one hour of lecture or recitation.
4. Pursuit of a course involving at least ten hours of lectures and recitations, counting two hours of laboratory or practical instruction as equivalent to one hour of lecture or recitation, during at least two-thirds of the preceding University year in the case of football men who took part in any intercollegiate football contest at the University last year.
5. Freedom from probation for any cause (see sections for causes for placing students on probation.)
6. Eligibility in accordance with all rules of the Southern Intercollegiate Athletic Association.

No student will be allowed to be absent from the University for more than six school days (counting Saturday as a half day) during any one semester on account of athletic trips. Prior to each trip the Director of Athletics shall furnish the President, the Registrar, the Chairman of the Athletic Committee, and the Dean of each college, a list of the students who are to make the trip and the expected duration of their absence. Students on this list will be excused by their instructors and allowed the privilege of making up any work they may miss and, if made up, it is not to count against them in their final grade.

No athletic team representing the University or any organization in the University, shall participate in any athletic contest without the permission of the Chairman of the Athletic Committee.

General Conduct

In issuing rules for the government of the students, it is not deemed necessary to set forth too many details. Something is taken for granted. It is assumed that the students will conduct themselves in a seemly manner, bearing in mind that their conduct constitutes

the basis for the reputation of the institution. It is assumed that the young men understand that intoxication, the visiting of saloons, the introduction of intoxicants upon the campus, gambling in any form, or the visiting of any place of vice is strictly prohibited. It is assumed that all students know that the penalty for immoral or ungentlemanly conduct is suspension or dismissal.

Hazing

All forms of interference with a student's personal liberty by other students, such as is commonly classed under hazing, and complicity in any form of initiation which has incident thereto the exhibition of a student as a public spectacle in a ridiculous light or the treatment of him publicly or privately, even with his consent, in such a way as to endanger life or limb, are forbidden in the institution.

Smoking in University Buildings

Students are prohibited from smoking in any of the recitation rooms, Y. M. C. A. rooms, Armory, Gymnasium, drawing rooms, hallways, doorways, or laboratories of the University.

Residence in Sorority Buildings

Freshmen and sophomores are not permitted to reside in sororiety houses. Juniors and seniors must obtain permission from the Dean of Women for such residence.

Erection of New Dormitories

The Board of Trustees contemplate the erection of suitable dormitories for men in the near future. The Dean of Men has a list of rooms and boarding houses.

Expenses

The necessary expenses, in addition to fees, will be about as follows:

Laundry	$10.00
Books	10.00
Rent of furnished room per week	$1.00 to 2.00
Board in private families per week	3.50 to 5.00
Board and lodging in private families per week	4.00 to 6.00

Students who are required to do military drill must procure the regulation uniform, which will cost about $15.00.

Board and lodging are provided in Patterson Hall for young women, at $5.00 a week. The occupants furnish their own napkins, towels and bedding, except mattresses and pillows, and pay their own laundry bills.

Employment Bureau

Many students find it necessary to earn money with which to help to support themselves while in college. The Y. M. C. A. has organized an employment bureau for the purpose of aiding them in securing work. If a student desires to employ part of his time to earn money, he reports to the bureau the number of hours he can work. Many good positions have been secured for the students in this way. There are about fifty various newspaper routes in the city; all of them are carried by college men. The state farm, which is a part of the University, employs many students. If the prospective student has only one or two hours each day for working, it is so arranged by the farm managers that he is always employed. A number of students wait on tables at the boarding houses for their board. The merchants and tailoring establishments of the city employ students to carry bundles. Young men are employed at hotels and restaurants; others work at numerous odd jobs at the homes of the citizens. A number of the young men are employed as stenographers in the city. Students seeking employment should apply at the office of the Y. M. C. A.

Dormitory for Women

Patterson Hall is the residence open to all women who are students in any department of the University, who carry at least twelve hours of work. The hall is a handsome three-story building especially constructed for students' use. It contains 68 rooms affording accommodation for one hundred and nineteen students. It is heated by steam and lighted by electricity.

Board is charged at the rate of $4.50 a week; payment is made by the month and is required in advance. Students furnish their own napkins, towels and bedding and pay for their own laundry. A deposit of five dollars is required on the assignment of each room as guarantee of good faith. At the end of the year or when the room is surrendered, this deposit will be returned less such amount as may be assessed for unusual damages to the room or for unpaid bills.

The general administration of the house is in the hands of the House Director, *Miss Adelaide E. Crane, who with the Dietitian, have supervision of the house life. A resident nurse will have general charge of the physical welfare of the household.

Applications will be received at any time, but notification of the assignment of rooms will not be sent out until early summer.

The Infirmary and the Nurse

Every provision is made for the care of the students when ill. In each residence hall, one room furnished and fully equipped, is

*Resigned January, 1919.

set aside for use when necessary. Should any illness of a serious nature develop, competent physicians are at hand and efficient nurses can be secured thru the Graduate Nurses' Registry. The hospitals of Lexington can also be reached conveniently.

The desire of the University authorities, however, is to "prevent sickness." A free dispensary is operated at the University under the direction of a reputable physician of Lexington and the University Nurse. The physician may be found at the dispensary regularly between 4:15 and 5:15 on Tuesdays and Fridays. The University Nurse may be found at the same hour every day. Students of the University are encouraged to seek advice of the nurse or physician as soon as they feel indisposed. Epidemics and much ill health are prevented in this way. Any advice or treatment given at the dispensary is free. Students are of course at liberty to seek the advice of any physician at any time.

Convocation

Religious exercises are conducted in the Chapel every Tuesday morning under the direction of the Chapel Committee. Members of the Faculty, ministers of the various churches of Lexington, and visiting educators address the students at these gatherings. Music is furnished by the best talent of the city and student body. Provision is also made for a meeting on Friday morning, when matters of general student interest may be considered.

Churches in Lexington

The churches of Lexington extend to all the university students a cordial invitation to enter into Christian fellowship with them. They welcome all students to their services irrespective of church relationship. Frequent receptions by the young people's associations of the various churches are given for the university students. The pastors visit the University, preach special sermons for students, and are glad to welcome them in their homes. Each church has a Bible class especially for students, usually conducted by a university professor.

Visiting Lecturers

The University provides every year a number of lectures and dramatic entertainments to which the students and public are invited. These lectures give students opportunity to hear men and women of national reputation. Among those who have visited the University recently are the following:

Augustus Owsley Stanley, Governor of Kentucky.

Hamilton Holt, Editor of the Independent, New York.

Harvey W. Wiley, Former Chief Chemist, Department of Agriculture, Washington.

W. A. Ganfield, President of Center College, Danville, Ky.

Dr. Alexander Johnson, New York.

Raymond Robins, Social Service Expert, Chicago, Ill.

Hendric Charles Babcock, Dean of College of Arts and Science, University of Illinois.

Albert Edward Winship, Editor of Journal of Education, Boston, Massachusetts.

H. V. McChesney, Head of the Education Work at Camp Taylor.

Mrs. Elizabeth McFarland, Field Secretary of the Y. W. C. A.

W. D. Weatherford, International Student Y. M. C. A. Secretary.

H. L. Southwick, President of the College of Oratory, Boston, Massachusetts.

Colonel George Bain, Lecturer, Lexington, Ky.

O. L. Reid, Superintendent Louisville Public Schools.

Dr. George W. Truitt, Dallas, Texas.

Samuel Rea, President Pensylvania Railroad, Philadelphia.

William Gibson, Pennsylvania Brake Shoe Company, Pittsburgh.

Theodore Weinshank, Warren-Webster Company, Camden, New Jersey.

F. C. Bitgood, Babcock & Wilcox Company, Bayonne, New Jersey.

W. H. Carrier, President, Carrier Engineering Corporation, New York.

D. F. Crawford, Locomotive Stoker Company, Pittsburgh.

George Stevens, President, Chesapeake & Ohio Railroad, Richmond, Virginia.

James Pontz Nelson, Valuation Department, Chesapeake and Ohio Railroad, Richmond, Virginia.

J. I. Lyle, Carrier Engineering Corporation, New York.

A. T. Lewis, Lewis, Robinson & Gant, Philadelphia.

T. C. Powell, Washington, D. C.

C. R. Dooley, Westinghouse Electric & Manufacturing Company, East Pittsburgh.

J. W. Dietz, Western Electric Company, Chicago.

George H. Pfeif, General Electric Company, Schenectady, N. Y.

W. L. Bronaugh, Chicago.

H. P. Ingels, New York.

C. R. Lyle, Armstrong Cork and Insulation Company, Pittsburgh.

Philip Riefkin, E. I. du Pont de Nemours & Company, Wilmington, Delaware.

Philip L. Kaufman, Strauss Bascule Bridge Company, Chicago.

G. P. Upington, Braemer Air Conditioning Corporation, Philadelphia.

E. C. McDowell, Dominion Steel Foundry Company, Hamilton, Canada.

J. T. Faig, President, Ohio Mechanics Institute, Cincinnati, Ohio.

The British Educational Mission

The University was host November 21 to the British Educational Mission which visited this country October to December. During the visit ways and means were discussed for bringing the educational institutions of the two countries into closer relationship. The University of Kentucky was one of the few American institutions in the itinerary of the Mission and is fortunate in the opportunity to exchange educational ideals with the universities of Great Britain.

The members of the mission were:

Dr. John Joly, Professor of Geology and Mineralogy, Trinity College, Dublin.

Dr. Arthur Everett Shipley, Vice-Chancellor the University of Cambridge, Master of Christ's College and Reader in Zoology.

Sir Henry Miers, Vice-Chancellor of the University of Manchester and Professor of Crystallography.

The Rev. Edward Mewburn Walker, Fellow, Senior Tutor, and Librarian of Queen's College, Member of the Hebdomadal Council, Oxford University.

Sir Henry Jones, Professor of Moral Philosophy, University of Glasgow.

Recommendation of Teachers

The University strives to secure appointments for its graduates in the schools and academies of the state and elsewhere. To this end it keeps on file the names of all former students so that it may be able at any time to assist them to positions, and be of service to the high schools of the state. The demand for University of Kentucky graduates is constantly increasing. The Committee on Appointments will be glad to receive any information concerning vacancies.

University Woman's Club

The Woman's Club, consisting of the professors' wives and other ladies of the University, exerts a most helpful influence upon the social and moral life of the community. Entertainments are given under their auspices. During the past year they were active in looking after the sick and needy among the students. They welcome students in their homes.

The Library

Books may be taken out by all officers and students of the University, by teachers in the public schools of the state, and by others having special permission. The whole collection is placed on open shelves accessible to all readers.

The general library is open as follows:

Week-days (legal holidays excepted) 8 a. m. to 9:30 p. m.

Sundays during regular session, 2 to 5:30 p. m.

Vacation periods, 9 to 12 M. daily.

The Experiment Station library is open from 8 a. m. to 5 p. m. daily except Saturday, when the hours are from 8 a. m. to 1 p. m.

It is the purpose of the library to be of the greatest possible service to both faculty and students of the University, and for this reason as few restrictions as possible are placed on the issuance of books and the use of them in the library reading room. Every effort is made to help students to an intelligent use of the reference books and periodicals and to aid in the work of the various student activities, including all clubs and literary societies.

Residence Requirement for the Bachelor's Degree

To be eligible for the Bachelor's Degree the candidate must have been a resident student of the University during at least one year's session.

Senior Classification

No student in the University shall be considered a member of the senior class in any year unless he shall have satisfied the requirements of senior classification in his respective college.

College of Arts and Science. A student, to be eligible for senior classification, must have completed 96 credits with a standing of 1.

College of Agriculture. A student, to be eligible for senior classification, must have completed 97 credits (exclusive of Gymnasium and Drill) with a standing of 1.

College of Engineering. To be eligible for senior classification, a student must have completed all the prescribed work below the senior year with a standing of 1.

College of Law. A student to be eligible for senior classification, must have completed fifty-two credits in Law, and in addition thirty credits in some other college.

A student in any college, to be classified as a junior, must have within 6 credits of the normal amount of work, and a standing of 1; to be classified as a sophomore, he must have within 10 credits of the normal amount.

Commencement Honors

Students are graduated "With High Distinction" who attain a standing for the course of 2⅜.

Students are graudated "With Distinction" who attain a standing of 2⅛.

Students may receive "Special Mention" in a subject who attain a standing of 2 and are recommended by the department concerned for especially good work.

A student in the University prior to June, 1918, to be eligible for honors, must have met the former requirements for honors for that part of his course.

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 (B. S.)
Bachelor of Arts in Industrial Chemistry (B. S. in Ind. Chem.)
Bachelor of Science in Agriculture (B. S. Agr.)
Bachelor of Science in Home Economics (B. S. in H. E.)
Bachelor of Laws (LL B.)
Bachelor of Science in Civil Engineering (B. C. E.)
Bachelor of Science in Mechanical Engineering (B. M. E.)
Bachelor of Science in Mining Engineering (B. E. M.)
Bachelor of Metallurgical Engineering (B. Met. E.)

The following advanced degrees are conferred in the Graduate School:

Master of Arts (A. M.)
Master of Science (M. S.)
Master of Science in Agriculture (M. S. Agr.)
Civil Engineering (C. E.)
Mechanical Engineer (M. E.)
Electrical Engineer (E. E.)
Mining Engineer (E. M.)

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

SCHOLARSHIPS AND PRIZES

Graduate Fellowships and Scholarships

For the encouragement of research and scholarship the following scholarships and fellowships have been established in the various departments of the University of Kentucky: Five scholarships with a stipend of $200 each; two fellowships with a stipend of $500 each; ten assistantships with a stipend of $400 each.

The scholars and fellows will be expected to devote their whole time to graduate work. The assistants will do no regular teaching, but will assist the heads of the departments in such work as they may require, as in laboratories, reading papers, etc. In general, they will be expected to spend two years in the University before receiving their first advanced degree. These fellowships are open to those who already hold, or will receive at the close of the current academic year, a bachelor's degree, or its equivalent, 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.

Application for a fellowship should be made to Glanville Terrell, Chairman of the Graduate School Committee, not later than April 15.

The Rhodes Scholarship

Under the bequest of the late Cecil Rhodes two scholarships in the University of Oxford are appropriated to universities or colleges in each of the present states and territories of the United States. Each scholarship has a yearly value of $1,500 and is tenable at any college in the University of Oxford for three successive academic years.

"In the election of a student to a scholarship, regard will be had to (1) his literary and scholarship attainments, (2) his fondness for any success in manly outdoor sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship, and (4) his exhibition during school days of moral force of character and of instincts to lead and to take an interest in his schoolmates."

Examinations are held in each state and territory to which scholarships are assigned, at centers to be fixed by the local Committee of Selection. The Rhodes Scholars are selected from candidates who have successfully passed this examination. One scholar is chosen for each state and territory to which scholarships are assigned.

Candidates must be unmarried, must be citizens of the United

States, and must not be younger than 19 nor older than 25 years on October first of the year in which they are elected.

Inquiries should be addressed to President Frank L. McVey, University of Kentucky, Lexington, Kentucky.

Southern Railway Loan Fund

The Southern Railway offers a loan fund of $1,000 to matriculated students of the College of Agriculture who have attained at least the rank of juniors and who have declared their intention to graduate. The minimum loan shall be $25 and the maximum $100 that may be made to one student in any college year.

Alumni Loan Funds

The Alumni Association of the University has a fund of eight hundred dollars, given by the South Africa Club and the classes of '90, '95, '06, and '08. It has in its possession also the Alpha Zeta Loan Fund of two hundred dollars.

The University Woman's Club has made an initial donation of fifty dollars.

Students who desire financial assistance from the funds should apply to the Student Loan Fund Committee.

No loan is made to a student who has been in residence at the University for a shorter period than one semester; preference is shown to juniors and seniors. The applicant's record for scholarship, his reputation for industry, and his habits of temperance are also determining factors. Except in extraordinary cases, the maximum loan to a student during an academic year is one hundred dollars; and the total sum loaned to any individual may not exceed three hundred dollars. The rate of interest on a loan is three per cent per annum, if paid when due; after maturity, six per cent. The student gives his personal note, which becomes due one year after his graduation or withdrawal from the University.

Tau Beta Pi Scholarship

The Tau Beta Pi Society offers a cash prize of $100 to the student of the engineering college who attains the highest scholarship during the freshman and sophomore years. The prize is available at the beginning of the junior year.

Bennett Prize

Pursuant to the will of the late Mr. Bennett, of New York, a cash prize of $20 in gold is offered to the student of the University who shall submit the best paper on some topic relating to the Origin and

Development of Parliamentary Institutions. The topics selected for the years 1918-19 are: 1. Compulsory Military Service in the United States. 2. The New German Revolution and Its Significance. All undergraduates are eligible to compete for this prize and the essays should be placed in the hands of the President by May 1. This prize is awarded in the chapel in June.

Barker Trophy

President Barker has given the Union and Patterson Literary Societies a $50 silver cup, for the possession of which they compete in annual debate. The successful society in this contest retains custody of the cup until the next debate.

Crum Prize

By kindness of Mr. George W. Crum a medal valued at $20 is offered annually to the Patterson Society. The conditions are imposed by the society and the medal awarded before the Christmas holidays.

Patterson Prize

Ex-President James K. Patterson offers to the Patterson Society a medal to be awarded annually on March 26, upon conditions imposed by the society.

Oratorical Prize

The Union Society offers a $15 gold medal to the successful competitor in an oratorical contest. This contest occurs on February 22 in the university chapel.

Declamation Prize

A $10 gold medal is offered annually, by the Union Society, to the successful contestant in declamation. This is open to all members of the society.

Journalism Prizes

Prizes will be awarded for practical work in the second semesters of second, third and fourth years. These contests will be open to students only of the three classes in Journalism.

Second Year. $5 in gold for best story, minimum 2,000 words, on subject to be assigned.

Third Year. $5 in gold for best description, minimum 5,000 words, of Experiment Station or Agricultural College and story of work accomplished by it that year.

Fourth Year. $5 in gold for best account of convention gathering of state importance, no limit as to words. $10 for best dramatic criticism on performance at Opera House, performance to be indicated by the head of department, and review to be written the night of the play and before local papers are issued. $5 for best current news story of spontaneous origin.

Mining Prize for Freshmen

The Department of Mines and Metallurgy offers a prize of $10 to that member of its freshmen class who attains the best record in class attendance during the year.

The W. H. Anderson Company Prize

The W. H. Anderson Law Publishing Company of Cincinnati, Ohio, offers as a prize to the student who makes the best general average in the first year, a set of Page on Contracts, three volumes.

Callaghan & Company Prize

Callaghan & Company, Law Book Publishers, of Chicago, offer as a prize to the law student of the junior year who makes the best general average a Cyclopedic Law Dictionary.

Blackstone Institute Prize

The Blackstone Institute, of Chicago, offers to the student who makes the best general average in the junior year, a set of fifteen volumes of "Modern American Law."

Military Prizes

A cash prize of $65 will be awarded to the best drilled company.

$5 will be awarded to the best drilled individual cadets in the freshman and sophomore classes respectively.

These prizes will be awarded at the annual Spring Competition.

Intercollegiate Apple Judging League Prize

The Intercollegiate Apple Judging League offers a handsome silver trophy for the most expert judging by teams of three students each from the agricultural colleges composing the league. Students in pomology of the Kentucky College of Agriculture compete annually for this prize, which must be won in three successive contests before it becomes the permanent possession of any institution.

State Horticultural Society Prize

In January, 1916, the Kentucky State Horticultural Society provided the "Junior Cup," a silver trophy, for excellence in apple judg-

ing by members of the junior class in pomology, the winner in each successive year for ten years to have his name inscribed upon the cup, which is to remain permanently in the care of the Department of Horticulture.

Commissioner of Agriculture Prizes

The State Commissioner of Agriculture has provided prizes aggregating $125 for the best judging of the various classes of live stock to be competed for annually by students of the College of Agriculture, at the Kentucky State Fair at Louisville.

A. S. H. B. Association Trophy

The American Saddle Horse Breeders' Association offers at the State Fair each year a handsome silver trophy to be given to the best student judge of saddle horses at the Fair.

Ewing Prize

For the best judging of dairy cattle by students of the freshman class of the College of Agriculture, Messrs. D. H. Ewing's Sons, of Louisville, donate an annual prize of $25 to be competed for at the Kentucky State Fair.

Bowles Prize

For the best judging of dairy cattle by a student of the freshman class of the College of Agriculture, Hon. J. B. Bowles, of Bardstown, Kentucky, offers an annual prize of $25.

J. F. Cook Prize

Mr. J. F. Cook, of Lexington, Kentucky, will offer a gold watch fob, properly inscribed, to the student in the College of Agriculture, who shows the greatest ability in the judging of jack stock.

The ability of the student to judge jack stock will be tested by visiting a farm where a large number of these animals are kept and where the students will express their opinion regarding the relative merits of the animals.

National Dairy Show Trophies and Scholarships

During the past four years students of the Department of Animal Husbandry in the College of Agriculture have competed at the National Dairy Show at Chicago for the Handsome trophies offered for the best judging of dairy cattle by students of state agricultural colleges. These trophies are as follows:

A. Sweepstakes trophy offered by the National Dairy Show Association for the agricultural college team making the highest average score in judging cattle of all the dairy breeds.

B. Sweepstakes trophy offered by Hoard's Dairyman, Ft. Atkinson, Wisconsin.

The National Dairy Show Association offers a first and second scholarship for the best and second best individual judging of all dairy breeds. These scholarships may be used in defraying the expenses of the students at any agricultural college in the United States.

International Live Stock Exposition Trophies and Prizes

A trophy is offered for the best judging of heavy horses, beef cattle, sheep and hogs at the International Live Stock Exchange at Chicago each year, to be competed for by selected teams from American colleges of agriculture.

A trophy is offered by the American Saddle Horse Breeders' Association to the agricultural college student judging team doing the best and most efficient judging of saddle horses at the International Live Stock Exposition.

A number of scholarships are also offered at this Exposition for the best individual judging of fat stock.

In the above named contests the Kentucky College of Agriculture has stood high among the agricultural colleges in the number of winnings. This College now holds the National Saddle Horse trophy, and the Ayrshire Dairy Cattle trophy mentioned above.

C. Trophy for the best judging of Holstein-Friesian cattle.

D. Trophy for the best judging of Jersey cattle.

E. Trophy for the best judging of Guernsey cattle.

F. Trophy for the best judging of Ayrshire cattle.

In addition to these trophies, the American Jersey Cattle Club, the American Guernsey Cattle Club, and the Holstein-Friesian Association of America, each offers a $400 scholarship to the Agricultural College student making the highest individual score in judging its respective breed of cattle.

Interscholastic Tournament Prizes

The winners of first, second, and third places in each event of the Interscholastic Tournament are awarded a gold, silver, and bronze medal respectively. The contestant winning the largest number of points in the track and field events is awarded an individual championship gold medal. The high school winning the largest number of points in the tournament is given a championship loving-cup, to be retained one year after being won.

ORGANIZATIONS AND STUDENT ACTIVITIES

Y. M. C. A.

The Young Men's Christian Association is the largest student organization in the University. The objectives of the Association are: (1) to lead men into and develop them in the Christian life; (2) to co-operate with the church and train men for service in it; (3) to promote a program of unselfish service; (4) to unite the student body in promoting the highest good of the University and the individuals who compose it; and (5) to unite the Christian students of the University with the world-wide Christian student brotherhood.

Four rooms are occupied by the Association on the second floor of the Alumni Building. Books and magazines, newspapers, free stationery, games, a piano, an Edison phonograph and telephone are provided. These rooms offer a convenient place for the students to meet in a social way.

A program of religious education is provided which includes practical and devotional talks and addresses on missions and social betterment. An effort is made to promote Sunday School attendance and to co-operate with the churches in various relations. Social service is promoted in connection with the state reformatory, the Sunday Schools, the city public schools, and other organizations. It is felt that such training makes a man more public-spirited and better fitted to work out his community problems after graduation.

Mr. R. W. Owens is the General Secretary for the University. Associated with him are representative students who form the cabinet. The Board of Management is composed of students, members of the Faculty, and representative citizens of the Lexington churches.

The Association maintains an employment bureau which assists worthy students in securing work. For further information, see page 87.

Y. W. C. A.

Every woman entering the University is invited and urged to identify herself with the Y. W. C. A., for this organization is an interesting and important feature of every woman's life in the University. It endeavors to help her to learn that that life counts most which serves most.

The Association has two well-equipped rooms in Patterson Hall,

one for the religious meetings and the other for the cabinet meetings and reading room. Meetings are held every Sunday at 6:45 p. m., the programs being arranged by a committee of students. Student Bible classess are conducted during the first semester and Mission classes the second. Morning Watch has been introduced this year and the services are held at 7 a. m. every morning, which have added a great deal to the religious spirit of the students.

A great deal more social work has been done in the last year, in which the students have shown much enthusiasm. Each year a large delegation is sent to the Blue Ridge Conference in North Carolina to bring back enthusiasm and plans for the following year. Receptions are held during the first month of the year, and other social functions follow thru the winter.

The President for the year 1918-19, Miss Mildred Graham, and fourteen cabinet members have charge of the Association work. There is also an Advisory Board, consisting of the Dean of Women and six other women of the University and the city of Lexington, who have shown especial interest in the Association.

The Woman's Student Government Association

The Woman's Student Government Association was organized January 29, 1919. The whole Association has legislative powers; the executive authority rests with a council elected by members of the Association. Its purpose is to develop a democratic spirit and a social sense among its members and in the University community. The Association purposes also to arrange for lectures on vocational subjects and to provide a rest room for women.

The Union Literary Society

This, the oldest of the literary associations connected with the University, was formed in 1872 by the consolidation of the Yost Club and the Ashland Institute, and operates under a charter from the legislature. It occupies quarters on the third floor of the Alumni Building. The society meets every Saturday evening for debate, declamations, etc.

The Patterson Literary Society

This society, formed in 1887 and, at the suggestion of Governor Knott, named in honor of the President of the University, was chartered in 1888. Its hall is located in the third floor of the Alumni Building. Meetings for debate, declamation, etc., are held each Saturday evening.

The Philosophian Literary Society

This society, instituted in 1882, by young women of the University, for literary improvement and social pleasure, offers besides the usual weekly meetings, public entertainments, consisting of declamations, essays, criticism, and addresses. Meetings are held in Patterson Hall on Wednesday evenings.

Horace Mann Literary Society

All students taking work in the Department of Education are eligible to active membership in the Horace Mann Society. The society meets promptly at seven o'clock on Thursday evening of each week in a recitation room in the Education Building. The session is limited to one hour and the discussion, debates and papers are devoted to literary and educational subjects. Two or three times during the year the work of the society is given over for the hour to parliamentary drill. The work done here is valuable training for teachers and those who expect to take part in any kind of public exercises in life.

Henry Clay Law Society

The Henry Clay Law Society is an organization composed of the law students, which convenes once each week in a hall provided for its use. In this society the students by study and actual practice learn the rules of parliamentary law and their use in deliberative assemblies. They organize legislative assemblies and learn the procedure in the framing and passage of bills, both state and federal. Subjects of a public nature are discussed in order to familiarize the students with the affairs of the country which will confront them in their experience as citizens and professional men.

Agricultural Society

The Agricultural Society is composed of students in the College of Agriculture. Problems of interest to agricultural students are discussed. Lecturers address the society frequently. It convenes every Monday evening in the Agricultural Building.

Tau Kappa Alpha

The Tau Kappa Alpha Society is a national honorary oratorical fraternity. The local chapter was organized in 1913. Its purpose is to encourage public speaking, especially in oratory and debate. To be eligible for membership a student must have represented the institution in some intercollegiate contest.

Intercollegiate Contests in Public Speaking

The University of Kentucky participates in annual intercollegiate contests in debate and oratory. These activities are under the supervision of the Committee on Oratory and Debate and representatives from the students. Special contests are arranged to promote interest in the literary societies and among students in the College of Law. Other contests are open to all students in the University.

The University is represented each year in the intercollegiate oratorical contest. The various colleges of the state constitute the membership of this oratorical association.

An Intercollegiate Oratorical Peace Association has been organized, and the University is represented each year in this contest. There are also several annual inter-society contests in public speaking.

Brooks Civil Engineering Society

The Brooks Engineering Society, named in honor of the former Dean of the College, is a flourishing organization, and gives abundant opportunity for the discussion of general and special engineering topics. Meetings are held monthly.

Mechanical and Electrical Engineering Societies

The American Society of Mechanical Engineers has a branch in the University of which all seniors in Mechanical and Electrical Engineering are members. Meetings are held every two weeks in the heat engineering room. Each member receives a copy of the transactions of the society, and the papers contained therein are used as the bases of discussions. Many lecturers of note address the society during the year.

The American Institute of Electrical Engineers has a branch society in the University of which all seniors in this college are members. Meetings are held every two weeks in the heat engineering room. The monthly proceedings of the Institute are received by each member, and the papers contained therein are the bases of discussion. Many prominent electrical engineers visit the University during the year and address these meetings.

Class societies are organized in every freshman class in this college. Each adopts a distinctive name and remains intact thruout the four years of the undergraduate course. Meetings are held at times to suit the schedules. During the first three years topics of engineering and literary interest are discussed at the meetings. Lectures by the members of the faculty and others frequently make up the program. In the senior year the society becomes a social organization, inasmuch as the technical and literary work is carried on by the

student branches of the American Society of Mechanical Engineers and the American Institute of Electrical Engineers.

Mining Society

The Kentucky Mining Society was organized in 1908, and was admitted as a Student Branch of the American Institute of Mining Engineers in 1911. It is also a local branch of the Kentucky Mining Institute. Meetings are held on the first Tuesday of each month.

Tau Beta Pi

Tau Beta Pi Association is an honorary engineering student organization which was founded at Lehigh University in 1885. A student to be eligible to election as a member must maintain an average grade in all his studies thruout his freshman, sophomore, and junior years that will rank him among the first one-fourth of his class who are matriculated in the College of Engineering. Members are elected twice each year. In the spring those who rank among the first one-eighth of their class up to the end of the first semester of the junior year are eligible to election. In the fall those who rank among the first one-fourth of their class up to the end of their junior year are eligible to election, and also the man who leads his class thru the freshman and sophomore years. This latter man is known as the Tau Beta Pi Scholar. The Kentucky Alpha Chapter was founded at the University in 1902. Meetings are held on alternate Monday evenings in the senior reading room.

Alpha Zeta

Alpha Zeta is an honorary agricultural fraternity. The membership is confined at this University to the junior and senior students in the College of Agriculture who attain a rank in scholarship placing them among the upper two-fifths of their classes. Alpha Zeta is a national fraternity consisting at the present time of twenty-three chapters in the leading agricultural colleges in the country. The object of the fraternity is to stimulate interest in the study of scientific agriculture and, in a measure, to reward students and others who have shown themselves exceptionally proficient in scholarship.

Athletics

Under this head are included football, baseball, basketball, tennis and track athletics. Participation in these forms of athletics by students is voluntary, altho, in certain seasons, and under conditions prescribed by him, the director of physical education for men exempts those who do consistent and satisfactory work in the above forms of athletics from regular work in the gymnasium.

Intercollegiate contests are held in all these forms of athletics. The interest in these contests is very intense at times. It is intended thru interest in athletics and in these contests to develop a love of outdoor sports and a proper attitude toward life among the students.

The University is a member of the Southern Intercollegiate Athletic Association, and athletics are conducted according to the rules of this association. The management of athletics is in the hands of the students, subject to a committee of the faculty appointed by the President. The student organization controlling athletics is called the Athletic Association. Membership in this organization is obtained by payment of five dollars. For this five-dollar fee, in addition to membership in the athletic association, the student receive more than five dollars' worth of coupons, which are accepted at their face value for admission to games and contests. For rules governing eligibility to athletic teams, see under Residence and Graduation.

Tennis Club

The Tennis Club is an organization of students who are desirous of promoting tennis as a college sport. A membership fee of one dollar is charged and the payment of this fee entitles the member to the use of the four club courts on the campus. The club holds a tennis tournament for its members annually.

High School Contests in Debate

High school contests in debate are held annually under the direction of the Department of English. All high schools in the State are invited to participate in these contests. The University offers a cup to the school which wins the final contest which is held at the University in Lexington. Medals are awarded to the members of the teams which win the first and the second honors. The purposes of these contests are to promote and supplement the work of high school literary societies and the oral work in English courses, to encourage high schools to give attention to the training of pupils in clear thinking and reasoning and in direct, sincere, distinct speaking, and to encourage discussion of current public questions.

Kentucky Interscholastic Tournament

The University holds annually a state-wide contest in public speaking, music and track athletics for high school students. The number of representatives which any school may send to the tournament is not generally limited, but it is suggested that the representatives be selected after a contest held at home. A preliminary contest is held at the University for the purpose of reducing the number

of contestants to a convenient program for the finals. The winners of the first, second and third places in each event are awarded gold, silver and bronze medals respectively. The contestant winning the largest number of points in the tournament is awarded an individual championship gold medal, and the high school winning the largest number of points in the tournament is given a championship loving cup, to be retained for one year after being won. All high schools in the state, both private and public, are eligible and are invited to send representatives.

Musical Clubs

The Glee Club is an organization of university students for the cultivation of vocal and instrumental talent. It is under the direction of a competent director and furnishes students an excellent opportunity to develop their musical gifts. Entertainments are given during the year in Lexington and nearby towns.

The Orchestra and the Band are also student organizations. The former furnishes the music for student functions in the chapel. The Band is the musical organization of the corps of cadets.

The Strollers

The Strollers is the dramatic club of the University. Each year the Strollers give a play in Lexington and sometimes in neighboring towns. Opportunity is offered to students to prove their histrionic ability in an annual contest held under the auspices of the Strollers on Hallowe'en, which is popularly known as "Amateur Night." All students are eligible to try out for parts in the play, altho membership in the organization is necessary to the making of a part.

White Mathematics Club

The White Mathematics Club is composed of instructors, graduate students and major students of the Department of Mathematics. It meets every Tuesday at 3:30 p. m., at which time the various members present special topics of general interest or lead the discussion in portions of some book adopted for the year's study.

History Club

The History Club is an organization composed of the instructors and students of the Department of History. It admits as members also all those interested in this field of work. It meets once a month in the rooms of the department in the Education Building.

Political Economy Club

The Political Economy Club is composed of instructors and advanced students of the Department of History and Economics. Meetings are held monthly.

English Club

The English Club is composed of the instructors and the students of the Department of English. Meetings are held monthly to discuss questions of interest to the department.

Biology Club

The Biology Club is an organization composed of members of the faculty and students interested in biology and kindred sciences. Meetings are held once a month in the Science Building. During the spring excursions are made to points of interest in central Kentucky.

Library Club

The library Club is composed of the members of the library staff and of the classes in library science. The club makes a study of subjects of current interest, its object being to give to those connected with the library a broader outlook by increasing their general information.

Press Association

The University of Kentucky Press Association was organized in 1912. Membership in this organization is open to all students in college who correspond for newspapers. Weekly meetings are held in the rooms of the Department of Journalism. All students, whether taking work in journalism or not, are encouraged to join this association.

PUBLICATIONS

Student Publications

The Kentucky Kernel is published every Thursday thruout the college year by the student body of the University for the benefit of the undergraduates, alumni, and faculty of the institution.

The Kentuckian is the student annual published by the senior class. The junior class each year elects two persons to serve as assistant editor and assistant business manager. They, the following year, become editor and business manager and select the other members of the staff.

The Kentucky Law Journal is issued monthly by the students of the College of Law. The magazine is the official organ of the State Bar Association.

The Rural Kentuckian is a monthly magazine published during the academic year by the students of the College of Agriculture. Members of the staff must be members of the Agricultural Society in good standing. In order to attain good standing a member must be a regular attendant for one semester.

University Publications

The University Bulletin is published monthly by the University. It includes the catalog, the announcements of the colleges and departments.

The Press Bulletin is published bi-weekly by the University. Its object is to acquaint the public with the work of the institution.

The University of Kentucky Index is a leaflet issued bi-weekly by the University.

The Experiment Station Bulletin Publications report the research work in the College of Agriculture.

The Weekly Announcement is issued weekly for the purpose of giving to the students, faculty and friends of the University notice of all meetings, lectures, and entertainments upon the campus or in the city which are of general interest to the students and the university community. This publication is conducted by the Department of Journalism.

The Semi-Monthly Farm Bulletin is issued on the 1st and 15th of each month by the Extension Division of the College of Agriculture. This sheet is distributed free to about 4,500 farmers, and is sent to the entire press of Kentucky.

The Kentucky High School Quarterly was established January, 1915, and is published four times a year under the auspices of the Department of Education. It is a high school quarterly devoted chiefly to Kentucky secondary education. Its purpose is largely to bring the high schools of the state into touch with each other thru its columns and to gather materials and publish articles of interest and value to high school teachers.

Part III

COLLEGES AND SCHOOLS

THE UNIVERSITY ORGANIZATION

College of Arts and Science

Department of Anatomy and Physiology
Department of Ancient Languages and Literatures
Department of Art and Design
Department of Bacteriology
Department of Botany
Department of Chemistry
Department of Economics and Sociology
Department of Education
Department of English Language and Literature
Department of Geology
Department of German Language and Literature
Department of History and Political Science
Department of Journalism
Department of Mathematics and Astronomy
Department of Military Science
Department of Music
Department of Philosophy
Department of Physical Education
Department of Physics
Department of Psychology
Department of Romance Languages and Literatures
Department of Zoology

College of Agriculture

The College

Department of Agronomy
Department of Animal Husbandry (Beef Cattle, Sheep and Swine)
Department of Animal Husbandry (Dairy Cattle, Horses and Poultry)
Department of Farm Management
Department of Home Economics
Department of Horticulture
Department of Markets
Department of Veterinary Science

Experiment Station
- *Department of Administration*
- *Department of Agronomy*
- *Department of Animal Husbandry (Beef Cattle, Sheep and Swine)*
- *Department of Animal Husbandry (Dairy Cattle, Horses and Poultry)*
- *Department of Chemistry*
- *Department of Entomology and Botany*
- *Department of Farm Management*
- *Department of Feed Control*
- *Department of Fertilizer Control*
- *Department of Food and Drug Control*
- *Department of Horticulture*
- *Department of Markets*
- *Department of Veterinary Science*

Extension Division
- *Club for Boys and Girls*
- *Farm Demonstration*
- *General Extension Work thru Departments (Agronomy, Animal Husbandry, Dairying, Soil Fertility, Farm Management, Feed Control, Horticulture, Veterinary Science and Marketing)*
- *Home Demonstration*
- *Negro Demonstration*

College of Engineering

(As provided for in resolutions of Board of Trustees, adopted June, 1917)
- *Department of Civil Engineering*
- *Department of Drawing*
- *Department of Electrical Engineering*
- *Department of Industrial Engineering*
- *Department of Mechanical Engineering*
- *Department of Mechanics of Engineering*
- *Department of Mines and Metallurgy*
- *Department of Practical Mechanics*
- *Department of Rural Highway Engineering*

College of Law

Graduate School

Summer Session

The University Extension

COLLEGE OF ARTS AND SCIENCE

OFFICERS OF ADMINISTRATION AND INSTRUCTION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University.

PAUL PRENTICE BOYD, M. A., PH. D.
Dean of the College of Arts and Science,
Head of the Department of Mathematics and Astronomy

Professors

BOLES, STANLEY ATWOOD, M. A.
Head, Department of Physical Education, Director of Athletics

BYARS, DAVID OWEN, Major (West Point)
Head, Department of Military Science

DANTZLER, LEHRE LIVINGSTON, A. M.
Head, Department of English Language and Literature

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

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

FUNKHOUSER, W. D., M. A., PH. D.
Head, Department of Zoology

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

JAMES, MCNEAL COLE, B. S. in AGR., A. B.
Professor of Agricultural Education

JONES, THEODORE TOLMAN, A. M.
Head, Department of Ancient Languages and Literatures

LAMPERT, CARL ALBERT
Head, Department of Music

MAXSON, RALPH NELSON, PH. D.
Professor of Inorganic Chemistry

MELCHER, COLUMBUS RUDOLPH, A. M.
Dean of Men, Head, Department of German Language and Literature

MILLER, ARTHUR MCQUISTON, A. M.
Head, Department of Geology

NOE, JAMES THOMAS COTTON, A. M.
Head, Department of Education

PENCE, MERRY LEWIS, M. S.
Head, Department of Physics

PRYOR, JOSEPH WILLIAM, M. D.
Head, Department of Anatomy and Physiology

RHOADS, MCHENRY, M. A., PH. M.
Professor of Secondary Education

ROYDEN, HERBERT NATHAN, CAPTAIN (West Point)
Professor of Military Science

SHULL, CHARLES ALBERT, PH. D.
Professor of Plant Physiology, Head, Department of Botany

STOUT, MRS. ROBERT LEE
Professor of Physical Education for Women

TERRELL, GLANVILLE, A. M., PH. D.
Head, Department of Philosophy

*TIGERT, JOHN JAMES, A. M. (OXON.)
Head, Department of Psychology

TUTHILL, EDWARD, PH. D.
Head, Department of History and Political Science

TUTTLE, FRANKLIN ELLIOTT, M. A., PH. D.
Head, Department of Chemistry

†WEBB, WILLIAM SNYDER, M. S.
Head, Department of Physics

WIEST, EDWARD, A. M., PH. D.
Head, Department of Economics and Sociology

ZEMBROD, ALFRED CHARLES, A. M.
Head, Department of Romance Languages and Literatures

Associate Professors

BAKER, GEORGE MARSHALL, M. A.
Associate Professor of Education

KILLEBREW, CINCINNATUS DECATUR, M. S.
Associate Professor of Physics

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

---

*On leave of absence, 1918-19.
†On leave of absence, first semester, 1918-19.

Assistant Professors

BANCROFT, GEORGE RUSSELL, M. A., PH. D.
Assistant Professor of Chemistry

BECK, MINNA MCLEOD, A. M.
Assistant Professor of Art and Design

BUTT, WILLIAM EDWARD, A. M.
Assistant Professor of History and Political Science

CALHOUN, ARTHUR WALLACE, M. A., PH. D.
Assistant Professor of Economics and Sociology

*CLUTTER, OSWIN RAY, M. SC., PH. B.
Assistant Professor of Biochemistry

CORNELL, CLARE BROWN, PH. D.
Assistant Professor of Psychology

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

GILL, ANDREW,
Assistant Director of Athletics and Field Coach

JILLSON, WILLARD ROUSE, M. S.
Assistant Professor of Geology

MCFARLAND, FRANK THEODORE, B. S. in AGR., M. S.
Assistant Professor of Botany

MABIE, EDWARD CHARLES, A. M.
Assistant Professor of Public Speaking

SIMRALL, JOSEPHINE, A. B.
Dean of Women, Assistant Professor of English

VANSELL, GEORGE HAYMAKER, A. M.
Assistant Professor of Zoology

WALTERS, FRED C., M. A.
Assistant Professor of Secondary Education, Principal of Practice High School

Instructors

ANDERSON, VIRGINIA FRANCES, B. S.
Instructor in Art and Design

BARRETT, FLORENCE MARIE, M. A.
Instructor in Romance Languages and Literature

---

*Resigned February, 1919.

*Bedford, Mathew Hume, Ph. D.
Instructor in Physical and Electro Chemistry

**Bradley, Eustace U., A. B.
Instructor in English Language and Literature

**Cannon, Harry Sharpe, A. M.
Instructor in German Language and Literature

Gott, Edwin Joseph, B. S. in Agr.
Instructor in Bacteriology

Hopkins, Christine, A. B.
Instructor in English Language and Literature

Jewell, Mary Frances, A. M.
Instructor in English Language and Literature

Kenney, Clarence B., Sgt., U. S. A.
Instuctor in Military Science

King, Margaret Isadore, A. B.
Librarian, Instructor in Library Science

Lunt, Charles K., Sgt. U. S A.
Instructor in Military Science

McLaughlin, Marguerite, A. B.
Instructor in Journalism

Mitchell, John Richard, A. B.
Instructor in Chemistry

Pollitt, Mabel Hardy, A. M.
Instructor in Ancient Languages and Literature

Smith, Guy Watson, M. S., Ph. D.
Instructor in Mathematics

States, Marshall Ney, B. S.
Instructor in Physics

Stone, Jesse W., Sgt., U. S. A.
Instructor in Military Science

Whiting, George Wesley, A. M.
Instructor in English Language and Literature

---

*On leave of absence until January, 1919.
**On leave of absence, 1918-19.

Introductory Statement

Organization

The College of Arts and Science embraces twenty-two departments: Anatomy and Physiology, Ancient Languages and Literatures, Art and Design, Bacteriology, Botany, Chemistry, Economics and Sociology, Education, English Language and Literature, Geology, German Language and Literature, History and Political Science, Journalism, Mathematics and Astronomy, Military Science, Music, Philosophy, Physical Education, Physics, Psychology, Romance Languages and Literatures, Zoology.

Admission and Fees

Requirements for admission to the College of Arts and Science, as a freshman, or with advanced standing, or as a special student are the same as for other colleges of the University. See page 60. For a statement of fees, see page 82.

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.

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, subject to the following conditions.

General Requirements

Matriculation Lectures, .3 credit.
Physical Education, 2.7 credits.
Military Science (Men), 4 credits.

---

*A credit represents one hour of recitation or two hours of laboratory a week for one semester. Drawing, Shopwork, Physical Education, Military Science, and other courses requiring no outside preparation are reckoned at three hours for one credit. For explanation of the point system see page 83.

Group Requirements

Freshman and Spohomore Years

English, 6 to 12 credits.

12 credits, if only 3 units of entrance are presented.

Foreign Languages, 6 to 18 credits.

6 credits in 1 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.

History and Social Sciences, 6 to 12 credits.

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

Philosophy and Education, 6 credits.

Mathematics and Physical Sciences, 6 to 10 credits.

Mathematics, Physics, Chemistry, Geology, Astronomy.

Biological Sciences, 6 credits.

Bacteriology, Botany, Physiology, Zoology.

Major

20 credits. Junior and senior years. Any department or related group, exclusive of elementary courses.

Minors

20 credits. Junior and senior years. One or two minors, to be approved by head of major department.

Electives

Subject to approval of Dean and head of major department.

Matriculation Lectures

During the first semester of the freshman year, all freshmen are required to attend a series of weekly lectures, given by various members of the faculty and designed to furnish the proper orientation for the work ahead.

Electives in Other Colleges

A student is permitted to elect and count toward graduation courses in the other colleges of the University not to exceed the equivalent of one year's work in Arts and Science.

Maximum and Minimum Credits Allowed

A student is required to carry each semester work amounting to at least 14 credits exclusive of gymnasium and drill. He may carry, without special permission, 16 credits, exclusive of gymnasium and drill. A freshman is not allowed to carry more than those 16 credits during his first semester.

Permission for extra work must be obtained from the Council, on recommendation of the Dean. To be eligible for this privilege the student must have all the preceding semester's work of A, B, or C grade and must have attained in that semester a standing* of at least 2.

Residence Requirement

To obtain a degree at least one year's work must have been done in residence.

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 60 credits in Mathematics and 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 a successful career in the journalistic profession. For a detailed statement of the course see the Department of Journalism, page 162.

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, page 133. It aims to provide a solid foundation for continued work in chemistry, and enables the students to engage at once in technical work with excellent prospects for success.

COMBINED COURSES

A student who has gained 97 credits with a standing of 1 in the College of Arts and Science may with the permission of the Deans of the colleges concerned be registered both in the College of Arts and Science and in any other college of the University. When he has gained one full year's credit with a standing of 1 in the other college he will be recommended for the degree of Bachelor of Arts. In this way it will be possible for a student to obtain both the degree of Bachelor of Arts and a degree in Agriculture, Engineering, or Law in 6 years or less.

*"Standing" means the ratio of total number of points gained to total number of credits gained.

THE PREPARATION OF TEACHERS

The Department of Education provides opportunity for the professional training of teachers. Courses are offered in the Philosophy and History of Education, Educational Psychology, Administration and Method. New courses for the training of teachers in agriculture and vocational subjects have lately been added. By special arrangement with the Lexington City Schools classes from the city high schools will be conducted at the University in order to afford practice teaching under the direction of a supervisor.

Certificates

Under the State law of 1908 all students of the University are eligible for the Elementary Teacher's Certificate at the completion of one year's study in the Department of Education. This certificate entitles the holder of it to teach in any public school in the State for a period of two years without further examination.

At the completion of two years' work the student becomes eligible to receive the *Intermediate Certificate*, which entitles the holder to teach in any school of the State for a period of four years without further examination.

At the completion of three years' work an *Advanced Certificate* may be issued, which will entitle the holder to teach in any school in the State for a period of three years. At the end of this period, with the approval of the State Superintendent, a *Life Certificate* may be substituted for the advanced certificate, on the presentation to the college authorities of satisfactory evidence of the candidate's teaching ability and moral character.

The degrees Bachelor of Arts and Bachelor of Science, Major Education, will, with the approval of the State Superintendent of Public Instruction, entitle the holder to teach in any of the common schools and high schools of the Commonwealth without further examination during life or good behavior. See page 144.

PRE-MEDICAL COURSES

The Department of Anatomy and Physiology affords thoro preparation for the study of medicine. *A Two Years' Course* is offered which complies with the requirements of the American Medical Association and the Association of American Medical Colleges for entrance to all Class A plus medical schools except those requiring a degree for entrance. The *Four Years' Course* meets the requirements for entrance to all medical schools, gives opportunity for advanced standing, and

lays a truly scientific foundation upon which a substantial superstructure may be erected. See page 123.

PREPARATION FOR SOCIAL SERVICE

The new emphasis on social problems and social welfare is opening an attractive field for teachers, ministers, welfare experts in industrial establishments, and other workers specially trained in the principles and methods of social study and social service. Students who desire special preparation in these lines are advised to follow the outline on page 140. This group of studies, besides courses in the social sciences and public health, includes public speaking and such other work necessary to prepare the social worker both to solve specific problems and to carry on a propaganda. See page 140.

PREPARATION FOR SECRETARIAL WORK AND BUSINESS ADMINISTRATION

In large industrial and commercial concerns, educational institutions, and the professions a great need is felt for high-grade secretaries and business executives. This offers a field of attractive employment for both young men and women. Students who wish to prepare for work of this character are advised to follow the outline of courses on page 140. This group of courses includes practical as well as cultural studies and prepares the student for the many and varied duties he will be called upon to perform. See page 140.

PREPARATION FOR WORK IN GEOLOGY

In recent years geology has come to be recognized as a profession. Its relation to mining, and especially to oil and gas exploration, is such that the services of a geologist are now considered indispensable by companies engaged in developing our mineral resources. Opportunities are also open with the state and federal geological surveys. The Department of Geology is prepared to equip men and women for such lines of work. See page 155.

PREPARATION COURSE FOR NURSES

The College of Arts and Science, in response to a request from the Surgeon General of the U. S. Army, offered during 1918-19 a twelve weeks' course for the preparation of nurses. It is planned to offer permanently such preparation with the courses extending thru a semester. The work will cover anatomy and physiology, bacteriology,

chemistry, hygiene and sanitation, nutrition and cookery and psychology. Students who complete this work will gain credit for it in the Army School of Nursing, and, probably, in civil hospitals to which they may be admitted. See page 123.

LIBRARY SCIENCE

The College affords, thru the Department of English, opportunity for professional training in library work. Instruction is given in cataloging, classification, reference work, book binding and mending, children's literature, school libraries, etc. These courses should fit students for subordinate positions in the larger libraries and furnish an excellent preparation for a more complete course later on. See page 155.

TRAINING FOR ART TEACHERS

The Department of Art and Design offers a four year course leading to the A. B. degree with an art teacher's diploma. Besides technical work a number of educational courses are required and opportunity for practice teaching in the practice school is given. See page 127.

MUSIC

The Department of Music offers courses in harmony, general history of music, musical appreciation, and a normal course for band and orchestra leaders. See page 173.

Departments of Instruction*

ANATOMY AND PHYSIOLOGY

Professor Pryor

Courses Preparatory to the Study of Medicine. These courses leading to the degree of A. B. or B. S., with Anatomy and Physiology as the major, are arranged to suit students who intend to devote themselves to the study of medicine. The first two years are arranged to comply with the requirements of the American Medical Association and the Association of American Medical Colleges for entrance to all Class A plus medical schools except those requiring a degree for entrance. The four year course meets the requirements for entrance of all Medical Schools. A liberal education in the Arts and Sciences is of inestimable advantage to one intending to pursue the study of medicine. It is a difficult matter to teach modern medicine to one who has not had some of these preliminaries. A thoro training in chemistry and physics, a reading knowledge of German and French, a working knowledge of the microscope, and the process of embedding, sectioning and staining, a solid foundation in anatomy and physiology will not only give advanced standing in the medical school, but will lay a truly scientific foundation upon which a substantial superstructure may be erected.

Preparatory Course for Nurses. Students who desire may find courses that will make excellent preparation for hospital training in nursing. Such students should elect anatomy and physiology, hygiene and sanitation, bacteriology, chemistry, nutrition and cookery, and psychology.

1. **General Physiology.** Lectures, recitations and laboratory. *Lecture and recitation two hours, laboratory four hours a week. First semester. Repeated second semester.* Professor Pryor.

2. **First Aid.** Required of Mining Engineers; open to others. Lectures and demonstrations. *One hour a week. First semester.* Professor Pryor.

---

*Courses numbered from 1 to 100 are open to undergraduates only; those from 101 to 200 are open to both undergraduates and graduates; those from 201 on are open only to graduates. Courses covering a whole year are marked with **a** for the first half of the work, with **b** for the second half.

4. Hygiene and Sanitation. Lectures and recitations. *Two hours a week. First semester.* Professor PRYOR.

101a. Human Osteology. Lectures, recitations, laboratory. *Recitations one hour, laboratory two hours a week. First semester.* Professor PRYOR.

101b. Human Osteology. Continuation of 101a. *Recitations one hour, laboratory two hours a week. Second semester.* Professor PRYOR.

102a. Advanced Physiology. Lectures and laboratory. *Recitations one hour, laboratory four hours a week. First semester.* Professor PRYOR.

102b. Advanced Physiology. Continuation of 102a. *Recitations one hour, laboratory four hours a week. Second semester.* Professor PRYOR.

OUTLINE OF TWO-YEARS' COURSE PREPARATORY TO THE STUDY OF MEDICINE

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1a	150	English Composition	3		3.
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.
Zoology 1a	183	General Zoology	2	4	4.
German 3a or	159	Composition and Reading	3		3.
Rom. Lang. 1a	182	Elementary French	3		3.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					16.7

Second Semester

English 1b	150	English Composition	3		3.
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.
Zoology 1b	183	General Zoology	2	4	4.
German 3b or	159	Composition and Reading	3		3.
Mathematics 3	166	Elementary French	3		3.
Rom. Lang. 1b	182	Plane Trigonometry	3		3.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					19.7

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Chemistry 7	134	Organic Chemistry	3	2	4.
Physics 1a or	178	Elementary Physics	4	2	5.
Physics 2a	178	General College Physics	3	4	5.
German 4a or	159	Advanced Reading	3		3.
Rom. Lang. 2a	182	French Reading	3		3.
Psychology 1	180	Elementary Psychology	3		3.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					16.7

Second Semester

Chemistry 8	134	Quantitative Analysis	1	8	5.
Physics 1b or	178	Elementary Physics	4	2	5.
Physics 2b	178	General College Physics	3	4	5.
German 4b or	159	Advanced Reading	3		3.
Rom. Lang. 2b	182	French Reading	3		3.
Zoology 104	183	Embryology	2	2	3.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					17.7

NOTE.—Students who have not had high school physics must take physics 1; those who have had high school physics take physics 2. The courses in modern languages are not required if the equivalent has been taken in high school.

ANCIENT LANGUAGES AND LITERATURES

Professor Jones, Miss Pollitt

Latin

1. Beginning Latin. A thoro drill in the elements of Latin declension, conjugation, simple rules of syntax. *Three hours a week. First semester.*

2. Caesar and Nepos. Selections from the Gallic War, and from Nepos will be read. Exercises in Latin Composition. *Three hours a week. Second semester.*

3. Cicero and Sallust. Selected orations of Cicero and Sallust's Catiline will be read. The Conspiracy of Catiline will be studied from the standpoint of the orator and of the historian. Exercises in Latin Composition. *Three hours a week. First semester.*

4. Virgil. The Aeneid will be read as a masterpiece of literature. Careful attention will be given to scanning and mythology. *Three hours a week. Second semester.*

5. Livy (Book I and Selections). The work in Livy will include talks on the founding and development of the Roman state, the methods and aims of ancient writers of history as compared with those of today. *Three hours a week. First semester.*

6. Horace (Odes and Selected Satires). In Horace careful attention will be given to contemporary history and to all mythological and geographical references. The student will receive daily practice in metrical reading. *Three hours a week. Second semester.*

7. Tacitus (Germania, Agricola, Dialogues). Special attention is given to the style of Tacitus, and to his treatment of biography. The Roman provincial system will be discussed. *Three hours a week. First semester.*

8. Terence (Phormio); Pliny's Letters (Selections). The student will get a general introduction to the dramatic and epistolary literature of the Romans. Talks will be given on the Roman theatre, the influence of Greek literature upon that of Rome, the home and political life of Pliny. *Three hours a week. Second semester.*

9. Juvenal (Selected Satires); Martial (Selected Epigrams). These writers will be read for their literary value, and for the light they throw on the political and social life in Rome at the close of the first century. *Three hours a week. First semester.*

10. Suetonius (Claudius and Nero); Seneca (Selections). The private life of the Caesars is discussed in detail. The principles of the Stoic Philosophy are explained. *Three hours a week. Second semester.*

11a. Teachers' Training Course in Latin. A hasty review of First Year Latin. Selections will be read from various preparatory authors (Cicero, Ovid, Sallust, Nepos, Virgil). *Three hours a week. First semester.*

11b. Teachers' Training Course in Latin. Talks will be given on methods of teaching Latin, the course of study, equipment, etc. The private life of the Romans will be studied. Selections from the authors named in Course 11a will be read. *Three hours a week. Second semester.*

12a. Latin Composition. The course will begin with disconnected sentences and will include easy passages in connected discourse. Prerequisite, the equivalent of Latin 4. *One hour a week. First semester.*

12b. Latin Composition. Continuation of 12a. *One hour a week. Second semester.*

Greek

51. Elementary Greek. The beginner's book, drill in forms and the elementary principles of syntax. *Three hours a week. First semester.*

52a. Anabasis. Two books of the Anabasis will be read with exercises in prose composition. *Three hours a week. Second semester.*

52b. Anabasis. Four books of the Anabasis will be completed with exercises in prose composition. *Three hours a week. First semester.*

53. Homer. The Iliad, books 1-6. The Homeric Question, Life in the Homeric Age, Mycenaean Antiquities, recent discoveries in Crete, will receive due attention. *Three hours a week. Second semester.*

54. Plato. The Apology and Crito, selections from the Phaedo, lectures on the relations of Plato to Socrates, Socrates as a moral teacher, and his methods of investigation. *Three hours a week. First semester.*

55. Herodotus. Books 6-7. This course will include a rapid survey of Greek history from the Ionic Revolt to the end of the Persian Wars. *Three hours a week. Second semester.*

ART AND DESIGN

Assistant Professor Beck, Miss Anderson

This department recognizes the close relation of art and industry, of art and commercial life, and does not seek to set aside the aesthetic life as a thing apart from daily usage.

It is the aim of this department to prepare students to enter the various art professions: drawing and painting, design in the art industries, illustration, house decoration, costume design, fine arts education, etc., and more than this it hopes to contribute to the development of general good taste in the movement that is going forward toward that end. To those majoring in the department, it offers a four years' course credited toward the A. B. degree, or toward the A. B. with an art teacher's certificate.

The following courses are necessary for all who wish to receive the teacher's certificate of this department and must be taken in this order: freshman year, Art and Design 1 and 2; sophomore, Art and Design 3 and 4; junior, Art and Design 5, 6 and 7; senior, Art and Design 8 and 9.

1a. Drawing and Painting. Drawing from objects, cast, still-life. Figure-action drawing. Perspective. Outdoor sketching. Mediums—

charcoal, water-color, crayon. *Lectures and recitations two hours, studio six hours a week. First semester.*

1b. Drawing and Painting. Continuation of 1a. *Second semester.*

2a. Art Structure. A careful study of the three elements of art: line, tone, color. Simple exercises in space filling, bringing out the principles of balance, rhythm, repetition, subordination, etc. Planning of borders and surface patterns. Study of Indian symbols. Original symbolic designs. Application to stenciling, wood-block printing, basketry, etc. *Lectures and studio four hours a week. Two credits. First semester.*

2b. Art Structure. Continuation of 2a. *Lectures and studio work four hours a week. Two credits. Second semester.*

3a. Drawing and Painting. Still-life studies. Costumed figure. Landscape sketching in charcoal, crayon, water-color. Brush work. *Lectures and recitations two hours, studio six hours a week. First semester.*

3b. Drawing and Painting. Continuation of 3a. *Lectures and recitations two hours, studio six hours a week. Second semester.*

4a. Art Structure. Further exercises in design. Harmonies of line, tone, and color. Proportion, arrangement. Study of the craft work of the Southern Mountain people. Problems in clay modeling, leather tooling, embroidery, etc. *Lectures and studio four hours a week. First semester.*

4b. Art Structure. Continuation of 4a. *Lectures and studio four hours a week. Two credits. Second semester.*

5a. Drawing and Painting. Pictorial Composition. Still-life. Study of draped model. Sketching of interiors. Monotypes. Mediums—brush and ink, charcoal, water-color, oil. *Lectures and recitations two hours, studio six hours a week. First semester.*

5b. Drawing and Painting. Continuation of 5a. *Lectures and recitations two hours, studio six hours a week. Second semester.*

6a. Art Structure. Color theory, a study based upon the "Munsell System." Original motives carried out in line, tone and color. Problems in lettering, posters, commercial art. Costume design. House decoration. *Lectures and studio four hours a week. First semester.*

6b. Art Structure. Continuation of 6a. *Lectures and studio four hours a week. Second semester.*

107a. Art Appreciation and History. Lectures, reading, discussion. This course will consider general art principles and their application to city-planning, landscape gardening, architecture, interior decora-

tion, costume design as well as to pictorial art, sculpture, etc. *Lecture one hour a week. First semester.*

107b. Art Appreciation and History. Continuation of 7a. Lecture *one hour a week. Second semester.*

8a. Drawing and Painting. Advanced work in pictorial composition and illustration. Outdoor sketching and still-life in all mediums. *Lectures and recitations two hours, studio six hours a week. First semester.*

8b. Drawing and Painting. Continuation of 8a. *Lectures and recitations two hours, studio six hours a week. Second semester.*

9a. Art Structure. Advanced exercises and problems. Craft work in metal. Pottery. Jewelry. *Lectures and studio four hours a week. First semester.*

9b. Art Structure. Continuation of 9a. *Lectures and studio four hours a week. Second semester.*

101a. Drawing and Painting. For graduate and undergraduate students. *Lectures and recitations two hours, studio six hours a week. First semester.*

101b. Drawing and Painting. Continuation of 101a. *Lecture and recitations two hours, studio six hours a week. Second semester.*

102a. Art Structure. For graduate and undergraduate students. *Lectures and studio four hours a week. First semester.*

102b. Art Structure. Continuation of 102a. *Lectures and studio four hours a week. Second semester.*

10a. Theory and Practice of Teaching Art. Structural (synthetic) method of art teaching, compared with academic (analytic) method. General principles of teaching as applied to art instruction. Teaching under criticism. Required of those registered for art teacher's certificate. Prerequisite, Education 1, 2. *Two hours a week. First semester.*

10b. Theory and Practice of Teaching Art. Continuation of 10a. Open to art seniors only. Required of those registered for art teacher's certificate. *Two hours a week. Second semester.*

11a. Freehand Drawing. A course especially adapted to the needs of students of Mining Engineering, Mechanics, etc. *Drawing one hour a week. First semester.*

11b. Freehand Drawing. Continuation of 11a. *Drawing one hour a week. Second semester.*

BACTERIOLOGY

Mr. Gott

1. General Bacteriology. Morphology, classification, physiology, observation and cultivation of bacteria. Principles of pasteurization, sterilization and desinfection. Bacteria in milk, water, air and soil. Lectures on infection and theories of immunity. Prerequisites, Chemistry 8 or 11, Botany 1. *Lectures and recitations two hours, laboratory four hours a week. Second semester.* Mr. GOTT.

3. Pathogenic Bacteriology. Bacteria in relation to animal and plant diseases. Infection and immunity. Cultivation, staining and identification of a number of selected disease producing organisms. Prerequisite, Course 1. *Lectures and recitations two hours, laboratory four hours a week. First semester.* Mr. GOTT.

4. Applied Bacteriology. Isolation and identification of important non-pathogenic bacteria. Reference work includes various industrial problems effected by bacteria. Prerequisite, Course 1. *Laboratory four hours a week. First semester.* Mr. GOTT.

5. Advanced Bacteriology. Special subjects will be assigned for reading and laboratory work. Prerequisite, Course 3 or 4. *Laboratory four hours a week. Second semester.* Mr. GOTT.

6. Bacteriology for Nurses. A separate course will be offered for students in the special course for nurses. The course will consist of lecture and laboratory work, introducing the subject from the standpoint of medical Bacteriology. *Lecture one hour, laboratory four hours a week. First semester.* Mr. GOTT.

BOTANY

Professor Shull, Assistant Professor McFarland

In addition to general courses intended primarily for undergraduates and designed to meet the needs of students of agriculture, teachers of botany, and those who pursue the subject for its cultural and esthetic value, the Department of Botany offers opportunity for advanced work and research along several lines. Students who desire to major in the department should consult with the head of the department and other members of the staff before registering for advanced courses. For such students the sequence of courses in this and allied departments will be outlined to secure the best possible approach to the specialized field desired.

1a. General Botany. The course comprises a general survey of the morphology and physiology of plants, and is designed to give

the student a comprehensive view of the entire vegetable kingdom, and to afford a substantial basis for advanced and special studies. While accompanied with lectures and recitations, the laboratory method is the form of instruction principally used. Prerequisite, full university entrance credit for the four-year course. Laboratory assignments will be made in three sections. *Lecture one hour, recitation one hour, laboratory four hours a week. First semester.* Professor SHULL, Assistant Professor MCFARLAND.

1b. General Botany. A continuation of Botany 1a, including the morphology of the seed plants, and in addition some attention to the collection and identification of flowering plants. Frequent field trips and longer excursions will be made as conditions permit. At least one of these trips will be required of each student. *Lecture one hour, recitation one hour, laboratory four hours a week. Second semester.* Professor SHULL, Assistant Professor MCFARLAND.

3. Plant Physiology. A laboratory and lecture course which considers all of the major processes of plant life. Special emphasis is placed upon absorption, transpiration, nutrition, respiration, and growth phenomena. The laboratory work is especially helpful to those preparing for professional work. Prerequisites, Botany 1a, 1b, and Chemistry 1. *Lecture one hour, recitation one hour, laboratory four hours a week. First semester.* Professor SHULL.

4. Ecology. An elementary course in field physiology, dealing with the relations of plants to their environment. The distribution and association of vegetation, and successional dynamics will receive much attention. Students will be required to take field trips at the discretion of the instructor. Prerequisites, Botany 1a, 1b. Desirable antecedent, Botany 3. *Three hours a week. Second semester.* Professor SHULL.

5. Dendrology. A study of the structures and characteristics of the native trees and shrubs, involving recognition and identification by means of summer and winter keys. The structures of the various trees will be taken up and by the use of keys the species determined. Prerequisites, Botany 1a, 1b. Given in 1918-1919; to be omitted in 1919-1920. *Lecture one hour, laboratory two hours a week. First semester.* Assistant Professor MCFARLAND.

6. Plant Histology. A course giving instruction in the technique involved in the preparation of plant tissues for detailed microscopic study. Practice in the paraffin and other methods of imbedding is given and the preparation of fifty representative slides is required. The course is valuable as a preparation for the study of plant physiology and plant pathology. Prerequisites, Botany 1a, 1b. Given in 1918-

1919; to be omitted in 1919-1920. *Laboratory six hours a week. Second semester.* Assistant Professor McFARLAND.

101. Mycology. Structure, identification, classification, and ecological relations of fungi. Special attention will be given to the edible and poisonous mushrooms. Open only to students in the College of Arts and Science. Prerequisites, Botany 1a, 1b. *Lecture one hour, recitation one hour, laboratory four hours a week. First semester.* Assistant Professor McFARLAND.

102. Advanced Mycology. Special attention will be given to pure cultures, methods of isolation, and identification of the fungi which cause diseases among plants. Emphasis will be put upon the causal agents, symptoms, diagnosis, and treatment. Open only to students in the College of Arts and Acience. Prerequisite, Botany 101. *Lecture one hour, recitation one hour, laboratory four hours a week. Second semester.* Assistant Professor McFARLAND.

105. Systematic Botany. This course is designed to acquaint the student with the latest views of classification of the entire plant kingdom. Theory as well as practice with the various keys will constitute a part of the work. Attention will be given to the local flora and it is expected that each student will collect 100 different species for identification. A laboratory and field course for students desiring personal acquaintance with the plants of Kentucky, and especially for those expecting to qualify as teachers in the public schools. Prerequisites, Botany 1a, 1b. *Lecture one hour, laboratory four hours a week. First semester.* Assistant Professor McFARLAND.

109. Plant Physics. An advanced course in plant physiology dealing with the recent advances in our knowledge of plant processes which are mainly physical. Osmotic pressure, transpiration and the cohesion theory, energy relations, physical chemistry of the vegetable colloids, etc. Prerequisite, Botany 3. *Lecture one hour, recitation one hour, laboratory six hours a week. First semester.* Professor SHULL.

110. Plant Chemics. The recent advances in our knowledge of those plant processes which are mainly chemical. The synthesis of carbohydrates, glucosides, fats, and proteins, the genesis of the organic acids, essential oils, pigments, and alkaloids, the nature and activity of enzymes. Prerequisite, Botany 109. It is highly recommended that the student take organic chemistry antecedently. *Lecture one hour, recitation one hour, laboratory six hours a week. Second semester.* Professor SHULL.

201. Microchemistry. The methods of detecting microchemically the substances occurring in plant tissues. The mineral elements used

in growth, and the synthetic, storage, secretion, and decomposition products of vegetable metabolism. The student should have a thorough knowledge of inorganic and organic chemistry before attempting the work. Prerequisite, Botany 110. *Lecture one hour, recitation one hour, laboratory four hours a week. First semester.* Professor SHULL.

202. Phytochemical Preparations. The student will be expected to prepare twenty-five or more substances in relatively pure condition from the crude raw materials. Methods of extraction, purification, identification. Prerequisite, Botany 110. *Laboratory six hours a week. Second semester.* Professor SHULL.

206. Research in Morphology. Students prepared for independent work will be assigned to investigations in anatomy, histology, or special morphology. *Laboratory ten hours a week. Both semesters.* Assistant Professor MCFARLAND.

207. Research in Mycology. Those desiring to carry on investigations in mycology should have had Botany 101 and 102 or their equivalent. Suitable work will be suggested to students desiring to enter this field. *Laboratory ten hours a week. Both semesters.* Assistant Professor MCFARLAND.

210. 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 along physical or chemical lines. *Laboratory ten hours a week. Both semesters.* Professor SHULL.

213. Research in Systematic Botany. Students who desire to work in systematic botany will be assigned to work on some definite group of the local flora. Prerequisite, Botany 105. *Laboratory ten hours a week. Both semesters.* Assistant Professor MCFARLAND.

CHEMISTRY

Professor Tuttle, Professor Maxson, Assistant Professor Bancroft, Assistant Professor Clutter, Dr. Bedford, Mr. Mitchell

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.

Courses of study are offered in General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis, Organic Chemistry, Physical

Chemistry, Industrial Chemistry, Agricultural Chemistry, Physiological Chemistry.

1a. General Inorganic Chemistry. Chemistry of the non-metallic elements. Lectures, class-room exercises and laboratory work. *One hour lecture, two hours recitation, four hours laboratory a week. First semester.* Professor MAXSON, Mr. MITCHELL and others.

51. General Inorganic Chemistry. Chemistry of the non-metallic elements. For students who have had one year of high school chemistry. Lectures, recitations and laboratory work. Prerequisite, one year of high school chemistry. *Three hours a week. First semester.* Professor MAXSON and others.

1b. General Inorganic Chemistry. Continuation of 1a. Chemistry of the metals. Lectures, class-room exercises and laboratory work. Prerequisite, Chemistry 1a. *One hour lecture, two hours recitation, four hours laboratory a week. Second semester.* Professor MAXSON, Mr. MITCHELL and others.

3. Inorganic Preparations. A practical laboratory course devoted to the preparation of inorganic compounds from the crude material. Prerequisites, Chemistry 1a and continuation of Chemistry 1b. *Laboratory four hours a week. Second semester.* Professor MAXSON.

4. Qualitative Analysis. Laboratory work accompanied by recitation periods. Prerequisite, Chemistry 1b. *One recitation and six laboratory hours a week. First semester.* Professor MAXSON.

5a. Advanced Inorganic Chemistry. A more advanced course in inorganic chemistry, primarily for students specializing in chemistry. *One hour a week. First semester.* Professor MAXSON.

5b. Advanced Inorganic Chemistry. Continuation of 5a. *One hour a week. Second semester.* Professor MAXSON.

7. Organic Chemistry. An elementary course for non-professional students. Prerequisite, Chemistry 1b. *Three recitations and two laboratory hours a week. First semester.* Assistant Professor BANCROFT.

8. Quantitative Analysis. A laboratory course accompanied by lectures and class-room exercises. Gravimetric and volumetric methods of analysis are studied in detail during the second semester. Prerequisite, Chemistry 4. *Recitation one hour, laboratory eight hours a week. Second semester.* Professor TUTTLE.

9. Quantitative Analysis. A lecture and laboratory course devoted to the analysis of ores, alloys, etc. Prerequisite, Chemistry 8. *Laboratory ten hours a week. First semester.* Professor TUTTLE.

10. Quantitative Analysis. A laboratory course accompanied by lectures and class-room exercises arranged for students in Mining and Metallurgy. *Recitations one hour, laboratory eight hours a week. Second semester.* Professor TUTTLE.

11. Agricultural Analysis. An introductory course in quantitative analysis arranged for the students in the course in agriculture. The elements of quantitative analysis are studied with special reference to the constituents of soil, fertilizers and agricultural products. Prerequisites, Chemistry 1a and 1b. *Recitations one hour, laboratory eight hours a week. First semester.* Professor TUTTLE, Dr. BEDFORD.

12. Advanced Agricultural Analysis. A laboratory course having for its object the complete analysis of fertilizers, feeds, soils and agricultural products. Prerequisites, Chemistry 8 or 11. *Laboratory eight hours a week. Second semester.* Professor TUTTLE.

13a. Organic Chemistry. A more advanced course of class-room exercises on the aliphatic series accompanied by lectures on the more important research problems, such as Fischer's work on the carbohydrates. *Three recitations and four laboratory hours a week. First semester.* Assistant Professor BANCROFT.

13b. Organic Chemistry. Cyclic Chemistry. The lecture work comprises such researches as the solution of the formula of camphor and of various terpenes. The student's attention is also directed to the classification of reactions of organic compounds. Prerequisite, Chemistry 13a. *Two recitations, laboratory eight hours a week. Second semester.* Assistant Professor BANCROFT.

14. Advanced Quantitative Analysis. The analysis of iron and steel, slags and rocks. *Laboratory ten hours a week. First semester.* Professor TUTTLE.

15. Physical Chemistry. Lectures and recitations covering the gaseous, liquid and solid states of matter; phase rule; theory of solutions. Laboratory studies in physico-chemical measurements. *Recitation two hours, laboratory two hours a week. First semester.* Dr. BEDFORD.

17. Gas Analysis. A laboratory course in the analysis of illuminating, natural and flue gases, using the methods and apparatus of Hempel, Orsat and others. Prerequisite, Chemistry 1b. *Laboratory two hours a week. Second semester.* Dr. BEDFORD.

18. Water Analysis. In this course waters are examined to determine their suitableness for domestic and other purposes. *Laboratory four hours a week. First semester.* Professor TUTTLE.

19a. Industrial Chemistry. In this course the chemistry of manufacturing processes is studied in detail, and when possible, manufacturing establishments in the vicinity are visited. *Two hours a week. First semester.* Professor MAXSON.

19b. Industrial Chemistry. Continuation of 19a. *Two hours a week. Second semester.* Professor MAXSON.

21. Physical Chemistry. Continuation of Chemistry 15. Thermochemistry; chemical equilibria and kinetics; application of Law of Mass Action to electrolytes; electro-chemistry. Prerequisite, Chemistry 15. *Lectures and recitations two hours a week; laboratory two hours a week. Second semester.* Dr. BEDFORD.

22a. Journal Club. A weekly exercise for seniors in the courses in chemistry devoted to a study of current periodical literature and conferences. *One hour a week. First semester.* Professor MAXSON.

22b. Journal Club. Continuation of 22a. *One hour a week. Second semester.* Professor MAXSON.

23. Advanced Inorganic Chemistry. Lectures, collateral reading and quizzes. A course designed for students who would broaden the scope of their training in inorganic chemistry. Elective. *Two hours a week. Second semester.* Professor MAXSON.

28. Plant Chemistry. The chemistry of plant life. Laboratory practice on plant composition and products. Prerequisites, Chemistry 7 or 13a, 8 or 11. *One lecture a week; laboratory six hours a week. Second semester.* Assistant Professor CLUTTER.

29. Food Chemistry and Analysis. The composition, adulteration, and preservation of food. Laboratory practice on the analysis of milk, sugar, baking powder, vinegar, alcoholic beverages, fats, etc. Prerequisite, Chemistry 7 or 13a, 8 or 11. *Lectures and discussions, one hour a week, with assigned reading; laboratory eight hours a week. First semester.* Professor TUTTLE.

30a. Physiological Chemistry. The chemistry and metabolism of carbohydrates, proteins, and fats. A study of the tissues, the secretions, and excretions. The nature and action of enzymes. Nutrition, food values and requirements. The effect of a diet of selected food principles on the quantity of metabolic products. Prerequisite, Chemistry 7 or 13a. *Two lectures, six hours laboratory a week. First semester.* Assistant Professor CLUTTER.

30b. Physiological Chemistry. Continuation of Chemistry 30a. *Two lectures, six hours laboratory a week. Second semester.* Assistant Professor CLUTTER.

104. Advanced Synthetic Inorganic Chemistry. A course planned to aid the student in gaining a more adequate knowledge of practical inorganic chemistry. Elective. *Laboratory ten hours a week. Second semester.* Professor MAXSON.

105. Advanced Physical Chemistry. Laboratory work on selected topics accompanied by reports on related subjects. Elective. Prerequisite, Chemistry 21. *Laboratory ten hours a week. Second semester.* Dr. BEDFORD.

106. Advanced Organic Chemistry. Critical comparison of preparation methods and research problems accompanied by presentation of results in thesis form. Elective. Prerequisite, Chemistry 13b. *Laboratory ten hours a week. Second semester.* Dr. BANCROFT.

107. Selected Problems in Quantitative Analysis. Elective. Prerequisite, Chemistry 14. *Laboratory ten hours a week. Second semester.* Professor TUTTLE.

201. Synthetic Inorganic Chemistry. Practice and research in inorganic synthesis, with the use of original literature. Graduate course. *Laboratory ten hours a week. Either semester.* Professor MAXSON.

202. Quantitative Analysis. A critical study of known procedures in analytical chemistry. *Laboratory ten hours a week. Either semester.* Professor TUTTLE.

203. Physical Chemistry. A study of speeds of reactions and chemical equilibria. *Laboratory ten hours a week. Either semester.* Dr. BEDFORD.

Course in Industrial Chemistry

The Course in Industrial Chemistry, a prescribed course of studies leading to the degree of Bachelor of Science in Industrial Chemistry, aims to provide a solid foundation for continued work in chemistry. Electives are not encouraged before the senior year in the belief that the related courses of study can be more wisely selected by experienced educators than by the student.

During the last half of the senior year electives in chemistry must bring the total amount of work up to nineteen or twenty hours a week. Whenever practicable for the student, he is encouraged to pursue graduate work here or elsewhere before engaging in professional work, but there is a steady and increasing demand for the graduates as soon as they have finished their course of study at this University. Nearly every industry today makes use of the chemist, and experience

has shown that the training secured in the course in Industrial Chemistry will enable the graduate to engage at once in technical work with excellent prospects for success.

German 3 must be completed and, if possible, one or two years' 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 a year of chemistry, a 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. INDUSTRIAL CHEMISTRY

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1a	150	English Composition	3		3.
Mathematics 5	166	College Algebra	5		5.
German 1a	158	Elementary German	3		3.
Drawing 1a	250	Mechanical Drawing		4	1.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					19.

Second Semester

English 1b	150	English Composition	3		3.
Mathematics 4	166	Trigonometry	5		5.
German 1b	158	Elementary German	3		3.
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.
Chemistry 3	134	Inorganic Preparations		4	2.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					19.7

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Drawing 1a	250	Mechanical Drawing		4	1.3
Mathematics 6	166	Analytical Geometry	5		5.
German 2a	158	Intermediate German	3		3.
Physics 2a	178	General Physics	3	4	5.
Chemistry 4	134	Qualitative Analysis	1	6	4.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					20.0

Second Semester

German 2b	158	Intermediate German	5		3.
Chemistry 8	134	Quantitative Analysis	1	8	5.
Physics 2b	178	General Physics	3	4	5.
Mathematics 7a	167	Differential Calculus	5		5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7
					19.7

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Chemistry 13a	135	Organic Chemistry, Aliphatic Series	3	4	5.
Chemistry 9	134	Quantitative Analysis		10	5.
Chemistry 15	135	Physical Chemistry	2	2	3.
Hist. & Pol. Sci. 51a	161	American Government	3		3.
Econ. and Soc. 1a	141	Principles of Economics	3		3.
German 3a	158	Composition and Reading	3		3.
					21.

Second Semester

Chemistry 13b	135	Organic Chemistry, Cyclic Series	2	8	6.
Chemistry 17	135	Gas Analysis		2	1.
Hist. & Pol. Sci. 51b	161	American Government	3		3.
Econ. and Soc. 1b	141	Principles of Economics	3		3.
German 3b	159	Composition and Reading			3.
Geology 4	156	Mineralogy		4	2.
Chemistry 21	136	Physical Chemistry. Continued	2	2	3.
					20.

SENIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Elec. Eng. 1	256	Elements	5		5.
Chemistry 5a	134	Advanced Inorganic Chemistry	1		1.
Chemistry 19a	136	Industrial Chemistry	2		2.
Chemistry 22a	136	Journal Club	1		1.
English 101a	150	Technical Composition	3		3.
Geology 7	157	Engin. Geology	3		3.
Chemistry 18	135	Water Analysis		4	2.
Chemistry 14	135	Advanced Quantitative Analysis		10	5.
					22.

Second Semester

Chemistry 5b	134	Advanced Inorganic Chemistry	1		1.
Chemistry 19b	136	Industrial Chemistry	2		2.
Metallurgy 16	151	Metallurgy	2		2.
English 101b	136	Technical Composition	3		3.
Chemistry 22b		Journal Club	1		1.
Chemistry		Elective		12	6.
Physics		Physics, Advanced		4	2.
					17.

ECONOMICS AND SOCIOLOGY

Professor Wiest, Assistant Professor Calhoun

Courses Preparing for Secretarial Work and Business Administration. To prepare young men and women for secretarial work and business administration in industrial and commercial concerns, educational institutions, and the professions the following group of courses intended to meet the present demand for such efficient training, is suggested: English 1, 3, 25; Journalism 3; Two Modern Languages (two years in each); Mathematics 4, 5; Physics 1 or 2; Psychology 1; Education 4; Contracts; History and Political Science, 4, 5, 51, 55; Economics and Sociology 1, 2, 3, 4, 101, 102, 103, 104, 105, 51, 151; Shorthand; Typewriting.

Courses Preparing for Social Service. Similarly a group of courses preparing students for welfare work in the associated charities and industrial establishments is suggested as follows: English 1, 3; Mathematics 4, 5; Zoology 1; Bacteriology 1; Anatomy and Physiology 1; Psychology 2, 105; Education 4, 7, 12; History and Political Science 4, 5, 51, 55; Two Modern Languages (two years in each);

Philosophy 1; Music 2, 3; Economics and Sociology 1, 2, 3, 102, 51, 52, 53, 54, 55, 56, 151, 152, 153.

Students in Sociology are advised to take as preliminary or companion courses work in General Biology, General, Comparative, and Social Psychology and Economic History. Attention is called to the following courses which may be counted as Sociology: Education 12; Psychology 104.

Economics

1a. **Principles of Economics.** An examination of the fundamental principles of economics and the application of these principles to practical problems. Open to sophomores, juniors, and seniors. *Three hours a week. First semester.* Professor WIEST.

1b. **Principles of Economics.** Continuation of 1a. *Three hours a week. Second semester.* Professor WIEST.

2. **Economic History of Modern Europe.** A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, commerce, industry, and finance; the effects of these several lines of development upon the national life. Open to all students. *Three hours a week. First semester.* Assistant Professor CALHOUN.

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 to all students. *Three hours a week. Second semester.* Assistant Professor CALHOUN.

4a. **Principles of Accounting.** Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Open to all students. *Three hours a week. First semester.* Professor WIEST.

4b. **Principles of Accounting.** Continuation of 4a. *Three hours a week. Second semester.* Professor WIEST.

5a. **Economics for Engineers.** A course specially adapted for the engineering students, consisting of business organization, corporation finance and some problems in labor, such as labor turnover and labor employment. *Two hours a week. First semester.* Professor WIEST.

5b. **Economics for Engineers.** Continuation of 5a. *Two hours a week. Second semester.* Professor WIEST.

101. **Business Organization.** The fundamental principles of business organization and management; social control of monopolistic combinations. Prerequisite, Economics 1. *Three hours a week. First semester.* Professor WIEST.

102. Labor Problems. A study of the labor market in its industrial phases, including such directly related topics as immigration, unemployment, and labor organizations. Prerequisite, Economics 1. *Three hours a week. Second semester.* Professor WIEST, Assistant Professor CALHOUN.

103. Transportation. Growth of the railway net; pools and traffic associations; principles and practice of rate-making as exemplified by the decisions of the Interstate Commerce Commission and the courts; state and federal regulation, with comparison of policies in foreign countries. Prerequisite, Economics 1. Alternating with Course 102. Omitted in 1919-1920. *Three hours a week. Second semester.* Professor WIEST.

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. Attention will be given to the current problems in taxation. Prerequisite, Economics 1. *Three hours a week. First semester.* Professor WIEST.

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 and comparison with those of foreign countries; foreign exchange. Prerequisite, Economics 1. *Three hours a week. Second semester.* Professor WIEST.

106. Advanced Accounting. Corporation accounting, cost accounting, municipal accounting, and auditing. Prerequisites, Economics 4, 101. Omitted in 1919-1920. *Three hours a week. First semester.* Professor WIEST.

201. Advanced Economics. The history of economic thought with special reference to the theories of value and the distribution of wealth. *Three hours a week. Second semester.* Professor WIEST.

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. Weekly reports will be submitted at hours to be arranged. *First semester.* Professor WIEST.

202b. Seminar. Continuation of 202a. *Second semester.* Professor WIEST.

Sociology

51. Introduction to Sociology. The approach is by way of concrete social problems studied in relation to the concept of social progress. Text: Bogardus. *Three hours a week. First semester.* Assistant Professor CALHOUN.

52. **General Sociology.** For Home Economics students. Two hours of Course 51. Assistant Professor CALHOUN.

53. **Principles of Sociology.** An elaboration of social origins, social evolution, social institutions, and social process in the light of biology, psychology, economics, and general sociological methods. Text: Ward, *Pure Sociology. Three hours a week. Second semester.* Assistant Professor CALHOUN.

54. **Social Dependence.** The phenomena of poverty, in relation to natural resources, human capacity, economic and social organization, philanthropic effort, and social reconstruction. Text: Parmelee, *Poverty and Social Progress. Three hours a week. First semester.* Assistant Professor CALHOUN.

55. **Social Control.** A study of refractory elements in society in relation to educational and repressive measures for social conformity. Text: Parmelee, *Criminology. Three hours a week. Second semester.* Assistant Professor CALHOUN.

56. **Rural Sociology.** The problem of the country and village community as grounded in rural economics. Text: Vogt. *Three hours a week. Second semester.* Assistant Professor CALHOUN.

151. **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. An essential course for specialists in those fields. *Three hours a week. First semester.* Assistant Professor CALHOUN.

152. **The Social Survey.** A study of method as illustrated in published surveys and in typical schedules, together with practice in drawing up schedules and initiating investigation. *Three hours a week. Second semester.* Assistant Professor CALHOUN.

153. **Sociological Systems.** The subject matter of this course varies from year to year, sometimes covering the history of sociology and at others intensifying on the work of one representative sociologist. The work of 1919-20 will concentrate on Thorstein Veblen. *Two hours a week. First semester.* Assistant Professor CALHOUN.

251a. **Social Correlation.** A lecture course in systematic sociology. *One hour a week. First semester.* Assistant Professor CALHOUN.

251b. **Social Correlation.** Continuation of 251a. *One hour a week. Second semester.* Assistant Professor CALHOUN.

252a. **Seminar.** This course offers intentive work on special phases of sociology, discussion of individual researches, and digest of cur-

rent journal material. *Two hours a week. First semester.* Assistant Professor CALHOUN.

252b. Seminar. Continuation of 252a. *Two hours a week. Second semester.* Assistant Professor CALHOUN.

EDUCATION

Professor Noe, Professor Rhoads, Professor James, Professor Tigert, Associate Professor Baker, Assistant Professor Cornell, Assistant Professor Walters

This department is a training school for teachers. Courses are offered in the Philosophy and the History of Education, in Educational Psychology and in Administration and Method. The high schools of Kentucky are demanding not only teachers who have specialized in one or more subjects but professionally trained teachers as well. Students doing work in the Department of Education are expected early in their course to select a group of related subjects to which they will devote the major part of their work in college.

By an act approved March 16, 1908, the General Assembly of the State of Kentucky established in the University a Department of Education with collegiate rank, leading to the usual degrees in pedagogy as maintained in other similar institutions, with the provision that the degrees of Bachelor of Arts in Education and Bachelor of Science in Education may be conferred, which, with the approval of the State Superintendent of Public Instruction, will entitle the holder to teach in any of the common schools and high schools of the Commonwealth without further examination during life or good behavior.

Under the State law of 1908 all students in this department of the University are eligible for the *Elementary Teacher's Certificate* at the completion of one year's study. This certificate entitles the holder of it to teach in any public school in the state for a period of two years without further examination.

At the completion of two years' work in this department the student becomes eligible to receive the *Intermediate Certificate,* which entitles the holder to teach in any school of the state for a period of four years without further examination.

At the completion of three years' work in this department an *Advanced Certificate* may be issued, which will entitle the holder to teach in any school in the state for a period of three years. At the end of this period, with the approval of the State Superintendent, a *Life Certificate,* may be substituted for the advanced certificate, on the presentation to the college authorities of satisfactory evidence of the candidate's teaching ability and moral character.

The distinctive feature of the work offered by the Department of Education consists in courses in Educational Psychology, the History and Principles of Education, Administration and the Theory and Practice of Teaching. A Model Practice School has been established in the Education Building under the supervision of the Department of Education with Fred C. Walters as the principal. This school has a competent corps of teachers and is used for observation and practice work under critic teachers for juniors and seniors majoring in Education. Experimental education has become an important phase of the work in this department.

The Smith-Hughes Act which passed Congress February 17, 1917, gives Federal aid to the several states which meet certain requirements for vocational education in the secondary schools. A part of the money received from the Federal Government is to be used in paying the salaries of teachers and supervisors in the secondary schools. Another portion of it is to be used by higher institutions of learning for the preparation of those who wish to teach vocational work in the various secondary schools.

In order to prepare students for the teaching of Vocational Agriculture, courses are offered including a course in Agricultural Education and another in the practice of teaching the subject of Agriculture. (For detailed outlines of courses in Vocational Agriculture see work under Agricultural College.)

The Horace Mann Literary Society meets every Thursday night for one hour in the Education Building. This society is becoming more and more a distinctive force in the social and literary development of students in the Department of Education. It is well attended at every meeting and the liveliest interest is manifest in all the work of the society.

Courses Required of Education Majors. All education majors are required to take the following courses in Education: 3, 4, 5, 6, 7, 9, and 15. As it is the policy of this department to emphasize scholarship and thoro preparation in subject-matter, we do not encourage students to multiply courses in education, but to prepare themselves as thoroly as possible in the subjects which they expect to teach. Education 1 and 2 are intended for students who expect to drop out at the end of the freshman year to teach.

1. **Elementary General Psychology.** Open to freshmen who are candidates for the Elementary Certificate and who expect to take Education 2. Given in the Department of Psychology. See Psychology 1a.

2. Methods and Aims of Teaching. A discussion of the teaching process, aims and methods of study, and the preparation of class-room work. Text-book and lectures. *Three hours a week. Second semester.* Professor NOE.

3a and 3b. See **Psychology** 2a and 2b.

4. Principles of Education. A study of the principles and ideals of educational theory and practice. Text-book and lectures. Required of Education majors. *Three hours a week. First semester.* Associate Professor BAKER.

5. Technique of Teaching. A discussion of methods with observation and practice teaching. The practice work open only to juniors and seniors. Required of Education majors. *Three hours a week. Second semester.* Professor NOE and Associate Professor BAKER.

6. Practice Teaching. Periods to be arranged. Open to juniors and seniors. Required of Education majors. *First semester.* Repeated second semester. Professor NOE.

107a. The Nineteenth Century Theorists. A critical examination of contempory educational theorists, with particular emphasis on James and Dewey. *Two hours a week. First semester.* Professor NOE.

107b. The Nineteenth Century Theorists. A continuation of 107a. *Two hours a week. Second semester.* Professor NOE.

7a. History of Education. An introductory course required of all Education majors. The ancient and medieval periods are rapidly covered, the emphasis being placed on the Renaissance and the Reformation. Lectures and assigned readings. *Three hours a week. First semester.* Professor NOE.

7b. History of Education. A continuation of Course 7a. Required of all Education majors. The Reformation period will be concluded, and the emphasis placed on the 18th and 19th century theorists, particularly Rosseau, Dewey, and Montesorri. Text-book, lectures and assigned readings. *Three hours a week. Second semester.* Professor NOE.

9. Principles of Secondary Education. This course aims to develop the fundamental principles of secondary education, and to familiarize the student with the best current practices and methods of high school teaching. The State High School Supervisor gives by way of concrete illustration a six weeks' series of lectures on the High Schools of Kentucky. Required of all Education majors. Text-book. *Three hours a week. Second semester.* Professor RHOADS, Associate Professor BAKER.

10. Moral and Esthetic Education. The first half of the semester will be devoted to a study of the principles of moral education; the

second half, to a study of the laws underlying the application of the beautiful. Readings, reports and lectures. *Three hours a week. Second semester.* Professor NOE.

14. Principles of Social Education. A study of the development of the social mind with special reference to education. Text-book, reading and reports. *Three hours a week. First semester.* Professor NOE.

15a. Administration and Supervision. A course in general principles required of all Education majors. Financial practices in cities and towns below twenty-five thousand will receive special emphasis. *Three hours a week. First semester.* Associate Professor BAKER.

15b. Administration and Supervision. A course in general principles required of all Education majors. The principles of constructive supervision will be developed. A critical study will be made of the Junior High School movement with particular reference to the feasibility of the Junior High School for the smaller cities and towns. *Three hours a week. Second semester.* Associate Professor BAKER.

216a. Seminar. Problems of Educational Psychology. A study of recent experiments of Educational Psychology in current literature. Prerequisite, Principles of Education. *Two hours a week. First semester.* Professor NOE.

216b. Seminar. Problems of Educational Psychology. Continuation of 216a. *Two hours a week. Second semester.* Professor NOE.

217a. Seminar in Administration and Supervision. The work will be determined by the individual needs of the students, consisting largely of individual studies and reports. *Two hours a week. First semester. Time to be arranged.* Associate Professor BAKER.

217b. Seminar in Administration and Supervision. Continuation of 217a. *Two hours a week. Second semester.* Associate Professor BAKER.

12a. American Ethnic Elements. A comparative study of the principal racial elements represented among the American people, their characteristics and contributions in relation to public education. Lectures, assigned readings and text. *Two hours a week. First semester.* Associate Professor BAKER.

12b. American Ethnic Elements. Continuation of 12a. *Two hours a week. Second semester.* Associate Professor BAKER.

113a. State and County Administration. The tendencies toward centralization in state and county administration will be analyzed and evaluated. A study of the county unit will be made with particular reference to its operation in Kentucky. This course is designed for

county superintendents and candidates for that office. Open to juniors and seniors. Lectures, assigned readings and text. *Two hours a week. First semester.* Associate Professor BAKER.

113b. State and County Administration. A comparative study of state and county financial accounting and reporting, in which Kentucky will be compared with Massachusetts, Minnesota, New Jersey and Illinois. This course is designed for county superintendents and candidates for that office. Open to juniors and senoirs. Lectures, assigned readings and text. *Two hours a week. Second semester.* Associate Professor BAKER.

22. Educational Measurements. A course in the theory and practice of measuring educational products and processes. The time is largely devoted to the giving and scoring of tests and scales in reading, spelling, writing, etc. *Two hours a week. Second semester.* Professor TIGERT.

23. Experimental Education. A laboratory course for advanced students in education who wish to make an experimental study of some educational problem which the student may select after consultation with the instructor. *Two hours a week. First semester.* Professor TIGERT.

Preparation of Teachers in Agriculture and Other Vocational Subjects

The following courses are offered for students who are expecting to teach under the provisions of the Smith-Hughes Bill.

24. Vocational Psychology. A brief discussion of the laws of mental development, structure and function. Special attention to the laws of memory, habit and attention, and their application to vocational education. *Three hours a week. First semester. Repeated second semester.* Professor NOE, Professor JAMES.

25. History of Vocational Education. As introductory to this course a brief discussion of the movements in the history of education will be given as a background. The history of vocational education will be traced from the earliest vocational schools to the present time, reports and discussions of recent movements receiving special attention. *Three hours a week. First semester. Repeated second semester.* Professor NOE, Professor JAMES.

26. The Principles of Education. The study of the aims, values and function of education. *Three hours a week. First semester. Repeated second semester.* Professor NOE, Professor JAMES.

27. Agricultural Education. Special methods for vocational students in the art of teaching, and specific practice in the teaching of

Agriculture in the Model Practice School, under the supervision of the instructor of Agricultural Education. *Three hours a week. First semester. Repeated second semester.* Professor JAMES.

28. Agricultural Education. Aims of Agricultural Education in the secondary schools; history of secondary agriculture; nature of agriculture suitable and desirable for presentation in the secondary schools of Kentucky; organization material and methods of presenting work in class-rooms; laboratory and library equipment. *Three hours a week. First semester. Repeated second semester.* Professor JAMES.

29. Agricultural Education. This course is designed especially for those specializing in some form of vocational education. It will deal with the aims, ideals and history of vocational education in Europe and America. The special problems of vocational education will receive emphasis. *Two hours a week. First semester.* Professor JAMES.

ENGLISH LANGUAGE AND LITERATURE

**Professor Dantzler, Professor Farquhar, Assistant Professor Mabie, Assistant Professor Simrall, Miss Jewell, **Mr. Bradley, Miss Hopkins, Mr. Whiting*

The object of this department is threefold: 1: to train one in the use of English as a means of expression, and to extend the knowledge of those who find in literature the readiest means to acquire a liberal education; 2: to fit students for graduate work in English; 3: to prepare teachers for high school work in English.

The courses in speech offered by the Department of English have several objects. They are to develop the student's power of self-expression by means of clear, correct, distinct speech as one of the essentials of a liberal education; to develop habits of accurate analysis, discrimination, and the ability to apply the processes of argument to situations in everyday life; to afford training in direct, conversational speaking as a preparation for business and the professions; to give such training in reading and oral interpretation as will lead to greater appreciation and enjoyment of literature and to more effective teaching of the subject; to realize educational values in dramatic art and to promote the use of the drama as an intimate, democratic medium for the self-expression of the community; to prepare teachers for the supervision and direction of speech work.

A Laboratory Theatre, operated in connection with the courses in dramatics, will afford opportunity for practical work in play produc-

---

*On leave of absence, 1919-20.
**On leave of absence for duration of war.

tion. Plays of the laboratory theatre will at times be open to the public.

The Department of English offers courses in Library Science, the object of which is threefold: 1. To acquaint the student with the general principles of library usage; 2. To qualify prospective teachers to take charge of high school libraries; 3. To prepare students for further work in library schools. English major students who contemplate library work as a profession are urged to consult with the head of the department at the beginning of the sophomore year.

Students who select English as a major study are expected to take advanced courses yielding twenty credits during the junior and senior years. Courses 1a, 1b, 3a, 3b are prerequisite to any of these courses. Students who expect to major in English are strongly urged therefore to take courses 3a and 3b in the sophomore year.

English Language and Rhetoric

1a. English Composition. Practice in writing correct and clear English. Accuracy of expression is desired rather than proficiency in style. A text book will be used, but the instruction will also be based upon the study of representative English masterpieces. Required of all freshmen. *Three hours a week. First semester. Repeated second semester.* All instructors.

1b. English Composition. This course is a continuation of English 1a. Required of all freshmen. This course with English 1a is prerequisite to all other courses in English. *Three hours a week. Second semester. Repeated first semester.* All instructors.

2. Advanced Composition. For students who have acquired some proficiency in expression, and who wish to do further work in the subject. The object is to cultivate facility and individuality of style, to become better acquainted with the art of composition. Prerequisites, English 1a or 1b. *Two hours a week. Thruout the year.* Miss JEWELL.

4a. Advanced Agricultural Composition. This course is designed for sophomores in the College of Agriculture. Oral and written exercises. Agricultural literature will form the basis of the work. *Two hours a week. First semester.* Mr. WHITING.

4b. Advanced Agricultural Composition. Continuation of 4a. *Two hours a week. Second semester.* Mr. WHITING.

101a. Technical Composition. This is an advanced course in technical composition designed for seniors in Industrial Chemistry and the College of Engineering. Scientific models will be studied. *Three hours a week. Thruout the year.* Professor DANTZLER.

101b. Technical Composition. Continuation of 101a. *Three hours a week. Second semester.* Professor DANTZLER.

5a. Old English. The object of this course is to introduce the student to the beginnings of English prose and poetry. During the first semester the elements of Old English grammar will be studied with reading of easy prose and poetry. During the second semester attention will be given to the literature and the social life of the period. Open to all but freshmen. *Three hours a week. First semester.* Professor DANTZLER.

5b. Old English. Continuation of 5a. *Three hours a week. Second semester.* Professor DANTZLER.

102a. History of the English Language. In this course the development of the language from the Old English period to the present will be traced. The work will be linguistic and literary. Open to juniors and seniors. Recommended to students in Journalism and those who intend to become teachers of English. *Two hours a week. First semester.* Professor DANTZLER.

102b. History of the English Language. Continuation of 102a. *Two hours a week. Second semester.* Professor DANTZLER.

103. Advanced Old English. This course is designed for those who wish to continue the work of English 5b. Selections from Cynewulf will be read. Lectures and papers on assigned topics. Elective for juniors and seniors. Prerequisites, English 5a, 5b. *Three hours a week. First semester.* Professor DANTZLER.

English Literature

3a. History of English Literature. This course is designed to give the student a general survey of English literature from the Old English period to the present. Extensive readings from selected masterpieces, with weekly written themes by the student. Prerequisite, English 1a or 1b. *Three hours a week. First semester.* Professor DANTZLER, Professor FARQUHAR, Miss JEWELL, Mr. WHITING.

3b. History of English Literature. This course is a continuation of Course 3a. Both courses are prerequisite to all others in literature. *Three hours a week. Second semester.* Professor DANTZLER, Professor FARQUHAR, Miss JEWELL, Mr. WHITING.

104. Milton. A study of Milton's poems and most important prose works. The relation of Milton to his contemporaries will be considered. Open to juniors and seniors. *Two hours a week. First semester.* Professor DANTZLER.

105. Browning. An intensive study of the art and teaching of Browning. Lectures and papers. Open to juniors and seniors. *Two hours a week. Second semester.* Professor DANTZLER.

106. English Romanticism. This course traces the history of the English romantic movement from its beginning to its culmination in the poets of the early nineteenth century. Special attention is paid to the poetry of Wordsworth, Coleridge, Byron, Shelley, Keats. Open to juniors and seniors. *Three hours a week. First semester.* Professor DANTZLER.

107. Victorian Poets. This course is a continuation of Course 106. Special attention will be given to the works of Tennyson, Browning and Swinburne. Open to juniors and seniors. *Three hours a week. Second semester.* Professor DANTZLER.

108a. Principles of Literary Criticism. The course attempts to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature. Open to juniors and seniors. *Three hours a week. First semester.* Professor FARQUHAR.

108b. Principles of Literary Criticism. Continuation of 108a. *Three hours a week. Second semester.* Professor FARQUHAR.

109. Pre-Shaksperean Drama. An historical course in English dramatic origins; a study of the works of Lyly, Kyd, Greene, Peele, and Marlowe. Open to juniors and seniors. *Three hours a week. First semester.* Professor FARQUHAR.

110. Shakspere. All Shakspere's plays are studied in an effort to appreciate drama and art. *Three hours a week. Second semester.* Professor FARQUHAR.

111. The English Novel. Introduction to the study of English fiction. Readings, with a view to illustrate the evolution of the novel as well as to develop an appreciation of it as a form of literature. Open to juniors and seniors. *Three hours a week. First semester.* Miss JEWELL.

112. Early Nineteenth Century Essayists. After a survey of the early prose Romanticists, the essays of Coleridge, de Quincey, Lamb, and Hazlitt will be studied. Lectures and reports. Open to juniors and seniors. *Two hours a week. First semester.* Miss JEWELL.

113. Victorian Essayists. Ruskin, Arnold and Newman. The social, literary and religious movements are kept in mind. Weekly themes upon assigned topics. Open to juniors and seniors. *Three hours a week. First semester.* Miss JEWELL.

114. American Literature. The literature of America is studied in its relation to national life and thought. The leading authors will be studied in class, while the minor writers will constitute parallel reading. Open to juniors and seniors. *Two hours a week. Second semester.* Professor FARQUHAR.

116. The Contemporary Drama. Development and tendencies in continental, British, and American dramatic literature, 1850-1918. Representative readings. Open to juniors and seniors. *Three hours a week. First semester.* Professor FARQUHAR.

16a. Literature of the Bible. A literary study of the Bible by books. It assists to an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling. Open to all but freshmen. *Two hours a week. First semester.* Professor FARQUHAR.

16b. Literature of the Bible. Continuation of 16a. *Two hours a week. Second semester.* Professor FARQUHAR.

17. English and Scots Ballads. This course is designed to be a literary and social study. It is expected to encourage interest in the folklore of Kentucky. Not offered 1919-20. Open to all but freshmen. *Two hours a week Second semester.* Professor DANTZLER.

18. Teachers' Course. This work is for those who intend to teach English in the high school. Methods in teaching, composition. Literature of the first two years in high school. Open to all but freshmen. *Two hours a week. Second semester.* Professor DANTZLER.

31. The Lyric. In this course the development of the lyric in a literary form is traced from the Old English period to the present. Not offered 1918-19; offered 1919-20. Open to all but frushmen. *Two hours a week. First semester.* Mr. BRADLEY.

32. Mythology in English Literature. This course will trace the classic myths in English literature from Spencer to Matthew Arnold. Its object is to acquaint the student with the mythological allusions and with the treatment of the principal myths in our literature. Not offered 1918-19; offered 1919-20. Open to all but freshmen. *Two hours a week. Second semester.* Mr. BRADLEY.

201a. Literary Criticism. Special problems in the development of English criticism. *Three hours a week. First semester.* Professor FARQUHAR.

201b. Literary Criticism. Continuation of 201a. *Three hours a week. Second semester.* Professor FARQUHAR.

202a. Studies in the Contemporary Drama. An investigation into the dramatic mode and form of the contemporary drama. *Three hours a week. Thruout the year.* Professor FARQUHAR.

202b. Studies in Contemporary Drama. Continuation of 202a. *Three hours a week. Second semester.* Professor FARQUHAR.

204a. Beowulf. A linguistic and literary study of Beowulf. *Three hours a week. Thruout the year.* Professor DANTZLER.

204b. Beowulf. Continuation of 204a. *Three hours a week. Second semester.* Professor DANTZLER.

Speech

7a. Elements of Public Speaking. Fundamentals of practical public speaking for those who wish a general training as a preparation for business and professional life. Emphasis placed on clear, distinct speech, enunciation, pronunciation, voice and conversational delivery. *Three hours a week. First semester.* Assistant Professor MABIE.

7b. Elements of Public Speaking. Continuation of 7a. *Three hours a week. Second semester.* Assistant Professor MABIE.

8a. Extempore Speaking. From September 16 to December 24, 1918, this was the "Four Minute Men Speech Class." Prerequisites, English 7a, 7b, or equivalent. *Three hours a week.* Not offered in 1919-20. *First semester.* Assistant Professor MABIE.

8b. Extempore Speaking. Continuation of 8a. *Three hours a week.* Not offered 1919-1920. *Second semester.* Assistant Professor MABIE.

9. Argumentation. Study of principles of argumentation, preparation of briefs, writing of argumentative articles and speeches. The aim is to develop habits of analysis and discrimination, and to teach the student how to present his thoughts convincingly to others. Not open to freshmen. *Three hours a week. First semester.* Assistant Professor MABIE.

10. Debate. Practise in direct oral argument. The aim is to develop student's ability to apply principles of reasoning and argument to real situations. Prerequisite, English 9. *Three hours a week. Second semester.* Assistant Professor MABIE.

11a. Argumentation and Debate for Law Students. Application of principles of logic and argumentation to the practise of law. Not open to freshmen. *Two hours a week. First semester.* Assistant Professor MABIE.

11b. Argumentation and Debate for Law Students. Continuation of 11a. *Two hours a week. Second semester.* Assistant Professor MABIE.

33. Elements of Interpretative Reading. Emphasis is placed upon the fundamentals of vocal expression, enunciation, pronunciation, voice and action and upon the essentials of oral interpretation of literature. *Three hours a week. First semester.* Assistant Professor MABIE.

115a. Oral Interpretation of Literature. An advanced course in study, appreciation, and oral interpretation of selected masterpieces of literature. Recommended to those who plan to teach English

literature. Open to juniors and seniors. *Three hours a week. Second semester.* Assistant Professor MABIE.

34a. Dramatic Production. Studies of community drama, dramatic personation and interpretation, organizaiton and technical work of the theatre, and the presentation of plays. A practical laboratory theatre will be operated in connection with this course. The purpose is to promote appreciation of dramatic literature, and to prepare students for work as directors and supervisors of high school and community dramatics. Not open to freshmen. *Two hours a week. First semester.* Assistant Professor MABIE.

34b. Dramatic Production. Continuation of 34a. *Two hours a week. Second semester.* Assistant Professor MABIE.

Library Science

25. General Reference Work. The student is taught to use intelligently the card catalog, the printed book, and the more important reference books, including periodical indexes, the use of the library in debating and the preparation of bibliographies. *Two hours a week. First semester.* Miss KING.

26. Library Methods for Teachers. The object of this course is to qualify prospective high school teachers to take charge of high school libraries, in connection with their teaching, and also to prepare them to give instruction to high school students in the use of books and libraries. The subjects treated include book selection, use and care of reference material, mending and care of books, equipment and administration of the school library. *Two hours a week. Second semester.* Miss KING.

27. Cataloging and Classification. This course includes cataloging, according to standard rules, shelf-listing, a study of the Dewey Decimal classification, and practice work in card-writing on the typewriter. *Two hours a week. Second semester.* Miss ALLEN.

GEOLOGY

Professor Miller, Assistant Professor Jillson

In recent years geology has come to be recognized as a profession. Its relation to mining, and especially to oil and gas exploration, is such that the services of a geologist are now considered indispensable by companies engaged in developing our mineral resources. Major geology students in the past have had no difficulty in securing on graduation attractive positions with the State and Federal geological surveys; and more recently very lucrative positions indeed with oil companies.

1a. Physiography. A study of the physical features of the earth and an interpretation of them in the light of causes now in operation. Text book, laboratory work and field excursions. Major geology students should take this course in the freshman year. Open also to other students in this year. *Three hours a week. Thruout the year.* Assistant Professor JILLSON.

1b. Physigoraphy. Continuation of 1a. *Three hours a week. Second semester.* Assistant Professor JILLSON.

2a. Elementary Geology. A general course in the fundamental principles involved in dynamical, structural, and physiographic geology and an outline presentation of historical geology. Text book, lectures and field excursions. At least two all-day trips must be taken by each student. Preferably this course would follow Course 1. *Three hours a week. First semester.* Professor MILLER, Assistant Professor JILLSON.

2b. Elementary Geology. Continuation of 2a. *Three hours a week. Second semester.* Professor MILLER, Assistant Professor JILLSON.

3. Elementary Geology. A first course in geology for agricultural students. Special emphasis is placed on processes connected with soil formation, rocks in their relation to soils, geological sources of fertilizers, an outline of historical geology with special stress laid on Kentucky stratigraphy. *Three hours a week. Second semester.* Professor MILLER.

4. Mineralogy. The object of the study is to render the student familiar with the composition and physical character of those common minerals likely to be met with both in the course of every day observation and in geological pursuits. *Four hours laboratory. First semester. Repeated second semester.* Professor MILLER.

5a. Advanced Geology. The same topics are treated as in 1, but more thoroly, as it is fitting such should be treated after the student has had Geology 2 and 3 as well as work in other departments which better fit him for an understanding of the deeper problems of geology. Two excursions in the fall and two in the spring required. For major geology students. Text book and lectures. *Two hours a week. First semester.* Professor MILLER.

5b. Advanced Geology. Continuation of 5a. *Two hours a week. Second semester.* Professor MILLER.

6. Economic Geology. A study of the mode of occurrence and theories of origin of commercial mineral and rock deposits and the practical aspects of rock structures. For major geology students and those pursuing courses in mining and industrial chemistry. This course should be preceded by Geology 1. Text book and lectures. *Three hours a week. Second semester.* Professor MILLER.

7. Engineering Geology. A study of rocks and rock minerals and structures especially as related to engineering problems. Outline of historical geology; soil formation; drainage, surface and underground; wave action and shore currents in relation to improvement of harbors and mouths of rivers; glacial deposits; building stone; geological materials for road making and for lime, cement and plaster; coal; petroleum; ore deposits. For civil engineering students. Text book and lectures. *Three hours a week. First semester.* Assistant Professor JILLSON.

8. Oil Geology. A course designed to prepare students to qualify as prospectors for oil and gas. For mining, civil engineering and major geology students. *Three hours a week. First half of second semester.* Assistant Professor JILLSON.

9. Field Geology. A special short course in the interpretation of geological features as seen in the field. Open only to students of 1, 2, 3 or 8. It consists of investigations by the student in the field and the preparation of maps, brief reports, etc., from individual field notes. *Two periods a week of three hours each. Second semester.* Assistant Professor JILLSON.

10. Geology of Kentucky. A course in the detailed geology of the State treated under the heads: Stratigraphy, structural geology, physiography and economic geology. Prerequisite, Geology 1 and 2. *Two hours a week. First semester.*

11. Evolution. A course in the development of the organic world given by the departments of Geology, Zoology and Botany. The following is an outline of the topics treated. Department of Geology: General survey of the problem and the history of the development of opinion. Evidences from invertebrate paleontology and vertebrate paleontology as relates to man. Evidence from vertebrate paleontology and geographical distribution of animals. Department of Botany: The origin and development of the plant kingdom: Morphological and experimental evidences of evolution: The mutation theory. Department of Zoology: Evidence from embryology, osteology and physiology. Theories of evolution (Natural selection, use and disuse, orthogenesis) involving a study of protective resemblance, mimicry and the problem of heredity: Evolution of Man. Lectures and recitations. *Three hours a week. First semester.* Professor MILLER, Assistant Professor JILLSON, Professor SHULL, Professor FUNKHOUSER.

101. Invertebrate Paleontology. A systematic study of invertebrate fossils in which special attention is paid to those which are important for the identification of geological horizons. Instruction by

text book, lecture and laboratory work. *Three hours a week. First semester.* Professor MILLER.

102. Vertebrate Paleontology. An advanced course offered only to graduates and those undergraduates who have completed the fundamental work in Geology and Zoology. This course offers a consideration of the type fossil forms in each vertebrate phylum, and a final summation of the evident evolutionary tendencies which have brought about domination and then extinction of some of the better known groups. Lectures, readings, recitations. *Two hours a week. Second semester.* Assistant Professor JILLSON.

103a. History of Geology. A study of the development of geological opinion from the days of the Greeks to the present time. Divided into two parts. (1) History of European Geology. (2) History of American Geology. *Two hours a week. First semester.* Professor MILLER.

103b. History of Geology. Continuation of 103a. *Two hours a week. Second semester.* Professor MILLER.

GERMAN LANGUAGE AND LITERATURE

*Professor Melcher, *Mr. Cannon*

1a. Elementary German. Drill upon pronunciation and rudiments of grammar, memorizing and repetition of easy colloquial sentences, reading, writing and speaking of very simple German. *Three hours a week. First semester.* Professor MELCHER.

1b. Elementary German. Reading of from 100 to 150 pages of graduated texts from a reader, constant practice in composition based on reading, exercises designed not only to fix in mind forms and principles of grammar, but also to cultivate readiness in reproduction. *Three hours a week. Second semester.* Professor MELCHER.

2a. Intermediate German. Reading of 150 to 200 pages of prose with practice in conversation and reproduction, oral and written, based upon the matter read, memorizing of short German poems. *Three hours a week. First semester.* Professor MELCHER.

2b. Intermediate German. Grammar drill continued, practice in writing German and reading at sight. Texts read are selected mainly from the recommendations of the Modern Language Association. Prerequisites, German 1a and 1b. *Three hours a week. Second semester.* Professor MELCHER.

3a. Composition and Reading. Materials for sight translation and conversation, rapid reading of some of the characteristic works of modern prose. *Three hours a week. First semester.* Professor MELCHER.

---

*On leave of absence 1918-19, resigned 1919.

3b. Composition and Reading. Study of Schiller's life and works. Class reading and interpretation of some of his poems and dramas. Collateral reading. Prerequisites, German 2a and 2b. *Three hours a week. Second semester.* Professor MELCHER.

4a. Advanced Reading and Composition. Rapid reading of various texts as "Die Jungfrau" and "Die Ahnfrau" with attention to metre and technique, "Psyche," "Frau Sorge," "Soll und Haben." *Three hours a week. First semester.* Professor MELCHER.

4b. Advanced Reading and Composition. Reading continued: numerous short themes on assigned subjects, free reproduction. Collateral reading. Prerequisites, German 3a and 3b or 5. *Three hours a week. Second semester.* Professor MELCHER.

5. History of German Literature. An introductory course to German Literature to give the student a general historic background for subsequent special work in literature. Prerequisites, German 2a, 2b. Required of major German students. *Three hours a week. First semester.* Professor MELCHER.

6. Scientific and Journalistic German. Reading of a graded scientific reader and selections from popular writers on science: Current German periodicals. Prerequisite, German 3a. *Three hours a week. Second semester.* Professor MELCHER.

101a. The Drama. Study of Lessing's life and the service of his critical works to German literature: Selections from his dramas and prose writings. *Three hours a week. First semester.* Professor MELCHER.

101b. The Drama. Rapid reading of selections from such contemporary dramatists as Sudermann, Hauptman, Ibsen. For juniors and seniors. Prerequisites, German 4a, 4b, 6. *Three hours a week. Second semester.* Professor MELCHER.

102a. Novel and Drama. The novel drama and advanced composition. *Three hours a week. First semester.* Professor MELCHER.

102b. Novel and Drama. Life and works of Goethe. Reading of Egmont and parts of Faust. For juniors and seniors. Prerequisites, German 4a, 4b, 6. *Three hours a week. Second semester.* Professor MELCHER.

HISTORY AND POLITICAL SCIENCE

Professor Tuthill, Assistant Professor Butt

Freshmen in the Department of History and Political Science will register first in one of the introductory courses, either 2 or 4. In the senior year a creditable essay on some phase of Kentucky history will be expected; when approved these productions are bound and preserved for future reference.

The Library contains valuable files of several magazines. The City Library of about 40,000 volumes is open to our students free of charge. Prizes, both local and national, are offered annually on a competitive basis in History and Government.

Friends and alumni are invited to collect and send for deposit in the library all plantation accounts, pioneer diaries, old letters and manuscripts of all sorts, useful in preserving the memory of persons who have built up the substantial interests of Kentucky.

History

2. History of England Since 1500. An introduction to the progress of the English people at home and abroad during the modern period. Recommended to students of law and literature. *Three hours a week. First semester.* Professor TUTHILL, Assistant Professor BUTT.

4a. Modern Europe. A general survey of the rise of modern states since about 800 A. D., with some stress on the progress of culture and the life of the nations. *Three hours a week. First semester.* Professor TUTHILL.

4b. Modern Europe. Continuing the course 4a, tracing the same developments in the later ages, and devoting a volume to the past century. *Three hours a week. Second semester.* Professor TUTHILL.

5a. History of the United States. Beginning with the colonies about 1750, omitting most of the military campaigns, but emphasizing the fundamental progress of the nation. Topics will be assigned chiefly in the history of the South. *Three hours a week. First semester.* Professor TUTHILL.

5b. History of the United States. A continuation of History 5a. *Three hours a week. Second semester.* Professor TUTHILL.

6. American Constitutional History. Planned especially for the needs of law students. *Two hours a week. Second semester.* Professor TUTHILL.

7. Recent American Movements. The populistic and progressive movements, tariff, political parties, prohibition, initiative and referendum, 1876-1914. *Two hours a week. Second semester.* Assistant Professor BUTT.

20. The Twentieth Century. Designed to explain contemporary world movements which have culminated in the Great War. Open to seniors and to others who have had good training in modern history. *Two hours a week. Second semester.* Professor TUTHILL.

24. Thesis Writing. All seniors will select as early as possible a subject in Kentucky history which will be pursued intensively thruout the year. They will meet from time to time during the Fall for in-

struction in investigation, and regularly during the Spring for comparison of data and synthetic presentation of material which has been tested. *Two hours a week.* Professor TUTHILL.

30. **English Constitutional History.** Designed to present the principal documents and features of the growth of English laws and institutions. *Two hours a week. First semester.* Professor TUTHILL.

118. **Teaching of History.** Open to graduates and undergraduates. *One hour a week. Second semester.* Professor TUTHILL.

210. **Pro-Seminar in European History.** This consists of the reading, translation and study of a selected chronicle. Open to graduates only. *Two hours a week.* Professor TUTHILL.

Political Science

150. **International Law.** Lectures, text, and case-books on questions of international law in war and peace. Open to juniors and seniors. *Two hours a week. Second semester.* President MCVEY.

51a. **American Government.** A study of the rights, duties and responsibilities of citizens, with attention to current questions. *Three hours a week. First semester.* Assistant Professor BUTT.

51b. **American Government.** A continuation of Political Science 51a. *Three hours a week. Second semester.* Assistant Professor BUTT.

52. **Municipal Government.** Two objects are sought in this course: 1. an examination of recent tendencies in city government; 2. an introduction to each of the larger problems of control. Recommended to seniors in Arts and Law, and to those who complete Political Science 1, or its equivalent. *Two hours a week. Second semester.* Assistant Professor BUTT.

55. **Comparative Government.** A comparative study of the parties, governments, and administrative systems of England, France, Germany, Switzerland, Canada, and Australia. *Two hours a week. Second semester.* Assistant Professor BUTT.

57. **Public Utilities.** A comparison of public and private ownership of railways and municipal utilities; physical valuation and reasonable rates; legislative versus administrative control; problems of the civil service. *Two hours a week. First semester.* Assistant Professor BUTT.

253a. **Comparative Constitutional Law.** A comparative study of the governments of the greater nations of America and Europe. Prerequisite, Political Science 1. *Two hours a week. First semester.* Professor TUTHILL.

253b. **Comparative Constitutional Law.** Continuation of 253a. *Two hours a week. Second semester.* Professor TUTHILL.

JOURNALISM

Professor Grehan, Miss McLaughlin

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 of Kentucky and cities of the South and East. In connection with this department students have organized a Press Association and the department a press bulletin thru which it serves Kentucky papers with news pertaining to the University and allied activities. The course of instruction covers a period of four years and leads to the degree of Bachelor of Arts in Journalism. Its purpose is to train young men and women in the practical work of journalism. Students when admitted are classified according to their previous scholastic attainments. Every student is required to become a member of such literary society of the University as he may elect after his freshman year. Applicants for admission to first year classes must be at least 17 years old. Students who are graduates of accredited schools are admitted without examination to the freshman course.

Prizes are awarded for practical work in the second semesters of the second and fourth years. These contests are open to students only of these two classes in journalism.

Second Year—Five dollars in gold for best news story, minimum 1,000 words, on a subject to be assigned. *Fourth Year*—Five dollars in gold for best account of a convention or gathering of state importance, no limit as to words. Five dollars for best dramatic criticism on a performance at a local theatre, the performance to be indicated by the head of the department, and review to be written the night of the play and before morning papers are issued. Five dollars for best current news story of spontaneous origin, or editorial on current topic.

1a, 1b. First Year Journalism. General survey and introductory lectures. This work includes elements of newspaper writing, short news stories, "rewrites" from selected newspapers, and work on university publications to the aggregate extent of not fewer than 10,000 words. Instruction in tywepriting is given. *Recitation five hours a week. Thruout the year.* Miss McLaughlin.

2a, 2b. Second Year Journalism. History of journalism, advertising, spelling, etymology, philology, definitions and synonyms of words in current use, punctuation. First semester: Spelling, etymology, philology, definitions and synonyms of words in current use, practice writing on general assignments. Second semester: Spelling, etymology, synonyms, etc., continued, practice writing on assigned subjects, sur-

vey of short news story and theory and practice of advertising. *Five hours a week. Thruout the year.* Professor GREHAN.

3a, 3b. Third Year Journalism. Verbal criticism, derivation, definition and shading of meanings of current terms used in news and editorial writing, copy-reading, proof-reading, headlining, city assignments for reporters and lectures on general make-up of daily and weekly newspapers. This course is subject to modification or elaboration according to capabilities and accomplishments of students as the work progresses. It is designed to give special attention to such phases of newspaper work as comparison and criticism of copy written by various "reporters" and "editors," who are class members, spelling, sentencing, newspaper style, proof-reading, and "make up." Students in this course are required to edit not fewer than 60,000 words during the second semester. Classes in verbal criticism are opened the second semester for students not majoring in journalism, who have had liberal training in fundamental English and Latin. *Three hours a week. Thruout the year.* Professor GREHAN.

4a, 4b. Fourth Year Journalism. Study of the law affecting libel and copyright, editorial and feature writing, dramatic criticism, book reviewing, interviewing, newspaper organization, talks on style, lectures on stage folk and theory of dramatic criticism. *Five hours a week. Thruout the year.* Professor GREHAN.

OUTLINE OF COURSE LEADING TO DEGREE A. B. IN JOURNALISM

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1a	150	English Composition	3		3.
Mathematics 51a	168	Descriptive Astronomy	3		3.
Anc. Lang. 5 or 1	126	Livy, Book 1, or Elementary Latin	3		3.
or Geology 1a	156	Physiography	3		3.
Rom. Lang. 1a	182	Elementary French	3		3.
Journalism 1	162	Typewriting, Reporting	5		5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1b	150	English Composition	3		3.
Mathematics 51b	169	Descriptive Astronomy	3		3.
Anc. Lang. 6 or 2	126	Horace or Caesar	3		3.
or Geology 1b	156	Physiography	3		3.
Rom. Lang. 1b	182	Elementary French	3		3.
Journalism 1	162	Typewriting, Reporting	5		5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 3a	151	History of English Literature	3		3.
English 16a	153	Literature of the Bible	2		2.
Rom. Lang. 2a	182	French Reading	3		3.
Econ & Soc. 4a or	141	Principles of Accounting	3		3.
Psychology 2a or	180	Introductory Psychology	3		3.
Philosophy 1a	174	Elementary Philosophy	3		3.
Journalism 2	162	Etymology, Spelling	5		5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium or Field Athletics		2	.7

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 3b	151	History of English Literature	3		3.
English 16b	153	Literature of the Bible	2		2.
Rom. Lang. 2b	182	French Reading	3		3.
Econ. & Soc. 4b or	141	Principles of Accounting	3		3.
Psychology 2b or	181	Introductory Psychology	3		3.
Philosophy 1b	175	Elementary Philosophy	3		3.
Journalism 2	162	Advanced Story Writing, Advertising	5		5.
Military Science	169	Drill		3	1.
Physical Education	175	Gymnasium and Field Athletics		2	.7

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 109 or	152	Pre-Shaksperean Drama	3		3.
English 111	152	English Novel	3		3.
Rom. Lang. 5a or	182	Elementary Spanish	3		3.
German 1a	158	Elementary German	3		3.
Econ. & Soc. 1a	141	Principles of Economics	3		3.
Econ. & Soc. 2 or	141	Economic History of Modern Europe	3		3.
Hist. & Pol. Sci. 4a or	160	Modern Europe	3		3.
Hist. & Pol Sci. 51a	161	American Government	3		3.
Journalism 3	163	Verbal Criticism	3		3.

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 110 or	152	Shakspere	3		3.
English 114	152	American Literature	3		3.
Rom. Lang. 5b or	182	Elementary Spanish	3		3.
German 1b	158	Elementary German	3		3.
Econ. & Soc. 1b.	141	Principles of Economics	3		3.
Econ. & Soc. 3 or	141	Economic History of U. S.	3		3.
Hist. & Pol Sci. 4b or	160	Modern Europe	3		3.
Hist. & Pol. Sci. 51b	161	American Government	3		3.
Journalism 3	163	Copyreading, Proofreading, Headlining, Make up of Newspapers	3		3.

SENIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 108a	152	Literary Criticism	3		3.
English 104 or	151	Milton	2		2.
Econ. & Soc. 104	142	Public Finance	3		3.
Rom. Lang. 103a	182	Advanced Spanish	3		3.
or German 2a	158	Prose Reading	3		3.
Econ & Soc. 51	142	Introduction to Sociology	3		3.
Journalism 4	163	Law of Libel and Copyright	5	*4	5.

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 108b	152	Literary Criticism	3		3.
English 105 or	151	Browning	2		2.
Econ. & Soc. 105	142	Money and Banking	3		3.
Rom. Lang. 103b	182	Advanced Spanish	3		3.
or German 2b	158	Reading and Composition	3		3.
Econ. & Soc. 53	143	Principles of Sociology	3		3.
Hist. & Pol. Sci. 150	161	International Law	2		2.
Journalism 4	163	Feature Writing, Book Reviewing, Dramatic Criticism, Editorial Writing, Policy	3		3.

*Laboratory hours assigned.

MATHEMATICS AND ASTRONOMY

Dean Boyd, Professor Davis, Associate Professor Rees, Assistant Professor Downing, Dr. Smith

Mathematics

Students planning to teach high school mathematics should consider Courses 1 to 7 inclusive, the minimum preparation for such work. Graduate students will find sufficient advanced work regularly given to occupy their time, for at least two years. The White Mathematics Club meets weekly for the study of some book of general interest and for the presentation of special topics. Juniors and seniors majoring in mathematics are expected to attend regularly. The mathematics and astronomy reference books and magazines are kept in the department library.

1. Elementary Algebra. This course is designed for those who enter the University with only one unit of high school mathematics, and is a prerequisite for Courses 4 and 5. Quadratics and beyond. *Three hours a week. First semester.*

2. Solid Geometry. This is given primarily for engineering students who enter conditioned in it. It is a prerequisite for second semester analytics. *Three hours a week. Second semester.* Dr. SMITH.

3. Plane Trigonometry. A course in Trigonometry required of freshmen in the College of Agriculture. *Three hours a week. First semester. Repeated second semester.* Dr. SMITH.

4. Plane Trigonometry. A thoro course in plane trigonometry supplemented by enough algebra to fill out a semester's work. For Arts and Science and Engineering students. Prerequisite, 1½ units of entrance Algebra. *Five hours a week. First semester. Repeated second semester.* All instructors.

5. College Algebra. Elementary algebra is first reviewed in a way to give greater clearness as to assumptions, the number concept and the fundamental idea, and to introduce graphs and determinants. Following this, topics are taken up that will, together with those included in Course 4, furnish the student with a fairly complete view of the subject. Prerequisite 1½ units of entrance Algebra. *Five hours a week. First semester. Repeated second semester.* All instructors.

6. Analytic Geometry. A course in which particular emphasis is laid on the graphical representation of the various types of functions. The derivative is introduced as a tool for the study. The work is given by lectures, with mimeographed outlines. Prerequisites, Courses 3, 4 and 5. *Five hours a week. First semester. Repeated second semester.* Professor DAVIS, Associate Professor REES, Assistant Professor DOWNING.

7a. Differential Calculus. A course covering most of the subject as presented in the larger texts and including much drill work in the solution of problems. Some work in integration is done. Engineering students take this in the second semester of the sophomore year. Prerequisites, Courses 4, 5, and 6. *Five hours a week. First semester. Repeated second semester.* Professor DAVIS, Associate Professor REES, Assistant Professor DOWNING.

7b. Integral Calculus. A continuation of Course 7a, completing elementary calculus. Prerequisites, Courses 3, 4, 5, 6, 7a. *Three hours a week. First semester. Repeated second semester.* Professor DAVIS, Asociate Professor REES, Assistant Professor DOWNING.

8. Spherical Trigonometry; Method of Least Squares. This course is required of civil engineers and students majoring in mathematics. *Two hours a week. Second semester.* Assistant Professor DOWNING.

9. Teacher's Course. A course in the history and pedagogy of mathematics, designed for students majoring in education with mathematics as their minor. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. Second semester.* Professor DAVIS.

101. Graphical Analysis and Determinants. A study by graphical methods of the fundamental principles of analysis and a presentation of the elements of curve tracing. This is followed by a brief course in determinants. Lectures. Offered in 1918-19; to be omitted in 1919-20. *Three hours a week. First semester.* Associate Professor REES.

102. Vector Analysis. A thoro study of the algebra of vectors with numerous applications to line geometry and solid analytics. Also a brief introduction to the calculus of vectors with applications to differential geometry, mechanics and physics. Text to be supplemented by lectures. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. Second semester.* Associate Professor REES.

103. Theory of Equations. An introductory course given chiefly by lectures and based on some standard text. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. First semester.* Associate Professor REES.

104. Advanced Analytics. This course is designed to present the extended theory connected with conic sections and to serve as an introduction to a later course in the general theory of algebraic curves. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. Second semester.* Associate Professor REES.

105a. Differential Equations. A study of the theory of ordinary and partial differential equations, with applications to physics and mechanics. Text-book work supplemented by lectures and reports.

Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. First semester.* Professor DAVIS.

105b. Differential Equations. Continuation of 105a. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. Second semester.* Professor DAVIS.

106a. Advanced Calculus. A second course in calculus, affording a more critical view of the fundamental notions theorems and including the study of elliptic integrals and functions defined by definite integrals. Work based on the texts of Byerly and Williamson. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. First semester.* Assistant Professor DOWNING.

106b. Advanced Calculus. Continuation of 106a. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. Second semester.* Assistant Professor DOWNING.

107a. Projective Geometry. This course provides a study of the content and the methods of modern synthetic geometry. It is also designed as an introduction to a later course in geometric transformations. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. First semester.* Dean BOYD.

107b. Projective Geometry. Continuation of 107a. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. Second semester.* Dean BOYD.

201a. Geometric Transformations. Homogeneous coordinates are first developed from the standpoint of anharmonic ratios. After this the projective transformations in the binary, ternary and quaternary fields are studied in order. Given in 1918-19; to be omitted in 1919-20. *Three hours a week. First semester.* Dean BOYD.

201b. Geometric Transformations. Continuation of 201a. Given in 1917-18; to be omitted in 1919-20. *Three hours a week. Second semester.* Dean BOYD.

202a. Algebraic Curves. This course will be based on the works of Salmon and Wieleitner and will require a reading knowledge of French and German. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. First semester.* Dean BOYD.

202b. Algebraic Curves. Continuation of 202a. Omitted in 1918-19; to be offered in 1919-20. *Three hours a week. Second semester.* Dean BOYD.

203. Thesis. Required of candidates for advanced degree. *Three hours a week. Second semester.* Dean BOYD, Associate Professor REES.

51a. Descriptive Astronomy. A general view of the subject is given by text-book and lectures. Class-room work is supplemented by the identification of the principal constellations and by the use of the

8-inch refracting telescope in the observatory. *Three hours a week. First semester.* Assistant Professor DOWNING.

51b. Descriptive Astronomy. Continuation of 51a. *Three hours a week. Second semester.* Assistant Professor DOWNING.

52a. Practical Astronomy. A second course in which will be considered such problems as the computation of latitude, longitude, eclipse and occultations, and the preparation of star lists. Omitted in 1918-19; to be given in 1919-20. *Three hours a week. First semester.* Assistant Professor DOWNING.

52b. Practical Astronomy. Continuation of 52a. Omitted in 1918-19; to be given in 1919-20. *Three hours a week. Second semester.* Assistant Professor DOWNING.

251a. Celestial Mechanics. A course dealing with central forces, potential and attraction of bodies, problem of two bodies. Mathematics 6 and 12 are prerequisites. Offered for 1919-20. *Three hours a week. First semester.* Assistant Professor DOWNING.

251b. Celestial Mechanics. Continuation of Course 3a. Problem of three bodies, perturbations, computation of orbits. Offered for 1919-20. *Three hours a week. Second semester.* Assistant Professor DOWNING.

MILITARY SCIENCE

Captain Royden, Major Byars, Sergeant Kenney, Sergeant Lunt, Sergeant Stone

Reserve Officers' Training Corps

The University of Kentucky has established and maintains an Infantry Unit of the Senior Division of the Reserve Officers' Training Corps in conformity with the provision of the National Defense Act of 1916. The purpose of the Reserve Officers' Training Corps as defined in this act is "To qualify by systematic and standard methods of training students at civil educational institutions for reserve officers," primarily the lower grade of officers in reserve.

Requirements

Freshman and Sophomore. Every male student over fourteen years of age whose physical condition indicates that he is fit to perform military duty under the U. S. Army regulations, is required to drill three times each week thruout the *freshman* and *sophomore* years. The successful completion of two years of military work is *requisite to graduation* in every course in the University.

No student will be excused from drill as heretofore for reasons of age, athletics or self-support. In cases, certain classes of men may be excused; but in no case will athletics be taken as a substitute for drill.

Junior and Senior. A cadet who desires to qualify for the "Reserve Officers' Corps" may continue his military training during the *junior* and *senior* years. He will first submit application to the President of the University and to the Commandant. If his application be accepted, and he agree in writing to take military training for the remainder of his course, his military duties will be as follows:

a. Drill five hours a week during the junior and senior years.
b. Pursue the regular military course of instruction.
c. Attend at least two summer training camps.
d. Conform to certain physical requirements.

Equipment and Expenses Furnished by the Government

According to the provisions as promulgated in General Orders 49, War Department, Sept. 20, 1916, the U. S. Government will assume the following expense:

a. Give one free uniform to each member of the Reserve Officers' Training Corps units.

b. Give an additional uniform to all members attending summer training camps.

c. Pay to all *junior* and *senior* students who *volunteer* for the last two years of their college course to take the military training, the sum of 40 cents a day as commutation for rations.

d. Furnish modern arms and equipment.

e. Furnish non-commissioned officers of the Army as instructors and as assistants to the officer of the Army stationed at the University.

Insignia

A distinctive insignia will be issued to the cadets and worn by them; later an insignia for excellence in training and target practice will be issued by the Government to such corps as may be entitled to same.

Rule for Appointment of Reserve Officers—National Defense Act, Sec. 49

Reserve officers may be appointed by the President of the United States, alone, from any graduate of the R. O. T. C. in this University, who shall have taken the two camps and the advanced training, who is twenty-one years of age, and who shall agree under oath, in writ-

ing, to serve the United States in the capacity of a reserve officer during the period of ten years, unless discharged by proper authority. No one undergoing a post graduate course at any institution shall be eligible for appointment as a reserve officer while undergoing such course, but this shall not affect his eligibility for appointment as a reserve officer upon completion of said course.

Graduate Course

Any reserve officer can apply for a post graduate course lasting for six months with any organization of the Regular Army with the temporary grade of second lieutenant and the pay of $100.00 a month and the full allowances of that grade.

Methods of Obtaining a Commission as Reserve Officer

Methods of obtaining a commission as a reserve officer for college men may be learned by inquiring at the office of the Commandant.

From above sections it can be seen that there is no obligation upon the student to accept government service after completion of the prescribed course in any institution of learning.

Course of Training for an Infantry Unit of the Senior Division

The following is the course fo study outlined in General Orders No. 49 for training of members of the Reserve Officers' Training Corps. It is presumed that each member of the Reserve Officers' Training Corps has taken during his academic course one year in either French, German or Spanish.

1a. **Military Art.** *a. Practical*—Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction, sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment. *b. Theoretical*—Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene. *Three hours a week. First semester.*

1b. **Military Art.** *a. Practical*—Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); bayonet combat; intrenchments (584-595, Infantry Drill Regulations); first-aid instruction; range and gallery practice. *b. Theo-*

retical—Lectures, general military policy as shown by military history of United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations, to include School of Company; camp sanitation for small commands. *Three hours a week. Second semester.*

2a. Military Art. *a. Practical*—The same as course 2a. Combat firing, if practicable, but collective firing should be attempted in indoor ranges by devices now in vogue at United States Disciplinary Barracks. *b. Theoretical*—United States Infantry Drill Regulations, to include School of Battalion, and Combat (350-622); Small-Arms Firing Regulations; lectures as in 2b; map reading; camp sanitation and camping expedients. *Three hours a week. First semester.*

2b. Military Art. *a. Practical*—The same as course 2a; signaling; semaphore and flag; first-aid. Work with sand table by constructing to scale intrenchments, field works, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice. *b. Theoretical*—Lectures, military history (recent); service of information and securtiy (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages and camping expedients); marches and camps (Field Service Regulations and Infantry Drill Regulations). *Three hours a week. Second semester.*

3a. Military Art. *a. Practical*—Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching. *b. Theoretical*—Minor tactics; field orders, studies in minor tactics, United States School of the Line); map maneuvers. Company administration, general principles (papers and returns). Military history. *Five hours a week. First semester.*

3b. Military Art. *a. Practical*—Same as Course 5a. Military sketching. *b. Theoretical*—Minor tactics (continued); map maneuvers. Elements of international law. Property accountability; method of obtaining supplies and equipment (Army Regulations). *Five hours a week. Second semester.*

4a. Military Art. *a. Practical*—Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching. *b. Theoretical*—Tactical problems, small forces, all arms combined; map maneuvers; court-martial proceedings (Manual for Courts-martial). International relations of America from discovery to present day; gradual growth of principles of international law embodied in

American diplomacy, legislation, and treaties. Lectures; psychology of war and kindred subjects; general principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed 5 lectures). *Five hours a week. First semester.*

4b. **Military Art.** *a. Practical*—Same as Course 7a. *b. Theoretical*—Tactical problems continued; map maneuvers, rifle in war, lectures on military history and policy. *Five hours a week. Second semester.*

MUSIC

Professor Lampert

This department seeks not only to supply means of self-expression, but also practical and technical assistance toward the development of men and women who wish to serve as supervisors of music, leaders of bands and orchestras, and as choir directors.

1a. **Sight Singing.** This course develops speed in reading notes and skill in their vocal production, and is very helpful for *all* forms of musical activities. *One hour a week. First semester.*

1b. **Sight Singing.** Continuation of Music 1. *One hour a week. Second semester.*

2a. **Musical Appreciation.** The object of this course is to provide material and methods for teaching history and appreciation of music in schools, and to enable all even tho unable to play an instrument to become acquainted with the art and really enjoy good music when they hear it. *One hour a week. First semester.*

2b. **Musical Appreciation.** Continuation of Music 3. *One hour a week. Second semester.*

3a. **Harmony.** The aim of this course is to give practice in chord combinations and writing of melodies. This work forms the basis for the study of musical theory in the public schools. *Two hours a week. First semester.*

3b. **Harmony.** Continuation of 5. Two hours a week. *Second semester.*

4a. **Public School Music.** This is a course for those who wish to fit themselves for the supervision of music in the public schools. *Two hours a week.*

4b. **Public School Music.** Continuation of 3a. *Two hours a week.*

5a. **General History of Music.** This course is designed to cover the historical evolution of music and to develop an appreciation of its wide significance as an educative factor. *Two hours a week. First semester.*

5b. General History of Music. Continuation of 9. *Two hours a hours a week. Second semester.*

6a. Band. The Band is open to all students possessing the necessary qualifications. The Band represents a very important musical activity at the University. *Three hours a week. One-half credit. First semester.*

6b. Band. Continuation of 5a. *Three hours a week. One-half credit. Second semester.*

7a. Orchestra. Membership is open to the entire student body, including graduate students provided they possess sufficient knowledge of any orchestral instrument. Concerts are given after programs have been prepared in a satisfactory manner. *Two hours a week. One-half credit. First semester.*

7b. Orchestra. Continuation of 6a. *Two hours a week. One-half credit. Second semester.*

8a. Glee Club. Selections for male, female, and mixed voices will be studied for public performance. *Drill two hours a week. One-half credit. First semester.*

8b. Glee Club. Continuation of 7a. *Drill two hours a week. One-half credit. Second semester.*

9a. Normal Course in Band and Orchestra. A course designed to train leaders for band and orchestra work. This involves the study of notation, harmony, orchestration, conducting and learning to play an instrument. *Two hours a week. First semester.*

9b. Normal Course in Band and Orchestra. Continuation of 8a. *Two hours a week. Second semester.*

PHILOSOPHY

Professor Glanville Terrell

1a. Elementary Philosophy. Open to freshmen. The purpose of this course is to serve as an introduction to Philosophy, to teach the student in broad outline the nature of the study and the problems involved. These problems will involve a study of human nature, the extent and force of human understanding, the nature of the ideas we employ, and the operations we perform in our reasonings. The relation of philosophy to morals and conduct, to evolution and the sciences in general will also receive attention. One of the aims of the course will be to lay the foundation of a more specialized study for those students who may develop a taste for the subject. *Three hours a week. First semester.* Professor TERRELL.

1b. Elementary Philosophy. Continuation of 1a. *Three hours a week. Second semester.* Professor TERRELL.

101a. History of Philosophy. Open to juniors and seniors, and sophomores who have had Philosophy 1a. This course will include the history and a discussion of the chief philosophic systems and theories from the Ionian School 600 B. C. to the present time. The first semester will be devoted to Greek and medieval philosophy, the second to modern philosophy. *Three hours a week. First semester.* Professor TERRELL.

101b. History of Philosophy. Continuation of 101a. *Three hours a week. Second semester.* Professor TERRELL.

102. Logic. Deductive and Inductive. Open to juniors and seniors, and sophomores who have had Philosophy 1a. In deductive logic the syllogism as a method of reasoning and its application to the detection of fallacies in argument will be chiefly studied. Inductive logic will be illustrated largely by its application to scientific investigation. *Three hours a week. First semester.* Professor TERRELL.

103. Ethics. Open to juniors and seniors, and sophomores who had Philosophy 1a. A study and discussion of the good life; what is the good life; right and wrong, origin of morals, origin and nature of conscience, standards of value, practical rules of conduct and good citizenship. *Three hours a week. Second semester.* Professor TERRELL.

104a. Advanced Philosophy. This course is for students who wish to specialize in Philosophy, and presupposes Course 1a or 101a. The first semester will be given to the study of Plato. *Three hours a week.* Professor TERRELL.

104b. Advanced Philosophy. Continuation of 104a. A study of Bergson's Creative Evolution. *Three hours a week. Second semester.* Professor TERRELL.

PHYSICAL EDUCATION

Professor Boles, Professor Stout, Assistant Professor Gill, Miss Innis

The work of the department will be conducted with the following aims in view: 1. To develop or improve organic vitality; 2. To acquire and maintain a correct posture; 3. To correct physical deformities wherever possible; 4. To establish co-ordination, grace of motion, reasonable muscular development and bodily skill; 5. To train the faculties of attention, judgment, precision, discrimination and courage; 6. To develop the "habit of exercise;" 7. To promulgate personal hygiene and domestic sanitation; 8. To provide incentive and proper control of systematic physical recreation to counteract the sedentary tenden-

cies of college life; 9. To cultivate high ideals, true sportsmanship and efficiency in management of athletics in the state; 10. To provide preliminary training for physical educators, directors of recreation systems and coaches of athletics.

Students in the College of Arts and Science are required to take Physical Education two hours per week during their first two years in the University. All students are required to take Physical Education two hours per week during their first year in the University. If at any time thereafter the Head of the Department of Physical Education and the Medical Examiner certify to special need for further training in individual cases, the work is to continue.

Students physically disabled may be excused from physical education upon the written recommendation of the University medical examiner, by the Dean of the College of Arts and Science.

Students who take part in any athletic sport will be excused from physical education during the season usually allotted to that sport. If a student be found delinquent in practice work, the said student shall be required to substitute work in the gymnasium.

Students who, for special reasons, are unable to take physical education, may be excused by the council.

Upon entrance, every student is subject to a clinical examination by the Medical Adviser. The findings of the adviser are furnished the Department of Physical Education and modifications in the form of exercises are made accordingly. No student is allowed to participate in any form of competitive games or difficult exercise, unless he be physically capable of such activity as determined by his examination. The members of the University teams must present to the director a written permit from the Medical Adviser before reporting for practice with the teams.

For Men

1a. Gymnasium Practice. Calisthenic drills, light and heavy apparatus work, tumbling and mass athletics. For all freshmen. *Two hours a week. First semester.* Professor BOLES and assistants.

1b. Gymnasium Practice. Continuation of 1a. *Two hours a week. Second semester.* Professor BOLES and assistants.

2a. Advanced Gymnastics. Heavy apparatus, rings and mats. Prerequisite, Course 1a, 1b or the consent of the instructor. *Two hours a week. First semester.* Professor BOLES.

2b. Advanced Gymnastics. Continuation of 2a. *Two hours a week. Second semester.* Professor BOLES.

3a. Hygiene and First Aid. Lectures and quizzes on the cause, prevention and hygienic treatment of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of students. Required of all men excused from 1a, 1b. *One hour a week. First semester.* Professor BOLES.

3b. Hygiene and First Aid. Continuation of 3a. *One hour a week. Second semester.* Professor BOLES.

4a. Principles of Coaching. Instruction in the organization, conduct and coaching theory and practice of competitive athletic games, football, baseball, basketball and track. Prerequisite, 1a, 1b. *Two hours a week. Two-thirds credit. First semester.* Assistant Professor GILL.

4b. Principles of Coaching. Continuation of 4a. *Two hours a week. Two-thirds credit. Second semester.* Assistant Professor GILL.

5a. Physical Education. This course is intended to prepare students for giving instruction in gymnastics in secondary schools. Physical training, theoretical and practical is emphasized. Prerequisites, Physical Education 1a, 1b. *Two hours a week. Two-thirds credit. First semester.* Professor BOLES.

5b. Physical Education. Continuation of 5a. *Two hours a week. Two-thirds credit. Second semester.* Professor BOLES.

For Women

The aims of physical education are educational and hygienic: first, to stimulate the functioning of all bodily organs, and to correct defects of the body external; second, to develop the mental faculties of attention, discrimination, judgment, reaction time and self-control; third, to develop character by the creation of high ideals.

Students are required to do two hours' work each week in the gymnasium. On every school day corrective or medical gymnastics and electric vibration treatments are given to special cases, depending upon the medical charts made of students upon entrance to the University. Physical education is compulsory for all young women during one year, and for Arts and Science students two years. Pupils must have an examination of heart and lungs by the University physician, and an anthropometric examination by the professor in charge before entering the work.

No courses looking toward the theoretical side of gymnastics are offered. Excellent work in anatomy and physiology is given by Dr. Pryor, but these courses are not given in relation to special exercises. To learn the medical theory that underlies physical training the

student must attend a school of gymnastics and take a two or three years' course of study.

1a. Gymnasium Practice. For all freshmen. *Two hours a week. First semester.* Professor STOUT.

1b. Gymnasium Practice. Continuation of 1a. *Two hours a week. Second semester.* Professor STOUT.

2a. Advanced Gymnasium Practice. The second year's work. *Two hours a week. First semester.* Professor STOUT.

2b. Advanced Gymnasium Practice. Continuation of 2a. *Two hours a week. Second semester.* Professor STOUT.

6a. Electric Vibration and Massage. *Two hours a week. First semester.* Professor STOUT.

6b. Electric Vibration and Massage. Continuation of Course 2a. *Two hours a week. Second semester.* Professor STOUT.

PHYSICS

Professor Pence, Professor Webb, Associate Professor Killebrew, Mr. States

1a. General Elementary Physics. First half. For students who have had no previous training in Physics. Course covers the elementary theory of mechanics and heat, particular attention being given to the solution of appropriate problems. Each student is required to perform and report on twenty-five laboratory exercises. *Lectures and recitations four hours; laboratory two hours a week.* Associate Professor KILLEBREW, Professor PENCE.

1b. General Elementary Physics. Second half. This is a continuation of Physics 1a. Course covers the elementary theory of electricity and magnetism, sound and light, with problems. Each student is required to perform and report on twenty-five additional laboratory exercises. *Lectures and recitations four hours; laboratory two hours a week.* Associate Professor KILLEBREW, Professor PENCE.

2a. General College Physics. First half. For sophomores in Science. Prerequisites: One year of high school Physics, Mathematics 2 and 3. Course covers the general theory of mechanics and heat including the solution of many problems. *Lectures and recitations three hours; laboratory four hours a week.* Professor PENCE, Mr. STATES.

2b. General College Physics. Second half. This is a continuation of Physics 2a. Course covers the general theory of electricity and magnetism, sound and light, including problems. *Lectures and recita-*

tions three hours; laboratory four hours a week. Professor PENCE, Mr. STATES.

3a. General College Physics. First half. For sophomore engineering students. Prerequisites same as Physics 2a. Course covers the general theory of mechanics and heat, special attention being given to mathematical deductions. Course designed to accompany Physics 5. *Lectures and recitations four hours a week.* Professor WEBB, Associate Professor KILLEBEW, Mr. STATES.

3b. General College Physics. Second half. This is a continuation of Physics 3a. Course covers the general theory of electricity and magnetism, sound and light, special attention being given to mathematical deductions. Course designed to accompany Physics 6. *Lectures and recitations four hours a week.* Professor WEBB, Associate Professor KILLEBREW, Mr. STATES.

4. Elementary Physical Measurements. For freshmen in Science and Engineering. Laboratory work accompanied by recitation periods. Departmental notes used as laboratory manual. *Laboratory four hours a week.* Professor PENCE.

5. Measurements in Mechanics. For sophomore engineering students. Prerequisites, Physics 4 and credit in or the simultaneous study of Physics 3a. *Laboratory four hours; lecture one hour a week. First semester.* Professor WEBB, Mr. STATES.

6. Measurements in Magnetism and Electricity. For sophomore Engineering students. Prerequisites, Physics 4 and credit in or the simultaneous study of Physics 3b. *Laboratory four hours; lecture one hour a week. Second semester.* Professor WEBB, Mr. STATES.

For Graduates and Advanced Students

101. Theory of Heat. For students whose major is physics; elective for others. Prerequisite, Physics 2a or 3a. To be omitted in 1919-20. *Lectures and recitations three hours; laboratory four hours a week. First semester.* Professor WEBB.

102. Electricity and Magnetism. For students whose major is Physics; elective for others. Prerequisites, Physics 2b or 3b. To be omitted in 1919-20. *Lectures and recitations three hours; laboratory four hours a week. Second semester.* Associate Professor KILLEBREW.

103. Theory of Light. For students whose major is Physics; elective for others. Prerequisites, Physics 2b or 3b. To be given in 1919-20. *Lectures and recitations three hours a week; laboratory four hours a week. Second semester.* Professor WEBB.

104. Theoretical Mechanics. For students whose major is Physics; elective for others. Prerequisites, Physics 2a or 3a, and Calculus. To be given in 1919-20. Lectures and recitations. *Three hours a week. First semester.* Associate Professor KILLEBREW.

106. X-Ray Phenomena. X-ray equipment and photography. Radio-active materials and the ionization of gases. Prerequisites, Physics 2a and 3a. *Recitation one hour a week; laboratory two hours a week. Second semester.* Professor PENCE.

110. Spectroscopy. For seniors in Industrial Chemistry, elective for others. Prerequisites, Physics 2b or equivalent. *Lecture and recitation two hours; laboratory four hours a week. Second semester.* Professor WEBB.

201. Physical Optics. Prerequisites, Physics 103 and calculus. To be given in 1919-20. Lectures and recitations. *Three hours a week. First semester.* Professor WEBB.

202. Measurements in Optics. Should accompany or follow Physics 201. To be given in 1919-20. *Laboratory four hours a week. Either semester.* Professor WEBB.

203. Kinetic Theory of Gases. Prerequisites, Physics 101, and Calculus. Omitted in 1919-20. Lecture and recitation. *Three hours a week. Either semester.* Professor WEBB.

204. Mechanics of Wave Motion. Prerequisites, Physics 104, and Calculus. Omitted in 1919-20. Lecture and recitation. *Three hours a week. Either semester.* Professor WEBB.

PSYCHOLOGY

Professor Tigert, Assistant Professor Cornell

1. Elementary General Psychology. A beginning course covering the fundamental facts and laws of normal human consciousness. Intended primarily for students who wish a one-semester course in the department and who are not interested in the purely scientific aspects of Psychology. (Note: Students who desire the full year introductory course and all those who plan to major in Psychology will register for Psychology 2.) *Two lectures and one recitation a week, with group experiments. Each semester.*

2a. Introductory General Psychology. A comprehensive introductory course including the elements of physiological, descriptive, and experimental Psychology. Intended for students who desire more than a one-semester course. Required of students majoring in Psychology and Education. Recommended for students in Journalism.

Not open to freshmen. *Lectures two hours a week; laboratory two hours a week. First semester.*

2b. Introductory General Psychology. Continuation of 2a. *Lectures two hours; laboratory two hours a week. Second semester.*

101a. Experimental Psychology. A general laboratory course. The student is made familiar with the operation of all standard apparatus and develops a technique in evaluating and interpreting data. In the latter half of the course the student will work out in detail some problem involving original planning and manipulation of apparatus. Prerequisites, Psychology 2a and 2b. *Lecture one hour; laboratory two hours a week. First semester.*

101b. Experimental Psychology. Continuation of 101a. *Lecture one hour; laboratory two hours a week. Second semester.*

102a. Genetic Psychology. A comparative study of the genesis and development of consciousness through the various animal groups, beginning with the lowest organisms. Prerequisites, Psychology 2a and 2b. *Two hours a week. First semester.*

102b. Genetic Psychology. Continuation of 102a, which is prerequisite. A study of the developing child mind from infancy through adolescence. *Two hours a week. Second semester.*

103. History of Psychology. A complete history of Psychological systems from Plato to the present. Lectures, readings in the sources, reports. Prerequisites, Psychology 1, or 2a and 2b. *Three hours a week. First semester.*

104. Social Psychology. A study of the social consciousness as displayed in various groups, etc. Treated both in a general way and from a genetic standpoint. Lectures, readings, reports. Prerequisite, one course in Psychology or Sociology. *Three hours a week. Second semester.*

105. Mental Tests. A laboratory course for training teachers in the fundamentals of mental diagnosis. The several standard tests will be studied and compared and the student made proficient in the manipulation of at least one scale. Prerequisites, Psychology 2a and 2b. *Lecture one hour; laboratory two hours a week. First semester.*

106. Abnormal Psychology. A course covering the phenomena of dreams, hypnotism, dual personality, etc. Prerequisites, Psychology 1 or 2a and 2b. *Two hours a week. Second semester.*

201a. Psychological Seminar. A discussion of the pertinent problems of applied Psychology. Prerequisites, Psychology 2a, 2b, 101a and 101b. *One hour a week. First semester.*

201b. Psychological Seminar. Continuation of 201a. *One hour a week. Second semester.*

202. The Psychological Clinic. A study of the diagnosis and treatment of mental defects in school children. Prerequisites, Courses 2a, 2b and 105. *Lecture one hour; laboratory two hours a week. First semester. Repeated second semester.*

ROMANCE LANGUAGES AND LITERATURES

Professor Zembrod, Miss Barrett

1a. Elementary French. *Three hours a week. First semester. Repeated second semester.* Miss BARRETT.

1b. Elementary French. Continuation of 1a. *Three hours a week. First semester. Repeated second semester.* Miss BARRETT.

2a. French Reading. Grammar, composition, translation. *Three hours a week. First semester.* Miss BARRETT.

2b. French Reading. Continuation of 2a. *Three hours a week. Second semester.* Miss BARRETT.

101a. French Novel and Drama. Advanced composition. *Three hours a week. First semester.* Professor ZEMBROD.

102b. French Novel and Drama. Continuation of 101a. *Three hours a week. Second semester.* Professor ZEMBROD.

201a. History of French Literature of the Seventeenth Century. Moliere, Corneille, Racine. *Three hours a week. First semester.* Professor ZEMBROD.

201b. History of French Literature of the Seventeenth Century. Continuation of 201a. *Three hours a week. Second semester.* Professor ZEMBROD.

201. Romanticist Novel and Drama. *Two hours a week. First semester.* Professor ZEMBROD.

202. History of French Literature of the Eighteenth Century. *Two hours a week. Second semester.* Professor ZEMBROD.

5a. Elementary Spanish. *Three hours a week. First semester. Repeated second semester.* Professor ZEMBROD.

5b. Elementary Spanish. Continuation of 3a. *Three hours a week. First semester. Repeated second semester.* Professor ZEMBROD.

103a. Advanced Spanish. Composition, Novel and Drama. *Three hours a week. First semester.* Professor ZEMBROD.

103b. Advanced Spanish. Continuation of 103a. *Three hours a week. Second semester.* Professor ZEMBROD.

4a. Elementary Italian. Prerequisites, French 1 and 2. *Three hours a week. First semester.* Professor ZEMBROD.

4b. Elementary Italian. Continuation of 4a. *Three hours a week. Second semester.* Professor ZEMBROD.

ZOOLOGY

Professor Funkhouser, Assistant Professor Vansell

Courses 1 and 3 are open to beginning students; course 1 is required of sophomores in agriculture; Courses 201a, 201b, 202a, 202b are open to graduate students only.

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 the invertebrates. *Lecture one hour; recitation one hour; laboratory four hours a week. First semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

1b. General Zoology. A continuation of Course 1a. The second semester is devoted primarily to the study of the vertebrates. *Lecture one hour; recitation one hour, laboratory four hours a week. Second semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

2a. Advanced Zoology. An intensive study of the anatomy, physiology and life-histories of representatives of each of the phyla. Prerequisite, Course 1. *Lecture one hour; recitations two hours; laboratory two hours a week. First semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

2b. Advanced Zoology. A continuation of Course 2a. *Lecture one hour; recitations two hours; laboratory two hours a week. Second semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

101. Histology. A course in the technique of the preparation of animal tissues for microscopic study. Special attention is given to methods of preparing, imbedding, sectioning and mounting. Prerequisite, Course 1 or 3. *Lecture one hour; recitation one hour; laboratory two hours a week. First semester.* Assistant Professor VANSELL.

102. Ornithology. A study of the life-histories, anatomy and physiology of birds with particular reference to the habits, songs, eggs, nests, migrations and economic importance of our native birds. *Lecture one hour; recitation one hour; laboratory two hours a week. Second semester.* Professor FUNKHOUSER.

103. Ostelogy. A study of the comparative osteology of vertebrates. Preparation of bones and mounting of skeletons. Given in alternate years. Offered in 1919-20; omitted in 1920-21. Prerequisite, Course 1. *Lecture one hour; recitation one hour; laboratory two hours a week. First semester.* Professor FUNKHOUSER.

104. Embryology. A study of the general facts and principles of embryology with intensive laboratory work on the eggs of the frog and bird. Prerequisite, Course 101. *Lecture one hour; recitation one*

hour; laboratory four hours a week. Second semester. Assistant Professor VANSELL.

201a. Herpetology. Systematic and taxonomic studies of the Reptilia. For graduate students only. *Lectures two hours; recitation one hour; laboratory two hours a week. First semester.* Professor FUNKHOUSER.

201b. Herpetology. A continuation of Course 201a. In the second semester a considerable amount of field work is required. *Lectures two hours; recitation one hour; laboratory two hours a week. Second semester.* Professor FUNKHOUSER.

3a. General Entomology. A beginning course in the study of insects. Gross anatomy, morphology and life-histories of representatives of the most important orders with special attention to insects of economic importance. *Lecture one hour; recitations two hours; laboratory two hours a week. First semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

3b. General Entomology. A continuation of Course 3a. *Second semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

4a. Advanced Entomology. An advanced course in the study of insects dealing chiefly with morphology and classification. Special attention is paid to economic, ecological and physiological problems. Designed particularly for students who expect to specialize in the subject. The first semester is devoted principally to morphology. Prerequisite, Course 3. *Lecture one hour; recitation two hours; laboratory two hours a week. First semester.* Professor FUNKHOUSER, Assistant Professor VANSELL.

4b. Advanced Entomology. A continuation of Course 4a. The second semester is devoted primarily to the classification of insects. Considerable field work is required and special attention is paid to systematic problems and to the use of tables and keys, together with the study of methods of collecting and mounting. *Lecture one hour; recitations two hours; laboratory two hours a week. Second semester.* Professor FUNKHOUSER. Assistant Professor VANSELL.

105. Medical Entomology. Designed primarily for students taking courses in medicine. A study of the insects causing disease with special attention given to mosquitoes, flies, fleas and lice. Prerequisite, Course 1 or 3. *Lecture one hour; recitation one hour; laboratory two hours a week. First semester.* Professor FUNKHOUSER.

106. Insect Ecology. A study of the relation of insects to their environments with special reference to the life-histories, habits, associations, relations to hosts, economic importance and control. Prerequi-

site, Course 3. *Lecture one hour; recitation one hour; laboratory two hours a week. Second semester.* Assistant Professor VANSELL.

202a. Systematic Entomology. Research work on special groups of insects requiring advanced study in the literature of the subject and designed for students who desire to specialize in entomology. For graduate students only. *Lecture one hour; recitations two hours; laboratory two hours a week. First semester.* Professor FUNKHOUSER.

202b. Systematic Entomology. A continuation of Course 202a. In the second semester special attention is paid to entomotaxy and to the bibliography of the group studied. *Lecture one hour; recitations two hours; laboratory two hours a week. Second semester.* Professor FUNKHOUSER.

COLLEGE OF AGRICULTURE

OFFICERS OF ADMINISTRATION AND INSTRUCTION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

THOMAS POE COOPER, B. S. IN AGR.
Dean of the College of Agriculture,
Director of the Experiment Station

ANDERSON, WALTER S., M. A.
Professor of Genetics, Assistant Animal Husbandman in the Experiment Station, Assistant in Animal Husbandry in the Extension Division

AVERITT, SAXE DABNEY, M. S.
Chemist, Department of Chemistry in the Experiment Station

BACON, PHILIP EDLOE
Inspector of Creameries in the Experiment Station

BARRETT, FRANK N., B. S. IN AGR.
Assistant in Boys' Club Work in the Extension Division

BLUMENTHAL, PHILIP LEE, PH. D.
Chemist, Department of Chemistry in the Experiment Station

BROWN, LINWOOD ARNOLD, PHARM. D., PH. C., F. A. A.
Special Drug Chemist, Public Service Laboratories in the Experiment Station

*BRUECKNER, ARTHUR LOUIS, B. S. IN AGR.
Assistant in Animal Pathology in the Experiment Station

BRYANT, THOMSON RIPLEY, B. S. IN AGR.
Assistant to the Dean, Assistant Diretor of Agricultural Extension Division

BUCKNER, GARRETT DAVIS, PH. D.
Chemist, Department of Chemistry in the Experiment Station

**CREGOR, N. MINTON, B. S. IN AGR.
Inspector, Food and Drug Department in the Experiment Station

---

*On leave of absence.
**Food and drug inspection work discontinued June 18, 1918.

COFFIN, MARGARET, A. B., B. S.
Assistant Professor of Home Economics

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

DIDLAKE, MARY LEGRANDE, M. S.
Assistant Entomologist and Botanist in the Experiment Station

DURHAM, MINNIE PARKER
District Agent Home Demonstration Work in the Extension Division

ELLIOTT, NORRIS RAYMOND, B. S. IN HORT.
Assistant Professor of Horticulture, Acting Head of the Department of Horticulture in the Experiment Station, Leader in Horticulture in the Extension Division

EWAN, AVORY EARLY, B. S. IN AGR.
Superintendent of Experiment Fields in the Experiment Station

FELTNER, JAMES M.
Assistant in Boys' Club Work in the Extension Division

GARMAN, HARRISON, D. SC.
Professor of Entomology, Head of the Department of Entomology and Botany in the Experiment Station

GOOD, EDWIN STANTON, M. S.
Chairman of Animal Industry Group, Professor of Animal Husbandry, Head of the Department of Animal Husbandry in the Experiment Station, Leader in Animal Husbandry in the Extension Division

GOTT, EDWIN JOSEPH, B. S. IN AGR.
Instructor in Bacteriology

HANKINS, ORVILLE G., B. S. IN AGR.
Assistant in Boys' Club Work in the Extension Division

HARMS, AMANDA HELEN, B. S.
Assistant Pathogenic Bacteriologist, Department of Animal Husbandry in the Experiment Station

HATHAWAY, CARRIE LEE
Seed Analyst in the Experiment Station

HAVENHILL, MARK, B. S. IN AGR.
Professor of Farm Mechanics

HEALY, DANIEL JOSEPH, M. D., C. M.
Professor of Bacteriology, Bacteriologist, Department of Chemistry in the Experiment Station

HOOPER, JOHN JULIAN, M. S. A.
Professor of Animal Husbandry, Head of the Department of Animal Husbandry in the Experiment Station, Leader in Poultry in Extension Division

HORLACHER, LEVI JACKSON, B. S. IN AGR.
Instructor in Animal Husbandry, Assistant in Animal Husbandry in the Experiment Station

HUGHES, MORGAN O.
Special Agent in the Extension Division

HUMPHREY, JOHN REGESTER
Professor of Marketing, Head of the Department of Markets in the Experiment Station, Specialist in Markets in the Extension Division

HUTSON, JOHN B., B. S. IN AGR.
Assistant in Farm Management in the Extension Division

ILER, WAYNE DICKERSON
Assistant Chemist, Department of Chemistry in the Experiment Station

*INGRAM, ELMER
Inspector, Feeds and Fertilizers in the Experiment Station

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

JONES, ROGER WALTER
Inspector, Feeds and Fertilizers in the Experiment Station

JONAS, MRS. MARGARET D.
District Agent Home Demonstration Work in the Extension Division

KARRAKER, PERRY ELMER, M. A.
Assistant Professor of Soils, Assistant Agronomist in the Experiment Station

KERCHER, OTIS, B. S. IN AGR.
State Leader, Boys' Club Work in the Extension Division

KINNEY, EDMUND J., B. S. IN AGR.
Associate Professor of Agronomy, Assistant Agronomist in the Experiment Station, Specialist in Agronomy in the Extension Division

---

*On leave of absence.

LaBach, James Oscar, M. S.
Director, Public Service Laboratories in the Experiment Station

Lamareaux, Madge, B. S.
Instructor in Home Economics

*Lee, Owen Scott, B. S.
Assistant Chemist, Department of Fertilizer Control in the Experiment Station

Logan, Lulie, A. B.
District Agent Home Demonstration Work in the Extension Division

McFarland, Frank Theodore, B. S. in Agr.
Assistant Professor of Botany

**McFarlin, John William, B. S.
Chief Food Inspector, Food and Drug Department in the Experiment Station

McHargue, James Spencer, M. S.
Chemist, Department of Chemistry in the Experiment Station

MacKinnon, Jean Gilbert, A. B., A. M.
Professor of Home Economics, Acting Head of the Department of Home Economics

Martin, James Holmes, B. S. in Agr.
Instructor in Poultry, Assistant in Poultry, Department of Animal Husbandry in the Experiment Station

†Mathews, Clarence Wentworth, B. S.
Professor of Horticulture. Head of the Department of Horticulture in the Experiment Station

Merriman, Francis E., B. S. in Agr.
District Agent, County Agent Work in the Extension Division

Milton, Roy Harlan, B. S. in Agr.
Superintendent of Experiment Station Farm

Morgan, Geoffrey
State Agent, County Agent Work in the Extension Division

Mutchler, Fred, Ph. D.
Director of Extension Division

Nelson, Bolling G.
District Agent, County Agent Work in the Extension Division

---

*On leave of absence.
**Food and drug inspection work discontinued June 18, 1918.
†On leave of absence in U. S. Government service.

NICHOLLS, WILLIAM DURRETT, M. S. A.
Professor of Farm Management, Head of the Department of Farm Management in the Experiment Station, Leader in Farm Management in the Extension Division

NISWONGER, HOLLY RAY, M. A.
Assistant in Horticulture in the Extension Division

NUTTER, JOHN WILLIAM
Superintendent of Dairy Farm, Department of Animal Husbandry in the Experiment Station

OLNEY, ALBERT JACKSON, B. S.
Assistant Professor of Horticulture, Assistant Horticulturist in the Experiment Station

PERRY, HOMER, B. S. IN AGR.
Seed Analyst in the Experiment Station

PERRY, MARGARET J.
Seed Analyst in the Experiment Station

PETER, ALFRED MEREDITH, D. SC., F. A. A.
Professor of Soil Technology, Head of the Department of Chemistry in the Experiment Station

PINNELL, WALTER REDMON, M. D.
Special Bacteriologist, Public Service Laboratories in the Experiment Station

PONTIUS, ROBERT LORING, V. S.
Professor of Animal Pathology, Veterinarian in the Experiment Station

*PORTER, CHILTON SCOTT, A. B., PH. G.
Drug Inspector, Food and Drug Department in the Experiment Station

PURNELL, LINDA, B. S.
Instructor in Home Economics

RATLIFF, DOROTHY
Specialist in Cheese Work in the Extension Division

*ROACH, GEORGE MALCOLM
Inspector, Food and Drug Department in the Experiment Station

ROBERTS, GEORGE, M. S.
Professor of Agronomy, Head of the Department of Agronomy in the Experiment Station, Specialist in Agronomy in the Extension Division

---

*Food and drug inspection work discontinued June 18, 1918.

RODES, WILLIAM, M. S.
Chemist, Department of Fertilizer Control in the Experiment Station

ROE, MABEL LEWIS, PH. D.
Assistant Plant Pathologist in the Experiment Station

SCOTT, CHARLES HODGE, A. B.
Instructor in Geology

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

SIMMONS, WILLIAM HERBERT, V. S.
Specialist in Veterinary Science in the Extension Division

SLADE, D. D.
Poultry Specialist in the Extension Division

SPEARS, HOWELL DAVIS, M. S
Chemist, Department of Feed Control in the Experiment Station

SPEED, JAMES
Editor

SUGG, JOHN A., JR.
Assistant in Boys' Club Work in the Extension Division

SUTTON, FREDERICK JAMES, M. S. IN AGR.
Assistant Professor in Horticulture, Assistant Horticulturist in the Experiment Station, Assistant in Horticulture in the Extension Division

*SWEENY, MARY, M. S., M. A.
Associate Professor of Home Economics

TERRELL, WILLIS GRANVILLE
Inspector, Feeds and Fertilizers in the Experiment Station

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

VANSELL, GEORGE HAYMAKER, A. B.
Assistant Professor of Entomology and Zoology

VAUGHN, ERLE CLEVELAND, A. B.
Assistant Entomologist and Botanist in the Experiment Station

WEAVER, LELAND E., B. S. IN AGR.
Assistant in Poultry in the Extension Division

WHITE, CLARA WARLAND
Instructor in Home Economics

---

*On leave of absence.

WILFORD, EDWARD JAMES, B. S. IN AGR.
Instructor in Animal Husbandry, in Charge of Meat Laboratory, Assistant in Animal Husbandry in the Experiment Station

WOLCOTT, MRS. HELEN B., M. S.
State Agent Home Demonstration Work in the Extension Division

WYATT, GEORGE T.
District Agent, County Agent Work in the Extension Division

**YAXIS, T. GEORGE, M. S. A.
Assistant in Animal Husbandry in the Experiment Station

Clercial Staff

ADAMS, HAZEL
Clerk in the Extension Division

CASWALL, ETHEL, V. T.
Clerk, Department of Chemistry in the Experiment Station

CASWALL, JESSIE FRAZER
Clerk, Department of Agronomy

CRAIN, LOTTIE
Clerk in the Extension Division

DAVIES, MARY ELLA
Clerk, Department of Animal Husbandry in the Experiment Station

DRAKE, MRS. ELLA FOLEY
Clerk, Department of Animal Husbandry in the Experiment Station

DUCKWALL, RUTH
Clerk, Department of Farm Management in the Experiment Station

ENGLERT, MARY
Clerk in the Extension Division

GALLOWAY, ELIZABETH
Clerk in the Extension Division

GRANDUCCI, LAURA CATHERINE
Clerk, Department of Animal Husbandry in the Experiment Station

GRAVES, CELESTINE
Clerk in the Extension Division

GINOCCHIO, OLEVA LOUISE
Secretary to the Dean and Director

**Resigned June 1, 1918.

HUSTON, MABEL
Clerk, Public Service Laboratories in the Experiment Station

JONES, MRS. ANNA BERRY
Secretary to the Director of Extension

KIDD, SUSAN COGAR
Secretary to the Director of Extension

LIPPS, THERRESSA
Clerk in the Extension Division

LISTON, LILLIE FRANCES
Secretary, Creamery License Section in the Experiment Station

LYMAN, MANILA
Clerk, Department of Animal Husbandry in the Experiment Station

MCCULLOUGH, ANNE
Clerk, Department of Administration in the Experiment Station

MEIER, KATHERINE
Clerk in the Extension Division

RYAN, MARGARET C.
Clerk, Boys' Club Work in the Extension Division

SNELL, MARY F.
Clerk in the Extension Division

SNODGRASS, GRACE
Librarian in the Experimeni Station

SOMMER, GERTRUDE
Clerk in the Extension Division

TERRY, LILA BEATRICE, A. B.
Clerk, Department of Entomoloy and Botany in the Experiment Station

UTTERBACK, FANNIE WALLACE
Clerk, Department of Feed Control in the Experiment Station

WALLIS, ANNA, A. B.
Clerk, Department of Fertilizer Control in the Experiment Station

WHITE, ELSIE
Clerk in the Extension Division

WILSON, HELEN
Clerk in the Extension Division

WYATT, MRS. G. T.
Clerk in the Extension Division

County Agricultural Agents

AGENT	OFFICIAL STATION	COUNTY
Adams, W. A.	Williamsburg	Whitley
Allen, Arch M.	Morganfield	Union
Amburgey, Maryland	Monticello	Wayne
Amburgey, Lawrence M.	Catlettsburg	Boyd
Baker, Guerney C.	Louisa	Lawrence
Bate, R. O.	Cynthiana	Harrison
Bradford, Laurence A.	Carrollton	Carroll
Browder, W. W.	Hartford	Ohio
Bowles, Kimber J.	West Liberty	Morgan
Carman, Armiel	Clinton	Hickman
Caudill, H. D.	Whitesburg	Letcher
Clough, Robert S.	Benton	Marshall
Cunningham, O. L.	Burkesville	Cumberland
Davis, James S.	Pineville	Bell
Frye, P. M.	Booneville	Owsley
Garvin, A. L. (Colored)	Harrodsburg	Mercer
Gentry, J. C.	Harrodsburg	Mercer
Gordon, Angus N.	Henderson	Henderson
Gordon, Morris M.	Fulton	Fulton
Graddy, Ivan C.	Greenville	Muhlenberg
*Harris, W. J.	Bardwell	Carlisle
Harrison, H. H.	Stanton	Powell
Harth, Joseph	Hardinsburg	Breckinridge
Hensley, B. S.	Paintsville	Johnson
Hill, Chas. L.	Calhoun	McLean
Horning, J. O.	Morgantown	Butler
Hunter, John A.	Scottsville	Allen
Johnson, Richard T.	Prestonsburg	Floyd
Jones, T. H.	Beattyville	Lee
Kuykendall, J. E. (Colored)	Bowling Green	Warren
Kilpatrick, E. J.	Paducah	McCracken
Kirk, George G.	Maysville	Mason
Laine, Henry A. (Colored)	College Hill	Madison
Lowry, S. J.	LaGrange	Oldham
McSwain, Horace E.	Vanceburg	Lewis
Mayhew, Earl	Harlan	Harlan
Miller, J. L.	Campbellsville	Taylor
Mitchell, B. H.	Mayfield	Graves

*Resigned.

AGENT	OFFICIAL STATION	COUNTY
Morgan, Samuel	Grayson	Carter
Morgan, L. F.	Jackson	Breathitt
Nance, Gordon B.	Smithland	Livingston
Owsley, W. W.	Springfield	Washington
Pullen, J. Stanley	Munfordville	Hart
Reynolds, W. R.	Tyner	Jackson
*Ricketts, J. P.	Owenton	Owen
Robbins, L. S.	Lexington	Fayette
Rudder, Roscoe R.	Williamsburg	Whitley
Sandlin, L. D.	Manchester	Clay
Spence, Robt. F.	Berea	Madison
Spickard, F. H.	Dixon	Webster
Sutton, W. D.	Burlington	Boone
Swanner, R. B.	London	Laurel
Trice, Walter G.	Bowling Green	Warren
Taylor, John T.	Louisville	Jefferson
	Care Board of Trade	
Taylor, Chas. L.	Bardstown	Nelson
Tye, William	Barbourville	Knox
Van Natta, L. S.	Lawrenceburg	Anderson
Varney, A. H.	Pikeville	Pike
Whitehouse, J. W.	Owensboro	Daviess
Whitlow, Rodney	Russellville	Logan
Wilson, W. C.	Catlettsburg	Boyd
Wilkey, C. R.	Cadiz	Trigg
Winton, Berlie	Hawesville	Hancock
Worthington, J. W.	Alexandria	Campbell
Wicklund, Carl A.	Independence	Kenton

*Resigned.

County Home Demonstration Agents

Ashbrook, Artie	Mayfield, Ky.
Beardsley, Sue C.	Harrodsburg, Ky.
Carter, Leona B.	West Liberty, Ky.
Coakley, Frances (Colored)	Paducah, Ky.
Crutcher, Mary C.	Winchester, Ky.
Evans, Octavia G.	Owensboro, Ky.
Fouse, Lizzie (Colored)	Lexington, Ky.
Goddard, Annie B.	Harrodsburg, Ky.
Goldnamer, Lillie C.	Elizabethtown, Ky.
Grubbs, Mrs. Jennie C.	Junction City, Ky.
Hall, Jacqueline	Cynthiana, Ky.
Harbison, Mary S.	Shelbyville, Ky.
Hatton, Mrs. George P.	Manchester, Ky.
Hill, Minnie L.	Russellville, Ky.
Hills, Helen	Paducah, Ky.
Kline, Mrs. W. H.	Smithland, Ky.
Letcher, Jane	Morganfield, Ky.
Lowery, Mrs. C. B.	Lexington, Ky.
Lyle, Ozema T.	Paducah, Ky.
Lynn, Fleety	Kuttawa, Ky.
McDowell, Mary	Shelbyville, Ky.
Meguire, Madue	Franklin, Ky.
Potter, Martha W.	Bowling Green, Ky.
Rawlings, Grace	Corbin, Ky.
Settle, Lucy Bell	LaCenter, Ky.
Sonnenday, Dora	Newport, Ky.
Spiller, Mattie L. (Colored)	Covington, Ky.
Threlkeld, Elizabeth	Lexington, Ky.
Truman, Lillian	Lexington, Ky.
Wadlington, Rheda	Ashland, Ky.
Weever, Susan G.	Henderson, Ky.
Wilson, Margaret	Fulton, Ky.
Brunhoff, Else	Louisville, Ky.
Deitmeier, Wilhelmine	Cincinnati, Ohio.

Introductory Statement

Organization

The College of Agriculture includes three divisions:

1. The College (Resident teaching)
2. The Experiment Station
3. Extension Division

The College

(For entrance requirements see pages 61 and 62; for advanced standing and for admission as special students see page 81; for description of buildings and equipment of the College of Agriculture see "History and Equipment," page 41.)

Requirements for Graduation

To receive the degree of Bachelor of Science in Agriculture, a student must offer 140 2-3 credits inclusive of 4 credits in military science and one year's work (2 2-3 credits) in physical education. Sixty-five credits exclusive of military science and physical training are for prescribed subjects, and 69 are elective. Forty-four of the elective credits must be for subjects in the College of Agriculture.

To receive the degree of Bachelor of Science in Home Economics, a student must offer 130 credit hours and 2 2-3 credits in physical education.

A "credit hour" is defined as one hour of lecture or recitation a week for one semester. Two laboratory hours constitute one credit hour. Military science and physical training are classed as laboratory work, but three hours of this work are required for one credit hour. Persons excused from military science or physical training on account of physical disability, or any other cause, must offer an equivalent number of credits in other subjects.

The amount of work a student will be permitted to carry during the first three semesters is indicated by prescribed work in the outline of courses. For the remainder of the time a maximum of 19 credit hours will be allowed. However, if a student has maintained a standing of A or B during a semester, he may, upon permission of the Committee on Extra Studies, carry additional hours the following semester.

No student will be considered eligible for senior classification who does not present 96 credits exclusive of military science and physical training at the beginning of his senior year.

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.

No student will be allowed to carry fewer than 12 hours of work.

The maximum and minimum hours for special students are the same as for regular students.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN AGRICULTURE

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Animal Husb. 6a	205	Study of Breeds and Stock Judging	2	2	3.
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.
English 1a	150	English Composition	3		3.
Mathematics 3	166	Plane Trigonometry	3		3.
					14.

Second Semester

Animal Husb. 6b	205	Study of Breeds	2	2	3.
Chemistry 1b	134	Chemistry of the Metals	3	4	5.
English 1b	150	English Composition	3		3.
Geology 2b	156	Elements of Geology	3		3.
					14.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Botany 1a	130	General Morphology	2	4	4.
Chemistry 11	135	Agricultural Analysis	1	8	5.
Horticulture 1	210	General Horticulture	3	2	4.
Zoology 1a	183	General Zoology	3	2	4.
					17.

Second Semester

Botany 1b	131	General Morphology	2	4	4.
Agronomy 1	200	Principles of Soil Physics and Soil Fertility	3	4	5.
Zoology 1b	183	General Zoology	3	2	4.
Electives		Electives			4.
					17.

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Agicultural Economics 1	213	Agricultural Economics	3		3.
Electives		Electives			15.
					18.

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Bacteriology 1	130	General Bacteriology	2	4	4.
Electives		Electives			14.
					18.

SENIOR YEAR

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
First Semester		Electives			18.
Second Semester		Electives			18.

Departments of Instruction

AGRONOMY

Professor Roberts (Soils), Associate Professor Kinney (Field Crops), Assistant Professor Karraker (Soils), Mr. Milton (Tobacco).

The courses in the Department of Agronomy are designed to acquaint the student with the fundamental principles of soil physics, soil fertility, and the production of field crops. The work offered trains the student for farming, for the teaching of the subjects of the courses, and serves as a foundation for research training.

In addition to the equipment already described, students have access to the work of the Experiment Station. Some seventy acres on the Experiment Station farm are used in the study of agronomic problems. There are eight experiment fields on various soil types of the state devoted primarily to the study of soil fertility and crop rotations.

1. Principles of Soil Physics and Soil Fertility. Soils, their origin, formation, classification and physical properties in relation to soil water, soil air, soil temperature and tillage operations; crop requirements for plant food; sources of plant food; plant food in the soil and losses of plant food; farm manures, fertilizers, lime materials and their use; crop rotations and farming systems in relation to the productiveness of soils. Prerequisites, Chemistry 1 and 2. Required of all students. *Lectures three hours a week; laboratory four hours a week. Second semester.* Assistant Professor KARRAKER.

2. Soil Management. A course giving a more detailed and extensive application of the principles taught in Agronomy 1 to the practical management of soils. The course includes a study of methods of maintaining good soil structure, tillage operations, the effects of drainage, maintenance of organic matter, the use of commercial plant foods and lime, crop rotations, production, care and use of farm manures, green manures, etc. Special attention will be given to the requirements of the various soil areas of Kentucky. Experiment fields are maintained on these areas the results of which will be studied and applied. Prerequisite, Agronomy 1. *Lectures two hours a week. First semester.* Professor ROBERTS.

3. Chemical Analyses of Soils. Fertilizers and crop materials in which the student may be interested. To be taken, if elected, in conjunction with Agronomy 2. The student is expected to furnish his own materials for analysis. Students electing this course may expect to be in the laboratory to some extent outside of regular hours to take care of the work. *Laboratory two hours a week. First semester.*

8. Cereals. The detailed study of the classification, botanical relations, distribution, composition, culture and improvement of the prin-

cipal grain crops of the country. Laboratory work is designed to supplement lectures and recitations. Prerequisites, Botany 1 and 1a, Agronomy 1. *Lectures and recitations three hours a week; laboratory two hours a week. First semester.* Associate Professor KINNEY.

10. Forage Crops. A study of grasses, clovers and other forage crops, their adaptations, management and improvement. Prerequisites, Botany 1 and 1a. *Lectures and recitations three hours a week. Second semester.* Associate Professor KINNEY.

14. Grain Judging and Market Grain Grading. Seed testing is also included in this course. Prerequisite, Agronomy 8. *Laboratory two to four hours a week. First semester.* Associate Professor KINNEY.

22. Agricultural Bacteriology. For seniors in Agriculture. In this course the student will study bacteria in relation to plant and animal diseases. The student will further study bacteria in relation to soil; to the decay of organic matter; to ammonification and nitrogen fixation; cellulose decomposition and sulfofication in soils; to dairy products and food preservation. Opportunity will be afforded for special work in soil bacteriology and in the bacteriology of diseases of plants and animals. Prerequisite, Agronomy 1. *Lectures one hour a week; laboratory four hours a week. First semester.* Professor HEALY.

23. Plant Pathology. A fundamental course treating of the nature, cause and control of plant diseases, illustrated by studies of the commoner diseases of cultivated crops. The course involves the simple technique of preparation of culture media and the development of pure culture of pathogenic fungi together with the life histories of the more common diseases producing organisms. Prerequisite, Botany 1a and 1b. *Lectures two hours a week; laboratory four hours a week. First semester.* Assistant Professor ROE.

101. Methods and Results of Field Experimentation. The essentials of successful field experimentation, the planning and laying out of model experiments, and a study of the results obtained by experiment station workers and other investigators. Special attention is given to the interpretation of field results. Designed for students who expect to teach or engage in experimental work. Recommended for teachers of vocational agriculture in high schools. Prerequisite, Agronomy 2. *Lectures two hours a week. First semester.* Professor ROBERTS.

102. Advanced Soil Physics. Advanced study of the physical nature and properties of soils and methods of determination; mechanical analysis, hygroscopic coefficient, moisture equivalent, soil colloids, osmosis in soils, the wilting point of plants, factors affecting moisture distribution in soils, etc. Prerequisites, Agronomy 1 and 2. *Lectures and laboratory four to six hours a week. First semester.* Assistant Professor KARRAKER.

103. Advanced Soil Fertility. Advanced study of the chemical nature and processes of soils in relation to plant growth, and methods of chemical soil investigation; nature and methods of determination of soil acidity; effects of decomposition products of organic matter and soluble mineral compounds on plant growth; determination of organic and inorganic carbon; water and sand cultures, pot experiments, etc. *Lectures and laboratory four to six hours a week. Second semester.* Assistant Professor KARRAKER.

104. Soil Survey Work and the Soils of the U. S. Methods of mapping soils, soil classification with especial reference to the work of the Department of Soils of the U. S. Department of Agriculture, and a general survey of the soils of the United States from an agricultural standpoint. Prerequisites, Agronomy 1 and 2. *Lecture one hour a week; one or two field excursions. First semester.* Assistant Professor KARRAKER.

105b. Special Crops. The production of tobacco, cotton, hemp, broom corn and other special crops. Since tobacco is a crop of such great importance in Kentucky, the first semester is devoted entirely to its study. The history of its cultivation in the United States, development of markets, development of types, methods of curing, and the more practical phases of production receive consideration. Elective for juniors and seniors. *Lectures and recitations two hours a week. Thruout the year.* Associate Professor KINNEY, Mr. MILTON.

106. Field Crop Improvement. Application of the principles of plant breeding to the improvement of field crops. Study of work of experiment stations and experimenters. Prerequisites, Agronomy 8 and 10 and Animal Husbandry 5. *One hour a week. Second semester.* Associate Professor KINNEY.

107a. Agronomic Seminars. A study of the current literature on soils and crops. Open to seniors and graduate students majoring in Agronomy. *One hour a week thruout the year.* The Agronomy Staff.

201. Special Problems in Soils. Open to graduate students. *Thruout the year.*

FARM ENGINEERING

Professor Havenhill

(The work in Farm Engineering is placed in the Department of Agronomy for administrative purposes.)

1. Farm Machinery. Various types of tillage, seeding, harvesting and storage machinery are studied and compared in detail. Laboratory practice consists of examination of mechanical construction and operation of these machines indoors and in the field. *Lectures two hours a week; laboratory two hours a week. First semester.*

2. **Farm Construction.** A study of building materials, types of farm buildings, lettering and drawing, enabling the student to interpret blue prints and make working drawings. *Lectures two hours a week; laboratory two hours a week. First semester.*

3. **Rural Sanitary Equipment.** A study of water supply, sewage disposal, lighting and heating for the farm home. *Lectures two hours a week. First semester.*

4. **Farm Motors.** The horse as a farm motor; his cost, upkeep and efficiency are first considered. Internal combustion engines, both stationary and tractors are studied. Laboratory work consists of the actual operation of these engines and tractors. *Lectures two hours a week; laboratory two hours a week. Second semester.*

5. **Land Measurement and Drainage.** The measurement of land and location of buildings, etc., without the use of high priced instruments or knowledge of higher mathematics. Ditch profiles and location maps, staking out of drains and study of tile, with practice in use of the level. *Laboratory two hours a week. Second semester.*

ANIMAL INDUSTRY

Professor Good, Professor Hooper, Professor Pontius, Professor Anderson, Mr. Martin, Mr. Horlacher, Mr. Wilford.

The courses in Animal Industry deal with the fundamental principles underlying the breeding, feeding and management of domestic animals. The anatomy, physiology and diseases of animals are given special attention. The instruction is designed to prepare students to become live stock farmers, teachers, or investigators in Animal Husbandry. The lectures of the various courses are supplemented with over 500 lantern slides, with charts, diagrams, models, photographs, samples of feeds and samples of various classes and grades of wool found on the market. In addition to the regular laboratory equipment, this department keeps complete sets of herd books of the various breeds of domestic animals for reference work required of the student.

On the University farm are maintained pure bred herds of Hereford, Shorthorn, Jersey, Holstein and Guernsey cattle; Berkshire, Duroc-Jersey and Poland China hogs; and flocks of Southdown, Hampshire and Cheviot sheep, together with representatives of other breeds of hogs and sheep. In addition to the purebred herds, steers used for feeding experiments as well as specimens representing the classes and grades of beef cattle, sheep and swine, are available for student instruction. The University also owns some good saddle horses and mules. On the poultry farm of ten acres are maintained representative flocks of the various breeds. Located within a narrow radius around

Lexington are herds and flocks that have a national reputation because of their many prize-winning animals, which, together with the animals on the University farm, give the student an excellent opportunity for study and observation.

The feed yards, barns and poultry houses are well arranged for experimental and instructional purposes. To facilitate the work in the judging of animals, a live stock pavilion 68 x 112 ft. is in the process of construction. For the course in farm butchering and the cutting and curing of meats, a well-equipped slaughterhouse and meat laboratory, including a cold storage equipment, has just been completed.

Advanced students are frequently employed to test dairy herds for the advanced registry maintained by the different dairy cattle breeders' associations.

The State Commissioner of Agriculture has provided a students' stock judging contest at the State Fair and has liberally endowed it. The American Saddle Horse Breeders' Association offers at the State Fair each year a handsome silver trophy for the students' saddle horse judging contest.

1. **Market Classes and Grades of Beef Cattle, Hogs and Sheep.** This course includes a study of the various market classes and grades of meat producing animals, together with the value of each class and grade, according to current market quotations. *Lectures two hours a week; laboratory three hours a week. First semester.* Mr. HORLACHER.

2. **Farm Poultry Production.** This course treats of the production of poultry on the general farm. It includes the following subjects: breeds and varieties, feeding, housing, breeding, culling, incubation, brooding, and marketing of poultry products. *Lectures two hours a week; laboratory three hours a week. First semester.* Mr. MARTIN.

3. **Advanced Poultry Production.** This is a continuation of Course 2, taking up the more advanced problems involved in breeding and selection, incubation, brooding, marketing, and diseases. The laboratory work consists of actual operation of incubators and brooders, grading and candling of eggs, and the treatment of diseased birds. Prerequisite, Animal Husbandry 2. *Lectures two hours a week; laboratory four hours a week. Second semester.* Mr. MARTIN.

4. **Live Stock Management.** Practical work in the feeding, care and management of all classes of live stock. The fitting of animals for show or sale, preparation of sale catalogs, the registering of purebred animals, and other exercises connected with the growing and handling of purebred and grade stock. *Laboratory two hours a week. Second semester.* Mr. HORLACHER, Mr. WILFORD, Mr. NUTTER.

5. **Farm Dairying.** During this course the students are made familiar with the Babcock butter fat test. They are required to take

samples of milk from the different cows in the Experiment Station herd and to determine the amount of butter fat contained in the milk and the amount of these products that the cows will produce each year. Instruction is given in the use of the lactometer and in the determination of acidity of milk. Instruction is also given in cooling and pasteurizing, cream ripening, the use of starters and judging of milk and butter. Students also receive instruction in churning butter and separating cream, in operating steam boilers and in equipping dairy farms. The department has a well equipped dairy laboratory in the basement of the Agricultural Building where practical instruction is given. *Lectures three hours a week; laboratory four hours a week. Second semester.* Professor HOOPER and assistant.

6a, 6b. Study of Breeds and Stock Judging. In this course the characteristics of each breed of live stock are considered at length, and each breed is discussed with reference to its origin, history and development, introduction into America, and adaptability to Kentucky conditions. Trips are taken each Saturday to stock farms in the vicinity of Lexington, where representative animals are studied and judged. Course 6a, Horses, Jacks and Dairy Cattle. *First semester.* Professor HOOPER. Course 6b, Beef Cattle, Sheep and Swine. *Second semester.* Mr. HORLACHER. *Lectures in both courses two hours a week; laboratory two hours a week.*

7. Live Stock Feeding. A comprehensive study is made of the principles underlying animal nutrition. The various feedstuffs offered in the local and general markets of the country are considered and the students are given training in compounding rations for different kinds of animals. Various observations are made in this subject on the farms visited by the students, and the varied experiments in progress on the Experiment Station farm also afford facilities for illustrative purposes. Text: Henry and Morrison's *Feeds and Feeding. Lectures three hours a week; laboratory two hours a week by appointment. Second semester.* Professor HOOPER, Mr. HORLACHER.

8. Dairy Manufactures. In this course the student is given instruction and practice in making creamery butter and the operation of a creamery, and in the manufacture of cheese of various kinds. *Lectures three hours a week; laboratory four hours a week. Second semester.* Professor HOOPER and assistant.

9. Genetics. The fundamental principles of heredity and variation are given in this course. Some questions discussed are: reduction, fertilization, variation, mutation, selection, pure line and hybrids. *Lectures three hours a week; laboratory two hours a week. First semester.* Professor ANDERSON.

10. Veterinary Science—Anatomy and Physiology of Farm Animals. The structure and functions of the animal economy in health are considered. In presenting the subject of anatomy, a study is made of the normal organs and their relation to the conformation of the horse; the adaptability of the various organs and systems of the animal body in perfect function; the physics and mechanics of locomotion, the recognition of unsoundness and specific diseases from clinical symptoms manifest; a discussion of the unsoundness of animals, including hereditary tendencies involved, and the common diseases affecting the various organs and systems of animals. Required of sophomores. *Lectures three hours a week. First semester.* Professor PONTIUS.

11. Veterinary Science. Contagious Diseases of Farm Animals. A study of the causes, symptoms, and methods of prevention of the common contagious diseases of farm animals. Special attention is given to such diseases as hog cholera, tuberculosis, contagious abortion, forage poisoning, parasitic diseases, sheep scab, ring worm, white diarrhea of chicks, foot-and-mouth disease, blackhead in turkeys, vesicular stomatitis, strangles and influenza in horses, blackleg in cattle. Practical methods of segregation of animals, disinfectants and disinfection, methods of dipping animals and dips, water supply, ventilation, importance of sanitary regulations in the control of infectious and parasitic diseases, review of state regulations affecting the shipment of animals, city ordinances involving regulations pertaining to meat and milk supply. A discussion of anti-serums, vaccines, bacterins, and autoxins, as well as other biological products as related to the prevention, cure and diagnosis of animal diseases. *Lectures three hours a week. Second semester.* Professor PONTIUS.

101. Advanced Stock Judging. The purpose of this course is to prepare students to represent the University in the national stock judging contests. Two teams of students are selected each fall: one for the judging of horses, beef cattle, sheep and swine, and another for the judging of dairy cattle. Students are offered the option of selecting either of these two lines of work. For juniors and seniors. *Credit is given according to the amount of work done. First semester.* Professor GOOD, Professor HOOPER, Mr. HORLACHER.

102. Farm Butchering and Curing of Meats. This course includes the butchering of beef cattle, sheep, hogs and the dressing of poultry; a study of the carcasses of these animals and the cutting and curing of meat. *Lectures two hours a week; laboratory four hours a week. First semester.* Mr. WILFORD.

103. Beef, Pork, and Mutton Production. Students pursuing this course will be taught the best method of feeding steers, hogs and

sheep. Bulletins relating to feeding experiments that have been carried on at the various experiment stations as well as the results of concluded experiments and experiments in progress at this Experiment Station will be studied in connection with this course. Some attention will also be given to the marketing of these animals, and to this end trips will be taken to butcher shops and to packing plants and stock yards. Text: Mumford's *Beef Production.* No text book will be used in connection with pork and mutton production. Prerequisite, Animal Husbandry 8. *Lectures three hours a week; laboratory two hours a week. Second semester.* Professor GOOD.

104. Animal Breeding. A course in the principles of breeding as applied to live stock. It includes a study of the practical aspects of animal breeding, line breeding, inbreeding, cross breeding and improvement through selection. An analysis of some of the breeds will be made and the methods of successful breeders will be studied. Prerequisite, Animal Husbandry 10. *Lectures three hours a week; laboratory two hours a week. Second semester.* Professor ANDERSON.

For Graduates

Students entering upon graduate work in Animal Husbandry must have had training in the fundamental principles of the subject either in connection with or in addition to a curriculum in agriculture equivalent to that offered in this University.

201. Economic Factors Involved in Meat Production. Professor GOOD.

202. Meats. Investigations relative to the percentages of dressed weights of animals and other problems related to meats. Mr. WILFORD.

203. Research in Genetics. Subject to be assigned. Professor ANDERSON.

204. Investigations in Feeding of Dairy Animals. Professor HOOPER.

205. Investigations in Breeding and Management of Light Horses. Professor HOOPER.

AGRICULTURAL ENTOMOLOGY

Professor Garman, Assistant Professor Jewett.

1. Beekeeping. This course will be based on a study of the structure of the honey bee, and its life-history, to be followed by studies of its food plants, enemies, diseases and their treatment, together with practis in handling bees, an opportunity being offered by colonies kept on the Experiment Farm. Features of the subject to which special attention will be given are the following: The structure of the

honey bee; its life-history; bee varieties; food plants; enemies; diseases and their treatment; handling swarms, clipping queens, etc.; wintering; transferring from box hives and bee gums to movable-frame hives; keeping bees for comb honey; keeping bees for extracted honey; requeening. *Lectures one hour a week; laboratory two hours a week. Second semester.* Assistant Professor JEWETT.

2. **Injurious Insects.** This includes a study of a few typical insects and their transformations followed by an examination of injurious species of importance, such as are to be encountered on the farm, in the orchard and the garden. Special attention will be given to species most troublesome in Kentucky. The following outline of the course will give a more definite idea of its character: The general structure of an insect; its manner of taking food; transformations; the nature and extent of insect injuries; general practis calculated to reduce insect injuries; direct treatment of crops for insect injuries; inspection of nurseries and orchards; insects injuring field crops; insects of truck crops; insects of fruits; insects of stored seeds; insects of forest trees; insects of ornamentals and shade trees; insects attacking stock. *Lectures one hour a week; laboratory two hours a week. Second semester.* Professor GARMAN.

FARM MANAGEMENT

Professor Nicholls, Mr. Hutson

Farm management teaches the student how to apply to personal farming the principles and sciences of agriculture that he has learned during his college course, and enables him to see in their proper proportions the factors upon which successful farming depends. The subject deals with the organization and management of a farm enterprise for the purpose of securing the greatest continuous profit.

The instruction in Farm Management is based on the belief that the best place to learn the business side of farming is on successful commercial farms, the student going over with the proprietors the methods of organization and management which have been responsible for the farm success. Frequent trips are made to successful farms for the purpose of studying their organization in detail. This brings out the personal element so essential in good farming and serves to reinforce and vitalize the truths of scientific agriculture as learned in the various lecture rooms and laboratories.

The class room instruction is largely based on facts of farm organization as brought out by farm management investigations carried on by the Kentucky Agricultural Experiment Station, in which detailed survey records of nearly six hundred farms in various sec-

tions of Kentucky have been secured. These furnish excellent illustrative and reference material for lecture and laboratory work. Liberal use is also made of farm survey data obtained by the U. S. Department of Agriculture and by the various state experiment stations.

1. **General Farm Management.** Course consists of lectures, recitations and collateral reading of bulletins on various phases of farm organization. Students are made familiar with the principles involved in a choice of a proper type of farming; the comparative merits of intensive and extensive farming; the relation of live stock to farm management; the best size of farm; the relation of capital to farm profits; farm rental systems; the management of men and horse labor and machinery for greatest profits; the layout of fields and farm buildings; farm accounts including the annual inventory; the choice of a region for farming and important considerations in buying a farm; and other fundamental factors of farm organization. Several field trips will be taken during the course. *Lectures three hours a week. Second semester.* Professor NICHOLLS, Mr. HUTSON.

2. **Advanced Farm Management.** The work in this course consists in the application by students of the general principles learned in Course 1 to particular farms; the working out of careful plans and specifications for profitable farming systems, maintaining the proper balance between crops and stock and for capital, labor and equipment. Students are taught how to take farm survey records and calculate labor incomes, and efficiency factors. They are also required to make out a detailed record of a year's business on their home farms, and to replan the home farm for greater efficiency. Laboratory work consists of visits to successful farms and making detailed analyses of their organization. Prerequisite, Farm Management 1. *Lectures two hours a week; laboratory one hour a week. First semester.* Professor NICHOLLS, Mr. HUTSON.

101. **Types of Farming.** This course is devoted to a study of the systems of farming employed in the most important agricultural regions of the United States, with particular attention to types of farming in representative regions of Kentucky. Prerequisite, Farm Management 1. *Lectures two hours a week. Second semester.* Professor NICHOLLS.

202. **Seminar.** Selected literature and special field studies of farm management problems, these to be used as the basis for original detailed plans for improving farming systems in particular cases. An intensive study of Kentucky farm survey records will be made in this course. *Two hours a week. Second semester.* Professor NICHOLLS.

HORTICULTURE

**Professor Mathews, Professor Elliott, Assistant Professor Olney.*

1. General Horticulture. A course dealing with the underlying principles of Horticultural practice. It treats of the principles of plant propagation, care and management of small plantations of the various fruits, reclamation of old orchards and methods of controlling the common insects and diseases of the orchard. *Lectures three hours a week; laboratory two hours a week. First semester.* Professor ELLIOTT.

2a. Pomology. A detailed study of general orchard operations with special reference to peaches, plums, cherries and quinces. Consideration is given to harvesting, storage, transportation and marketing. Practical exercises are given in preparing orchard maps, study of buds, pruning, orchard planting, spraying in season and visits to storage and refrigeration plants. *Lectures three hours a week; laboratory two hours a week. Second semester.* Professor ELLIOTT.

2b. Pomology. This course is a continuation of Pomology 2a. It treats of apples, pears and grapes in detail. A very thoro study is made of spray materials and how they should be mixed and applied. Laboratory work consists of practical exercises in harvesting apples and grapes, grading and packing for shipment. Pruning, mixing and applying sprays, etc. The student becomes familiar with the various spray apparatus and how to use and care for them. *Lectures three hours a week; laboratory two hours a week. First semester.* Professor ELLIOTT.

3. Small Fruits. A practical study of the culture of small fruits. It includes raspberries, blackberries, dewberries, strawberries, currants, gooseberries and a few miscellaneous fruits. The student becomes familiar with these fruits, their propagation, cultural requirements, care, uses, and importance. *Lectures two hours a week; laboratory two hours a week. Second semester.* Assistant Professor OLNEY.

4. Systematic Pomology. A study of the origin, history and varieties of the vineyard and orchard fruits. Practice is given in describing and identifying varieties, in fruit judging and the preparation of fruit exhibits. Members of the teams sent to the annual intercollegiate fruit judging contest are selected from this class. *Lectures two hours a week; laboratory four hours a week. Second semester.* Professor ELLIOTT.

5. Nursery Management. A study of the principal methods of propagation, care and management of nursery stock. Laboratory exercises consist of practical work in propagation, transplanting, fumi-

---

*On leave of absence in government service.

gation, packing for shipment, etc. Prerequisite, Horticulture 3. *Lectures two hours a week; laboratory two hours a week. Second semester.* Assistant Professor OLNEY.

6. **Greenhouse Construction and Management.** A course designed to familiarize the student with the different types of greenhouses and the construction of each as adapted to various uses. The different systems of heating and piping are studied and compared. Some time is given to designing and drawing of greenhouse plans. *Lectures one hour a week; laboratory two hours a week. First semester.* Assistant Professor OLNEY.

7. **Vegetable Gardening.** A study of the principles of vegetable gardening for home and market. The making of hotbeds and cold frames, care of seedlings, varieties of vegetables, companion and succession crops, rotations, cultural methods, soils, fertilizers, harvesting, storing and marketing, are fully considered. *Lectures three hours a week; laboratory two hours a week. Second semester.* Professor ELLIOTT.

8. **Vegetable Forcing.** A detailed study of the vegetable forcing crops, including the propagation, care and management of these crops in hotbeds, cold frames and greenhouses. Special attention is given to the forcing of lettuce, radishes, tomatoes and cucumbers. Laboratory work consists of practical exercises in the greenhouse. *Lectures two hours a week; laboratory two hours a week. First semester.* Assistant Professor OLNEY.

9. **Market Gardening.** Business methods followed by professional truckers, companion and succession cropping. Relation of character of soil, labor, supply, market facilities, etc., to success of the work. Prerequisites, Horticulture 7, 8, and 9. *Lectures two hours a week; laboratory four hours a week. Second semester.* Assistant Professor OLNEY.

10. **Garden Flowers.** Practical methods of growing the more common flowers and ornamental plants; annuals, biennials, hardy perennials, bedding plants; summer blooming bulbs; winter growing of bulbs. *Lectures one hour a week; laboratory two hours a week. Second semester.* Assistant Professor OLNEY.

11. **Elements of Floriculture.** A course embracing the fundamental principles upon which floriculture operations are based. Laboratory practice is afforded in propagating, growing and training greenhouse plants. Visits are also made to the several local florists' establishments. Prerequisite, Horticulture 7. *Lectures two hours a week; laboratory two hours a week. Second semester.* Assistant Professor OLNEY.

12. Commercial Floriculture. A study of the cultural methods practised by commercial florists in growing the principal flower crops. Laboratory practice is supplemented by work with the local florists. Prerequisites, Horticulture 7 and 12. *Lectures two hours a week; laboratory four hours a week. First semester.* Assistant Professor OLNEY.

13. Landscape Gardening. The principles of landscape gardening are studied with special reference to the arrangement, planting and care of trees, shrubs, vines and ornamental plants for the home grounds, small parks and school grounds. The student becomes acquainted with the ornamental tree shrubs, vines and their use in landscape work. *Lectures two hours a week; laboratory two hours a week. Second semester.* Professor ELLIOTT.

14. Landscape Design. A laboratory course; the making of workable planting plans for city and rural homes, small parks and school grounds. *Laboratory six hours a week. First semester.* Professor ELLIOTT.

15a, 15b. Thesis and Experimental Horticulture. Advanced work arranged to meet the needs of individual students who are making horticulture their major study. Based upon research and experiment work in the department. When possible, arrangements for such a course should be made before the close of the junior year. In special cases the work may be done in part during the summer vacation as determined by the character and amount of work undertaken. *Thruout the year.* Professor ELLIOTT.

16. History and Literature of Horticulture. A lecture and library course familiarizing student with history and literature of horticulture. *Lectures one hour a week. First semester.* Professor ELLIOTT.

AGRICULTURAL ECONOMICS AND SOCIOLOGY

Professor———————————

The work of these courses is based on the idea that the successful farmer or agricultural specialist in any line must possess not only a knowledge of the physical forces underlying farming, but also must be thoroly acquainted with the economic and social forces with which the farmer must contend. At no previous period in our state or national history has there been as much attention given to the matters of rural credits, marketing, co-operation, and the problems of rural social development as at present. No agricultural worker can today afford to be uninformed concerning these matters, and it is the aim of these courses to afford the student an opportunity to get in touch with the theory and practice of agricultural, economic and social institutions and organizations.

1. Agricultural Economics. This course includes a consideration of the general principles of agricultural economics, the factors of production, improvement of the business side of farming, farm bookkeeping, cost accounts, tenancy, conservation, rural credits, etc. This course will be found profitable to general farmers, agricultural specialists, and to general students who wish to understand some of the economic problems of our greatest industry. Text, lectures, assigned readings, reports and discussions. *Three hours a week. First semester.* Professor ————.

2. Rural Social Problems. This course is designed to put students in touch with the fundamental principles underlying the general social organization of rural life, and also to give them such knowledge of ways and means of community improvement as will enable them to render positive service to their respective communities. Among other matters will be considered the following rural vital statistics: the shifting of the rural population; community hygiene and sanitation; good roads; the rural church; the rural school, and community co-operation for community betterment. An essential feature of the course will be a study of the student's own community, with a view to recommending community action for the betterment of the general social, intellectual, moral, and economic conditions. Lectures, assigned readings, reports and discussions. *Three hours a week. Second semester.* Professor ————.

MARKETING

Professor Humphrey

1. Marketing. The work in this course is intended to give the student an insight into the general principles and conditions underlying the system of marketing farm products which have been developed in the United States and foreign countries. It will include lectures on the fundamental principles of market organizations, their history, growth and present development, together with studies of the types and functions of marketing agencies. Special stress will be laid upon the part played by co-operative organizations in the economical development of marketing. Prerequisite, Political Economy 3. *Two hours a week. First semester.* Professor HUMPHREY.

2. Farm Market Organization. This course is given as a further development of the course in marketing. It will deal with special problems of farm marketing and in particular with problems underlying the growth and maintenance of the most successful market organizations. Practice will be given the student in the application of commercial law to the transaction of business and in particular in the organization of model marketing associations. Lectures and class

room practice will also be given in market business methods and accounting in their special application to farm products. Prerequisite, Marketing 1. *Two hours a week. Second semester.* Professor HUMPHREY.

TRAINING COURSE FOR TEACHERS OF VOCATIONAL AGRICULTURE AND HOME ECONOMICS

An act of Congress popularly known as the Smith-Hughes vocational education bill provides for the training of teachers for the teaching of agriculture and home economics in the secondary schools of the states accepting the provisions of the act. The University of Kentucky has been designated as the institution in Kentucky to train teachers for this work.

The Board of Vocational Education grants a certificate thru the Department of Education of the University of Kentucky to students completing the prescribed courses in agriculture and satisfactorily meeting the requirements of this Board. A student should confer with members of the faculty relative to subjects that may be required to meet the demands of the Vocational Board.

Those who expect to teach vocational agriculture may take one of the following courses:

1. The regular course in agriculture leading to the degree of Bachelor of Science in Agriculture, in which shall be taken the fifteen credits in professional work as outlined in the course for the training of teachers in vocational agriculture. These may be substituted as a part of the 25 open electives in the regular course.

2. The course suggested for the training of teachers in vocational agriculture. In this course the first two years are identical with the first two years in the regular course. The second two years differ in that the subjects are largely prescribed work that in the judgment of the faculty a teacher of vocational agriculture should have.

In this course, the requirements for graduation are as follows:

Prescribed agricultural subjects	45½ credits
Prescribed non-agricultural subjects	47 credits
Prescribed in professional education	15 credits
Required electives in agriculture	19½ credits
Open electives	7 credits
Military science and physical training	6⅔ credits
	140⅔

All other requirements are the same as for the regular course in agriculture.

OUTLINE OF COURSE FOR THE TRAINING OF TEACHERS IN VOCATIONAL AGRICULTURE UNDER THE PROVISIONS OF THE SMITH-HUGHES ACT

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Animal Husb. 6a	205	Study of Breeds and Stock Judging	2	2	3.
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.
English 1a	150	English Composition	3		3.
Mathematics 3	166	Plane Trigonometry	3		3.
					14.

Second Semester

Animal Husb. 6b	205	Study of Breeds	2	2	3.
Chemistry 1b	134	Chemistry of the Metals	3	4	5.
English 1b	150	English Composition	3		3.
Geology 2b	156	Elements of Geology	3		3.
					14.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Botany 1a	130	General Morphology	2	4	4.
Chemistry 11	135	Agricultural Analysis	1	8	5.
Horticulture 1	210	General Horticulture	3	2	4.
Zoology 1a	183	General Zoology	3	2	4.
					17.

Second Semester

Botany 1b	131	General Morphology	2	4	4.
Agronomy 1	200	Principles of Soil Physics and Soil Fertility	3	4	5.
Zoology 1b	183	General Zoology	3	2	4.
Electives		Electives			4.
					17.

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Agri. Econ. 1	213	Agricultural Economics	3		3.
Education 24	148	Educational Psychology	3		3.
Farm Engin. 1	202	Farm Machinery	2	2	3.
Agronomy 2	200	Soil Management	2		2.
		Electives in Agriculture			7.
					18.

Second Semester

Bacteriology 1	139	General Bacteriology	2	4	4.
Education 25	148	History of Education	3		3.
Animal Husb. 7	205	Live Stock Feeding	3	2	4.
Animal Husb. 5	204	Farm Dairying	3	4	5.
		Electives			3.
					19.

SENIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Education 28	149	Agricultural Education	3		3.
Education 26	148	General Methods	3		3.
Animal Husb. 9	205	Genetics	3	2	4.
Farm Engin. 2	203	Farm Construction	2	2	3.
		Electives in Agriculture			5.
					18.

Second Semester

Agr. Economics 2	213	Rural Social Problems	3		3.
Education 27	148	Agricultural Education	3		3.
Animal Husb. 2	204	Farm Poultry Production	3	3	3.5
		Electives in Agriculture			7.5
					17.

If 65 units of work are presented as advanced credits, a student may finish the course in two additional years by taking the maximum hours of work allowed.

It is suggested that work of collegiate grade in the following subjects should preferably be presented as advanced credits:

English Composition	6 credits
Botany	8 credits
General Chemistry	10 credits
Quantitative Analysis	5 credits
Zoology or Biology	8 credits
Elements of Geology	3 credits
Political Economy	3 credits
Psychology	3 credits
History of Education	3 credits
Principles of Education, or other Credits in Education	3 credits
Military drill and physical education, or in lieu thereof any subjects of collegiate grade	7 credits
Agriculture of collegiate grade	6 credits

This would leave 76 units of work in technical agricultural subjects and other subjects to be taken in the University. The fact that some of the work to be taken in the University is found in the freshman and sophomore years in the foregoing schedule should be a matter of no concern to the student entering with advanced credits, since his actual standing is determined by the number of credits presented.

(For Home Economics Vocational Training Course see page 222.)

HOME ECONOMICS

Professor MacKinnon, Assistant Professor Coffin, Miss Purnell, Miss Lamoreaux, Miss White

The Department of Home Economics is located in the Agricultural Building. There are two food laboratories, one for general cookery and the other for Dietetics and Experimental Cookery. Both these laboratories are finished in white enamel. Adjoining these two kitchens is a small dining room used for instruction and practice in the correct serving of meals. The classes in sewing are held in two well equipped and splendidly lighted laboratories. One of these is for the use of the students in dressmaking and tailoring; the other is especially designed for the classes in millinery and costume design. An

exceptionally good fitting room adjoins these laboratories. In addition to these practical laboratories, there is a large research laboratory, where food problems can be studied.

The Department also maintains a six room house, which is used as a practical housekeeping experiment. The senior girls live here for a month under the direction of one of the instructors of the department, and during this month they do all of the work connected with the house. This includes cooking, cleaning, planning of meals, buying of supplies and payment of bills.

Two cafeterias have been established on the University campus, under the direction of the Home Economics Department. This gives the students in the department a chance to gain experience in cafeteria management and also affords an opportunity to a limited number to earn a part of their expenses.

Training in home economics leads ot a variety of professions. Among these are: (1) home-maker; (2) teacher; (3) special teacher as connected with vocational schools; (4) dietitian; (5) institutional manager; (6) cafeteria director; (7) visiting housekeeper; (8) demonstrator for commercial concerns; (9) extension worker; (10) interior decorator; (11) costume designer; (12) editorial work for women's magazines and bulletin publication; (13) research worker with commercial concerns; (14) director of educational advertising departments connected with commercial concerns.

The two courses as outlined with the proper electives, make possible any one of these professional phases of Home Economics.

Students expecting to major in Home Economics are urged to take Physics and Chemistry in their high school course.

To receive the degree of Bachelor of Science in Home Economics, a student must offer 130 credit hours and 2 2-3 credits in physical education.

Each student taking laboratory work in the following courses in Home Economics is required to make a deposit of $2.50 a subject to cover breakage, damage or loss of equipment. The residue fund is returned at the end of each year. The courses are: Home Economics 1, 2, 3, 4, 5, 101, 102, 103, 104, 107, 108.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN HOME ECONOMICS

(Food or Clothing Major)

Food and clothing majors have the same requirements for the freshman and sophomore years.

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1a	150	English Composition	3		3.
Chemistry 1a	134	Elementary Chemistry	3	4	5.
Modern Language		Any Modern Foreign Language	3		3.
Art and Design 2a	128	Art Structure		4	2.
Home Econ. 40	225	Home Sanitation	2		2.
Physical Edu.	178	Physical Education		2	.7
					15.7

Second Semester

English 1b	150	English Composition	3		3.
Chemistry 1b	134	Elementary Chemistry	3	4	5.
Modern Language		Any Modern Foreign Language	3		3.
Art and Design 2b	128	Art Structure		4	2.
Home Econ. 20	224	Dress Making	1	4	3.
Physical Edu.	178	Physical Education		2	.7
					16.7

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 3a	151	History of English Literature	2		2.
Chemistry 7	134	Organic Chemistry	3	2	4.
Home Econ. 21	224	Dress Making	1	4	3.
Physiology 1	123	Physiology	3	4	5.
Art and Design 107a	128	Art Appreciation	2		2.
Physical Edu.	178	Physical Education		2	.7
					16.7

Second Semester

English 3b	151	History of English Literature	2		2.
Chemistry 11	135	Quantitative Chemistry	3	4	5.
Home Econ. 1	224	Foods	3	4	5.
Home Econ. 26	225	Textiles	2		2.
Electives		Electives			3.
Physical Edu.	178	Physical Education		2	.7
					17.7

JUNIOR YEAR
(Food Major)

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Botany 1a	130	General Botany	2	4	4.
Physics 1a	178	Physics 1a	4	2	5.
Home Econ. 4	224	Dietetics	2	2	3.
Electives		Electives			4.
					16.

Second Semester

Bacteriology 1	130	General Bacteriology	2	4	4.
Home Econ. 101	226	Experimental Cookery	2	4	4.
Electives		Electives			8.
					16.

SENIOR YEAR
(Food Major)

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Economics 1a	141	Principles of Economics	3		3.
Sociology 52	143	General Sociology	2		2.
Home Econ. 103	226	Food and Nutrition	2	4	4.
Electives		Electives			8.
					17.

Second Semester

Home Econ. 102	226	Special Diets	2	2	3.
Genetics 9	205	Genetics	3	2	4.
Home Econ. 105	226	Recent Work in Dietetics and Nutrition	1		1.
Electives		Electives			9.
					17.

JUNIOR YEAR
(Clothing Major)

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Botany 1a	130	General Botany	2	4	4.
Physics 1a	178	Physics 1a	4	2	5.
Home Econ. 25a	225	Millinery		4	2.
Home Econ. 22	224	Tailoring	1	4	3.
Electives		Electives			2.
					16.

Second Semester

Bacteriology 1	130	General Bacteriology	2	4	4.
Home Econ. 25b	225	Millinery		4	2.
Home Econ. 23	225	Costume Design		4	2.
Electives					8.
					16.

SENIOR YEAR
(Clothing Major)

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Economics 1a	141	Principles of Econmics	3		3.
Sociology 52	143	General Sociology	2		2.
Home Econ. 104	226	Problems in Textiles	2	4	4.
Electives					8.
					17.

Second Semester

Genetics 9	205	Genetics	3	2	4.
Home Econ 24	225	Problems in Clothing		4	2.
Home Econ. 41	225	Home Decoration	3		3.
Electives					8.
					17.

TRAINING COURSE FOR TEACHERS OF HOME ECONOMICS UNDER THE VOCATIONAL EDUCATION ACT

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 1a	150	English Composition	3		3.
Chemistry 1a	134	Elementary Chemistry	3	4	5.
Physiology 1	123	General Physiology	3		3.
Home Econ. 40	225	Home Sanitation	2		2.
Art and Design 2a	128	Art Structure		4	2.
Physical Edu.	178	Physical Education			.7
					15.7

Second Semester

English 1b	150	English Composition	3		3.
Chemistry 1b	134	Elementary Chemistry	3	4	5.
Physics 1b	178	Physics 1b	4	2	5.
Home Econ. 20	224	Dress Making	1	4	3.
Physical Edu.	178	Physical Education			.7
					16.7

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
English 3a	151	History of English Literature	2		2.
Chemistry 7	134	Organic Chemistry	3	2	4.
Botany 1a	130	General Botany	2	4	4.
Home Econ. 21	224	Dress Making	1	4	3.
Home Econ. 1	224	Foods	2	4	4.
Physical Edu.	178	Physical Education			.7
					17.7

Second Semester

English 3b	151	History of English Literature	2		2.
Home Econ. 26	225	Textiles	2		2.
Home Econ. 2	224	Foods	2	4	4.
Bacteriology 1	130	General Bacteriology	2	4	4.
English 26	155	Library Science		2	1.
Electives		Electives			3-4
Physical Edu.	178	Physical Education			.7
					16.7 to 17.7

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Education 24	148	Educational Psychology	3		3.
Home Econ. 25a	225	Millinery		4	2.
Home Econ. 4	224	Dietetics	2	2	3.
Home Econ. 22	224	Tailoring	1	4	3.
Art and Design 107a	128	Art Appreciation	2		2.
Electives		Electives			3-5.
					16 to 18

Second Semester

Education 25	148	History of Education	3		3.
Home Econ. 25b	225	Millinery		4	2.
Home Econ. 41	225	Home Decoration	2	2	3.
Home Econ. 60a	225	Technique of Teaching Home Economics	2		2.
Electives		Electives			6-8.
					16 to 18

SENIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Economics 1a	141	Principles of Economics	3		3.
Education 26	148	Principles of Education	3		3.
*Home Econ. 60b	226	Practise Teaching in Home Economics	1	2	2.
*Home Econ. 42	225	Household Administration	2	6	5.
Sociology 52	143	General Sociology	2		2.
Electives		Electives			4-7.
		Total work not to exceed			17.

Second Semester

Home Econ. 102	226	Special Diets	2	2	3.
Genetics 9	205	Genetics	3	2	4.
*Home Econ. 60b	226	Practise Teaching	1	2	2.
Home Econ. 42	225	Household Administration	2	6	5.
Electives		Electives			5-8.
		Total work not to exceed			17.

*To be taken by one-half of the senior class the first semester and by the remainder of the class the second semester.

Electives in Home Economics

First Semester

3, 61, 70, 71, 101, 103, 104, 105, 106, 107, 108.

Second Semester

5, 23, 24, 43, 70, 71, 101, 107, 108.

Electives in Agriculture

Animal Husbandry 8, 11.

Horticulture 6, 9.

1. Selection, Preparation and Economic Uses of Food. Composition, uses and preparation of food; the changes in composition as the result of heat, cold and fermentation; economic buying. Prerequisites, Chemistry 1 and 2, Physics 1. *Lectures two hours a week; laboratory four hours a week. First semester.* Professor MacKinnon.

2. Selection, Preparation and Economic Uses of Food. A continuation of Course 1. Prerequisites, Chemistry 7. Home Economics 1. *Lectures two hours a week; laboratory four hours a week. Second semester.* Professor MacKinnon.

3. Preservation of Food. Practical course in home preservation of food. Prerequisite, Home Economics 1. *Lecture one hour a week; laboratory two hours a week. First semester.* Professor MacKinnon.

4. Dietetics. Diet—the relation of food to health; influence of age, sex and occupation on diet; dietaries. Prerequisites, Home Economics 1a, 1b, and 41; Chemistry 1, 2, and 7; Bacteriology 1. *Lecture two hours a week; laboratory two hours a week. First semester.* Assistant Professor Coffin.

5. Home Cookery and Table Service. The planning of meals, cooking and serving, emphasizing typical foods used in American homes and efficient use of time, labor and money. Prerequisite, Home Economics 4. *Lecture two hours a week; laboratory four hours a week. Second semester.* Assistant Professor Coffin.

20. Dressmaking. Study and technical practice in drafting, cutting and making of simple cotton and linen garments. Study of cost and time. Prerequisite, Art and Design 2. *Lecture one hour a week; laboratory four hours a week. Second semester.* Miss Lamoreaux.

21. Dressmaking. Dress forms made to measure. Cutting, fitting and making of wool, silk and velvet dresses. Study of economy and quality in buying, and a comparison of home-made and ready-made garments. Prerequisite, Home Economics 20. *Lecture one hour; laboratory four hours a week. First semester.* Miss Lamareaux.

22. Tailoring. The making of a tailored shirtwaist and skirt. Tailoring problems involved in renovating coats and suits. Prerequi-

site, Home Economics 21. *Lecture one hour a week; laboratory four hours a week. First semester.* Miss LAMOREAUX.

23. **Costume Design.** Study of different materials as adapted to costume designing. Practical application of the principles of design to simple costumes. Practice in using and adapting designs for different individuals and purposes. Study of historic costume. Prerequisite, Home Economics 21. *Laboratory four hours a week. Second semester.* Miss LAMOREAUX.

24. **Problems in Clothing.** Children's garments; renovation and repair; unusual problems in drafting and fitting. Prerequisite, Home Economics 21. *Laboratory four hours a week. Second semester.* Miss LAMOREAUX.

25a. **Millinery.** Fall and winter millinery problems. Making and use of folds, bindings, cord, bows and facings, and their application on two sample hats. Altering purchased buckram frames to suit individual needs. Renovation of materials and trimmings. *Laboratory four hours a week. First semester.* Miss LAMOREAUX.

25b. **Millinery.** Spring and summer problems. A continuation of 25a. Prerequisite, 25a. *Laboratory four hours a week. Second semester.* Miss LAMOREAUX.

26. **Textiles.** Development of the textile industry. Manufacture, characteristics and use of materials. Prerequisite, sophomore standing. *Recitation two hours a week. Second semester.* Miss LAMOREAUX.

40. **Home Architecture and Sanitation.** Situation, surroundings and construction of the house. Heating, lighting, ventilation, water supply, care of food. *Lectures two hours a week. First semester.* Professor MACKINNON.

41. **Home Decoration.** Designing interiors: problems of furnishing a home on a stipulated income. Study of pictures, wall hangings and floor coverings. Prerequisites, Art and Design; Art Appreciation; junior Home Economics standing. *Lectures two hours a week; laboratory two hours a week. Second semester.* Miss LAMOREAUX.

42. **Home Management.** Marketing; household accounts; family budgets; planning and serving meals; care of house. Prerequisite, senior Home Economics standing. *Lectures two hours a week. Practice House one month.* Assistant Professor COFFIN.

43. **Home Nursing.** Lectures dealing with nature of contagious diseases and home care during illness, fundamental principles in home nursing. Prerequisite, senior Home Economics standing. *Lectures one hour a week. Second semester.* Assistant Professor COFFIN.

60a. **Technique in Teaching Home Economics.** Theories and principles of teaching food, clothing and home management; courses

of study for elementary and high school work; observation of teaching; study of equipment. Prerequisites, Home Economics 1, 2, 4, 40, 20 and 21. *Lectures two hours a week.* Assistant Professor COFFIN.

60b. Practice Teaching of Home Economics. Conferences; teaching foods, clothing and home management, under the supervision of the department. Periods to be arranged. Prerequisite, Home Economics 60a. *Three hours a week.* Assistant Professor COFFIN.

61. Extension Organization and Methods. Lecture and observations on extension organization and methods. Practice in demonstration work. Prerequisite, senior Home Economics standing. *Lectures two hours a week. First semester.*

70. Institutional Management. Management and equipment of institutional kitchens and dining rooms. Preparation of food in large quantities. *Lectures one hour; laboratory six hours a week. First and second semesters.* Miss PURNELL.

71. Problems in Institutional Management. Study of financial, executive and nutritional conditions involved in feeding large groups of people. Special problems in preparation of food in large quantities. *Lectures one hour; laboratory six hours. First and second semester.* Miss PURNELL.

101. Experimental Cookery. Individual problems in cookery. Use of different types of cooking apparatus. Time and labor studies. Prerequisite, Home Economics 4. *Lectures two hours; laboratory four hours a week. Thruout the year.* Professor MACKINNON.

102. Special Diets. Diets and dietaries adapted to disorders of nutrition; diets and dietaries with economic restrictions. Prerequisite, senior Home Economics standing. *Lectures two hours; laboratory two hours a week. Second semester.* Assistant Professor COFFIN.

103. Food and Nutrition. Bacteriological, chemical and physiological problems of food and nutrition. Prerequisites, Physiology, Bacteriology 1, Chemistry 11, Home Economics 4. *Lectures two hours a week; laboratory four hours a week. First semester.* Professor MACKINNON.

104. Problems in Textiles. Study of nature of fiber; adulteration of fabrics, analysis of fabrics, dyeing processes. Prerequisites, Chemistry 11, Home Economics 26. *Lectures two hours; laboratory four hours a week. First semester.* Miss LAMOREAUX.

105. Seminar. Recent advances in dietetics and nutrition. Prerequisite, senior or graduate standing. *Lecture one hour. First semester.* Assistant Professor COFFIN.

106. Seminar. Textile problems. Prerequisite, senior or graduate standing. *One hour a week. First semester.* Miss LAMOREAUX.

107. Special Investigations. Problems in Food and Nutrition. Prerequisite, Home Economics 103. *Lecture one hour; laboratory eight hours a week. Thruout the year.* Professor MACKINNON.

108. Textile Research. Investigation of textile problems. Prerequisite, Home Economics 104. *Lecture one hour; laboratory eight hours a week. Thruout the year.* Professor MACKINNON.

THE SHORT COURSE IN AGRICULTURE

A short course in Agriculture is given from about December 1 to March 1. All the work in this course is of a practical nature, and is designed for people living on farms who may desire to attend some agricultural school during the slack season on the farm. No entrance examinations are required, and the course is open to any one who may desire to enter.

For detailed information concerning the short course, address the Dean of the College of Agriculture, Lexington, Ky.

FARMERS' WEEK

Farmers' Week is generally held during the last week in January. The week is occupied by the annual conventions of the various live stock breeders' associations of the state, the State Horticultural Society, the Kentucky Corn Growers' Association and the State Beekeepers' Association. Each association has its own program which is furnished by the faculty of the College of Agriculture and by men from this and other states distinguished in their particular lines of work. A dairy show, a horticultural show and a farm products show are held during the week in which prizes are awarded. Judging demonstrations in live stock are conducted in connection with the live stock programs. A marketing conference is also held during the week.

THE AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station has for its object the investigation of agricultural problems of special interest to the Kentucky farmer and the discovery of new truths in those sciences related to agriculture.

As at present organized, the Experiment Station includes thirteen departments of work, namely: Administration; Agricultural Economics, including studies in marketing, rural credits, co-operation and the problems of rural social development; Agronomy, or the study of

the soils and crops; Animal Husbandry, including beef cattle, sheep and swine, horses, poultry, dairy cattle and dairying; Diseases of Live Stock, including the study and investigation of obscure diseases of live stock, the preparation and distribution of hog cholera serum, blackleg vaccine, etc.; Chemistry, including the analysis of soils, mineral waters, phosphates, limestones, etc.; Entomology and Botany, including the study and identification of destructive insects and fungus species and their eradication and control by spraying, etc., together with the study of the native plants of the State, acclimation of new varieties of plants, etc.; Feeds and Feeding Stuffs Inspection; Commercial Fertilizers Inspection; Horticulture, including orcharding, cultivation under glass, and market and landscape gardening; Research.

Among the investigations recently carried out at the Kentucky Agricultural Experiment Station, and on the experiment farm, may be mentioned the following: Studies on the cultivation of corn, wheat, oats, barley, sweet clover, soy beans; the soiling of crops as compared with pasturage; crop rotations suitable to several types of Kentucky soils; soil surveys; the sulfur content of typical Kentucky soils and the relation of sulfur to soil fertility; tobacco investigations; the life-history and habits of the corn-ear worm, and also of the locust borer; stem rot of clover and alfalfa; cross inoculation with nodule bacteria of leguminous plants; a botanical study of the woody plants of Kentucky and of some Kentucky weeds and poisonous plants; a study of a new parasite on the San Jose scale; studies in horticulture and orcharding, the construction of hotbeds and cold frames; poultry raising; egg-raising contest; feeding studies on young chicks; a study of the marketing conditions prevailing in Kentucky; a study of the marketing of burley tobacco in Central Kentucky; investigations in infectious abortion in cows and mares and the isolation of the micro-organism responsible for these diseases; infectious anthritis of colts, and the causative organisms of this disease; extensive studies in pig feeding; an experiment in hogging down soy beans and cowpeas; breeding investigations with sheep for lamb and wool production; extensive investigations in steer feeding in dry lots and on pasture; the value of various crops for silage; forage poisoning in live stock; malnutrition in hogs; blackleg in turkeys; a study of the inherited characteristics in horses and jacks, and the inheritance of coat colors in horses; the construction and equipment of dairy barns; experiments with a mechanical milker; hog cholera and its control; clover bloat in cattle; an investigation of slaughterhouses and plans for a model municipal abattoir, etc. Bulletins on these subjects may be had on application to the Director.

The Experiment Station is also charged with the administration of the State laws governing the manufacture and sale of commercial fertilizers, feeds and feeding stuffs. These laws are administered in such a way as to protect the interests of the manufacturer and the consumer alike, and with the view of safeguarding the public against fraud in the sale and distribution of these various articles. The work incident to the enforcement of the nursery inspection law and of the seed inspection law and of the creamery and testers' license law is carried out at the Experiment Station.

EXTENSION DIVISION

In the College of Agriculture of the University of Kentucky an Agricultural Extension Division is maintained. This work is conducted co-operatively with the United States Department of Agriculture, with funds appropriated by the United States government under the Smith-Lever Act and the general agricultural appropriation, and all funds for extension work appropriated by the State of Kentucky, as well as funds derived from the University of Kentucky. In addition to these funds quite a large amount of money is appropriated by fiscal courts and boards of education in the State for this work. In the Federal Smith-Lever Act agricultural extension is defined as follows:

> "Shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges, in the several communities, and imparting to such persons information on said subjects thru field demonstrations, publications and otherwise."

In order to carry out the provisions of this act, the following lines of work are being carried on in the State:

Administration of Extension Funds, Farm Demonstration Work thru County Agents, Home Demonstration and Girls' Club Work, Boys' Club Work, Movable Schools of Agriculture and Home Economics, Printing and Distribution of Publications, Organization of Boys' and Girls' Poultry Clubs, Boys' Pig Clubs, Extension Work in Poultry, Extension Work in Horticulture, Extension Work in Live Stock, Dairy Extension Work, Extension Work in Soils and Crops, Extension Work in Veterinary Science, Extension Work in Home Economics.

COLLEGE OF ENGINEERING

The College of Engineering is prepared to give a comprehensive and thoro training in the sciences and arts fundamental to the various fields of the engineering profession.

OFFICERS OF ADMINISTRATION AND INSTRUCTION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

FREDERICK PAUL ANDERSON, M. E.
Dean of the College of Engineering,
Director of Experimental Engineering Laboratories,
Professor of Mechanical Engineering

Professors

BARR, THOMAS JAMES, B. M. E.
Acting Head, Department of Mines and Metallurgy

BOLES, STANLEY ATWOOD, M. A.
Head, Department of Physical Education, Director of Athletics

BOYD, PAUL PRENTICE, M. A., PH. D.
Head, Department of Mathematics and Astronomy

BYARS, DAVID OWEN, Major (West Point)
Head, Department of Military Science and Tactics

CROUSE, CHARLES STEPHENS, E. M.
Professor of Metallurgy

DANTZLER, LEHRE LIVINGSTON, M. A.
Head, Department of English Language and Literature

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

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

FRANKEL, LEON KAUFMAN, M. E.
Head, Department of Mechanics of Engineering

FREEMAN, WILLIAM EDWIN, A. B., E. E.
Head, Department of Electrical Engineering

MAXSON, RALPH NELSON, B. S., PH. D.
Professor of Inorganic Chemistry

MILLER, ARTHUR MCQUISTON, A. M.
Head, Department of Geology

NOLLAU, LOUIS EDWARD, M. E.
Head, Department of Drawing

*NORWOOD, CHARLES JOSEPH, M. S.
Head, Department of Mines and Metallurgy

PENCE, MERRY LEWIS, M. S.
Head, Department of Physics

PRYOR, JOSEPH WILLIAM, M. D.
Head, Department of Anatomy and Physiology

ROYDEN, HERBERT NATHAN, Captain (West Point)
Commandant

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

TUTHILL, JAMES EDWARD, PH. D.
Head, Department of History and Political Science

TUTTLE, FRANKLIN ELLIOTT, M. A., PH. D.
Head, Department of Chemistry

WEBB, WILLIAM SNYDER, M. S.
Professor of Physics

WIEST, EDWARD, M. A., PH. D.
Head, Department of Economics and Sociology

Associate Professors

CARREL, WILLIAM JOSEPH, B. S., C. E.
Associate Professor of Structural Engineering

KILLEBREW, CINCINNATUS DECATUR, M. S.
Associate Professor of Physics

REES, ELIJAH LATHAM, C. E., M. A.
Associate Professor of Mathematics

Assistant Professors

BANCROFT, GEORGE RUSSELL, A. B., PH. D.
Assistant Professor of Chemistry

BECK, MINNA MCLEOD, A. M.
Assistant Professor of Art and Design

*On leave of absence.

BUREAU, ERNEST ADOLPH, PH. B., E. E.
Assistant Professor of Electrical Engineering

BUTT, WILLIAM EDWARD, M. A.
Assistant Professor of History and Political Science

CURTIS, JOHN JAMES, M. E.
Assistant Professor of Testing of Materials

DICKER, JOHN BORN
Superintendent of Shops, Head of the Department of Practical Mechanics

DOWNING, HAROLD HARDESTY, B. C. E., M. S.
Assistant Professor of Mathematics

GILL, ANDREW, B. A.
Assistant Director of Athletics and Field Coach

HORINE, JOHN SHERMAN, M. E.
Assistant Professor of Drawing

JILLSON, WILLARD ROUSE, M. S.
Assistant Professor of Geology

MABIE, EDWARD CHARLES, M. A.
Assistant Professor of Public Speaking

NEWMAN, WILLIAM ARNOLD, C. E.
Assistant Professor of Civil Engineering

Instructors and Assistants

ANDERSON, VIRGINIA FRANCES, B. S.
Instructor in Freehand Drawing

ARKLE, THOMAS MCKEE
Instructor in Wood Shop

AUBREY, THOMAS
Engineer and Assistant in Wood Shop

BEDFORD, MATTHEW HUME, PH. D.
Instructor in Chemistry

CROWDER, EDWARD BARLOW
Instructor in Foundry

HAWKINS, ROBERT DAWSON, B. M. E.
Instructor in Mechanical Engineering

HOPKINS, CHRISTINE, A. B.
Instructor in English

JACKSON, GEORGE LEWIS, B. M. E.
Instructor in Experimental Engineering

JEWELL, MARY FRANCES, M. A.
Instructor in English

MITCHELL, JOHN RICHARD, A. B.
Instructor in Chemistry

POLLITT, MABLE, A. M.
Instructor in Mathematics

RICE, JOHN HUGHES
Engineer and Assistant in Engineering Laboratories

SAUNIER, STEPHEN THADDEUS
Instructor in Blacksmith Shop

SMITH, GUY WATSON, M. S., PH. D.
Instructor in Mathematics

STATES, MARSHALL NEY, B. S.
Instructor in Physics

THURMAN, GORDON
Instructor in Machine and Forge Shop

TUCKER, THOMAS C.
Instructor in Wood Shop

WATKINS, ISAAC G.
Assistant in Engineering Laboratories

WEBB, LOUISE GRAY
Instructor in Mechanical Drawing

WHITING, GEORGE WESLEY, M. A.
Instructor in English

Introductory Statement

Organization

The College of Engineering embraces the following Departments: Civil Engineering, Collateral Activities, Drawing, Electrical Engineering, Mechanical Engineering, Mechanics of Engineering, Mines and Metallurgy, Practical Mechanics.

Courses of Study and Degrees

The College of Engineering offers instruction leading to the following baccalaureate degrees:

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

The courses of study leading to these degrees are identical during the freshman and sophomore years. Familiarity with such fundamental subjects as Chemistry, Drawing, English, Mathematics, Physics and Practical Mechanics is essential to the successful study and practice of any branch of the engineering profession. Furthermore after two years of college work a student is better able to make a definite choice of the branch of engineering which he is best fitted to follow. During the junior and senior years the courses are planned to give the special training that is best suited to each branch of the profession.

The College of Engineering offers graduate courses leading to the following advanced 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 these degrees, see the announcement of the Graduate School, page 301.

OUTLINE OF THE FRESHMAN AND SOPHOMORE YEARS OF ALL COURSES LEADING TO ENGINEERING DEGREES

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits*
Art and Design 11a	129	Freehand Drawing		1	0.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1a	250	Mechanical Drawing		7	2.3
Drawing 3a	250	Descriptive Geometry	3		3.0
English 1a	150	English Composition	3		3.0
Mathematics 5	166	College Algebra	5		5.0
Prac. Mech. 1 & 3a	279	Wood Working and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

Second Semester

Art and Design 11b	129	Freehand Drawing		1	0.3
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.0
Collaterial Activ. 7	249	Class Society			
Drawing 1b	250	Mechanical Drawing		4	1.3
Drawing 3b	251	Descriptive Geometry	2		2.0
English 1b	150	English Composition	3		3.0
Mathematics 4	166	Trigonometry	5		5.0
Physics 4	179	Elementary Physical Measurements		4	2.0
Prac. Mech. 2 & 3b	279	Pattern Making and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

*A credit represent one hour of recitation or two hours of laboratory a week for one semester.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 61	244	Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3a	151	History of English Literature	3		3.0
Mathematics 6	166	Analytical Geometry	5		5.0
Mech. of Engin. 5	266	Slide Rule Practice	1		1.0
Practical Mech. 4	279	Forge Shop		6	2.0
Physics 3a	179	General College Physics	4		4.0
Physics 5	179	Measurements in Mech. and Heat	1	4	3.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Civil Engin. 62	245	Field Practice		4	1.0
Drawing 4a	251	Advanced Drawing		4	0.7
		Second Half			
Drawing 4a	251	Advanced Drawing		8	1.3

Second Semester

Civil Engin. 63	245	Advanced Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3b	151	History of English Literature	3		3.0
Mathematics 7a	167	Calculus, First Part	5		5.0
Physics 3b	179	General College Physics	4		4.0
Physics 6	179	Measurements in Elec. Sound and Light	1	4	3.0
Practical Mech. 5	279	Machine Shop		6	2.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Drawing 4b	251	Advanced Drawing		9	1.5
		Second Half			
Civil Engin. 64	245	Advanced Field Practice		4	1.0
Drawing 4b	251	Advanced Drawing		5	0.8

SUMMER WORK

It is very desirable that students of engineering should obtain practical experience while pursuing their college course. It is strongly urged that all engineering students obtain employment during their summer vacations with some concern engaged in engineering work.

CIVIL ENGINEERING

Professor Terrell, Associate Professor Carrel, Assistant Professor Newman

The home of the Department of Civil Engineering is in the Civil Engineering and Physics Building, a large three-story brick structure, trimmed with cut stone, and having a floor space of about 40,000 square feet. The lecture rooms, offices, drawing rooms and laboratories are all located in this building.

Drawing Rooms

In this building there are three large well-lighted drawing rooms, provided with individual tables containing lockers for each student's outfit and cabinets for drawing boards. A large collection of standard drawings of bridges, buildings, stadiums, railroad construction, sewer construction, water works, power plants, and irrigation structures are available for examination.

Laboratories

Laboratories are available to the student for experimental work in the testing of building materials of all kinds, as well as a complete Road Laboratory for the purpose of testing materials used in the construction of permanent roads.

Library

The General University Library is available for the use of all students in the University. In addition to the general library, the Department of Civil Engineering has a library specially designed to meet the needs of civil engineering students. The leading technical journals are placed in the department library reading rooms.

Apparatus

The field and office equipment belonging to the department consists of transits, engineer's levels, solar attachments, needle compass, plane table, precise pantograph, planimeters, splines, hand levels, sextant, aneroid barometer, railroad curves, level rods, cross-section rods. tapes, flags, and minor accessories.

COURSE OF STUDY AND DEGREES

The course of study prescribed for students in Civil Engineering is outlined below. This course leads to the degree of Bachelor of Science in Civil Engineering. For information regarding the advanced degree C. E. (Civil Engineer), see the announcement of the Graduate School, page 301.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN CIVIL ENGINEERING

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits*
Art and Design 11a	129	Freehand Drawing		1	0.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1a	250	Mechanical Drawing		7	2.3
Drawing 3a	250	Descriptive Geometry	3		3.0
English 1a	150	English Composition	3		3.0
Mathematics 5	166	College Algebra	5		5.0
Prac. Mech. 1 & 3a	279	Wood Working and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

Second Semester

Art and Design 11b	129	Freehand Drawing		1	0.3
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1b	250	Mechanical Drawing		4	1.3
Drawing 3b	251	Descriptive Geometry	2		2.0
English 1b	150	English Composition	3		3.0
Mathematics 4	166	Trigonometry	5		5.0
Physics 4	179	Elementary Physical Measurements		4	2.0
Prac. Mech. 2 & 3b	279	Pattern Making and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

*A credit represents one hour of recitation or two hours of laboratory a week for one semester.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 61	244	Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3a	151	History of English Literature	3		3.0
Mathematics 6	166	Analytical Geometry	5		5.0
Mech. of Engin. 5	266	Slide Rule Practice	1		1.0
Prac. Mech. 4	279	Forge Shop		6	2.0
Physics 3a	179	General College Physics	4		4.0
Physics 5	179	Measurements in Mech. and Heat	1	4	3.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Civil Engin. 62	245	Field Practice		4	1.0
Drawing 4a	251	Advanced Drawing		4	0.7
		Second Half			
Drawing 4a	251	Advanced Drawing		8	1.3

Second Semester

Civil Engin. 63	245	Advanced Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3b	151	History of English Literature	3		3.0
Mathematics 7a	167	Calculus, First Part	5		5.0
Physics 3b	179	General College Physics	4		4.0
Physics 6	179	Measurements in Elec. Sound and Light	1	4	3.0
Practical Mech. 5	279	Machine Shop		6	2.0
Military Science		Infantry Drill		3	1.0
		First Half			
Drawing 4b	251	Advanced Drawing		9	1.5
		Second Half			
Civil Engin. 64	245	Advanced Field Practice		4	1.0
Drawing 4b	251	Advanced Drawing		5	0.8

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 31	243	Highway Loc. Const. & Maint.	2		2.0
Civil Engin. 71	246	Stresses	3		3.0
Civil Engin. 72	246	Graphic Statics		4	1.3
Collateral Activ. 7	249	Class Society			
Elec. Engin. 1	256	Elements of Electrical Engin.	3		3.0
Elec. Engin. 9a	257	Electrical Laboratory		2	1.0
Geology 2a	156	Elementary Geology	2		2.0
Mathematics 7b	167	Calculus, Second Part	3		3.0
Mech. of Engin. 1	265	Mech. of Materials	5		5.0
Mech. of Engin. 2	265	Testing Materials		2	1.0
Metallurgy 4	277	Metallurgy of Iron and Steel	2		2.0
		First Half			
Civil Engin. 66	245	Topographic Surveying		6	1.0
		Second Half			
Civil Engin. 33	243	Road Material Laboratory		2	0.5
Civil Engin. 73	246	Roof Truss Design		4	0.7

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 1	242	Masonry Construction	2		2.0
Civil Engin. 21	242	Hydraulics	2		2.0
Collateral Activ. 7	249	Class Society			
Elec. Engin. 3a	256	Alternating Currents	3		3.0
Elec. Engin. 9b	257	Electrical Laboratory		2	1.0
Geology 2b	156	Elementary Geology	2		2.0
Mathematics 6	166	Spherical Trig. and Least Squares	2		2.0
Mech. of Engin. 6	266	Analytical Mech.	5		5.0
		First Half			
Civil Engin. 41	243	Railroad Location	5		2.5
Civil Engin. 75	246	Highway Bridge Design		7	1.3
Metallurgy 3	277	Assaying Lab.		4	0.7
		Second Half			
Collateral Activ. 1	248	Junior Inspection Trip			
Civil Engin. 42	244	Railroad Construction	3		1.5
Civil Engin. 43	244	Railroad Maintenance	2		1.0
Civil Engin. 44	244	Railroad Drafting		2	0.3
Civil Engin. 45	244	Railroad Field Practice		9	1.0

SENIOR YEAR

A student to be eligible to any class scheduled for the senior year must report for class work on September 17, and must have received credit in all subjects scheduled for the three preceding years.

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 2	242	Reinforced Concrete	3		3.0
Civil Engin. 3	242	Masonry Dams	2		2.0
Civil Engin. 4	242	Reinforced Concrete Design		2	0.7
Civil Engin. 67	245	Geodesy	2		2.0
Civil Engin. 68	246	Geodetic Surveying		2	0.7
Civil Engin. 76a	246	Railroad Bridge Design		11	3.7
Collateral Activ. 5a	249	Magazine Digest	1		1.0
Collateral Activ. 7	249	Class Society			
Economics 5a	141	Economics for Engineers	2		2.0
English 101a	150	Technical Composition	3		3.0
Geology 7		Engineering Geology	2		2.0
Mech. Engin. 1	263	Thermodynamics	4		4.0

Second Semester

		First Half			
Civil Engin. 11 & 12	242	Contracts and Specificiations	2		1.0
Civil Engin. 22	243	Water Power Engineering	2		1.0
Civil Engin. 32	243	Streets and Pavements	5		2.5
Civil Engin. 34	243	Asphalt Laboratory		4	1.0
Civil Engin. 51	244	Water Supply and Water Works Supply	2		1.0
Civil Engin. 52	244	Sewers and Sewage Disposal	3		1.5
Civil Engin. 76b	246	Railroad Bridge Design		8	1.3
Collateral Activ. 5b	249	Magazine Digest	1		0.5
Collateral Activ. 7	249	Class Society			
Economics 5b	141	Economics for Engineers	2		1.0
English 101b	151	Technical Composition	3		1.5
Geology 8	157	Oil Geology	2		0.5
		Second Half			
Collateral Activ. 2	248	Senior Inspection Trip			
Collateral Activ. 3	248	Thesis		26	4.5
Collateral Activ. 4	249	Thesis Assembly		1	0.3
Drawing 5	251	Photography	1	2	0.8

Courses of Instruction

CIVIL ENGINEERING

Construction

1. Masonry Construction. Required of juniors in Civil Engineering. Properties of stone, brick, cement and concrete and their uses in engineering structures. Foundations, retaining walls, piers and abutments, dams and chimneys; the design of masonry structures. *Two hours a week. Second semester.* Assistant Professor NEWMAN.

2. Reinforced Concrete. Required of seniors in Civil Engineering. Determination of forms and proportions; computations of columns, beams and arches of reinforced concrete construction. Prerequisites, Mechanics of Engineering 1 and 6. *Three hours a week. First semester.* Professor TERRELL.

3. Masonry Dams. Required of seniors in Civil Engineering. Theory and design of retaining walls and masonry dams. Lectures, recitations and design. Prerequisite, Civil Engineering 21. *Two hours a week. First semester.* Professor TERRELL.

4. Reinforced Concrete Design. Required of seniors in Civil Engineering. The design of columns, beams, buildings, retaining walls, dams and arches. Special problems assigned to each student. Complete detail drawings with computation. *Two hours a week. First semester.* Professor TERRELL.

Contracts and Specifications

11. Contracts. Required of seniors in Civil Engineering. Offer and acceptance, consideration, contracts under seal, assignments, joint and several contracts, the statute of frauds, conditions, impossibility, illegality, discharge of contracts. *One hour a week. First half second semester.* Associate Professor CARREL.

12. Specifications. Required of seniors in Civil Engineering. A detailed study of various specifications. The student is required to write and discuss several specifications. *One hour a week. First half of second semester.* Associate Professor CARREL.

Hydraulics

21. Hydraulics. Required of all juniors in Engineering. This course consists of text book exercises together with the solution of numerous problems covering the principles of hydrostatics and hydrodynamic pressure; the flow of water thru orifices, nozzels, over weirs and thru pipes and open channels; also the loss from friction and other sources. Prerequisite, Mathematics 7b must be completed or taken

co-ordinately. *Two hours a week. Second semester.* Associate Professor CARREL, Mr. HAWKINS.

22. Water Power Engineering. Required of seniors in Civil Engineering. The work embraces a detailed study of rainfall, run-off, storage and the design and construction of water power works. *Two hours a week. First half of second semester.* Professor TERRELL.

Highway Engineering

31. Highway Location, Construction and Maintenance. Required of juniors in Civil Engineering. Principles and methods followed in locating a highway, topographic conditions, benefit of road and economics considered. Method of construction, materials to be used and how to use them for all classes and types of roads. A study of the best methods to be followed in maintaining and keeping highways and bridges in good repair. Lectures, assigned readings, reports and inspection of roads. *Two hours a week. First semester.* Professor TERRELL.

32. Streets and Pavements. Required of seniors in Civil Engineering. A study of paving materials for cities and towns, traffic census, resistance to traction, determining the most suitable material, and designing of streets. *Five hours a week. First half of second semester.* Professor TERRELL.

33. Road Material Laboratory. Required of juniors in Civil Engineering. Testing of rock, gravel, sand, brick and culvert pipe. Given in connection with Civil Engineering 31. *Two hours a week. Second half of second semester.* Professor TERRELL.

34. Asphalt Laboratory. Required of seniors in Civil Engineering. Testing of natural asphalts, oil asphalts, rock asphalt, coal tars, flux oil, road oil, dust layers and dust preventives. Determining the origin of a given product and the method of manufacture. Determining if a given product will pass a given specification. *Four hours a week. First half of second semester.* Professor TERRELL.

35. Road Making. For Agricultural students. An elementary course in country highways touching on location, construction and maintenance. Intended to give the student a better realization of the importance of roads and also how to obtain them for a community. *Three hours a week. Second half of second semester.* Assistant Professor NEWMAN.

Railroad Engineering

41. Railroad Location. Required of juniors in Civil Engineering. This course consists of the study of economic methods of railroad location, including reconnaissance, preliminary survey, topography, maps, projecting the location, making approximate estimates and final

location. *Five hours a week. First half of second semester.* Assistant Professor NEWMAN.

42. Railroad Construction. Required of juniors in Civil Engineering. The work in construction consists of lectures, recitations and assigned readings in connection with office and field work, and includes cross-sectioning, calculation of quantities, haul, and monthly and final estimates. *Three hours a week. Second half of second semester.* Assistant Professor NEWMAN.

43. Railroad Maintenance. Required of juniors in Civil Engineering. Construction and maintenance of track and accessory structures, the improvement of gradient and alignment, the design and maintenance of yards and terminals. Lectures, recitations and assigned readings. *Two hours a week. Second half of second semester.* Assistant Professor NEWMAN.

44. Railroad Drafting. Required of juniors in Civil Engineering. A preliminary course to that of field location. In this course a complete set of notes is turned over to the student and he is required to make the most economical paper location. *Two hours a week. Second half of second semester.* Assistant Professor NEWMAN.

45. Railroad Field Practice. Required of juniors in Civil Engineering. A course in practical field work consisting of all necessary instrument work from the reconnaissance survey to a completed railway. *Six hours a week. Second half of second semester.* Assistant Professor NEWMAN.

Sanitary Engineering

51. Water Supply and Water Works Supply. Required of seniors in Civil Engineering. Requisites of supply, source of supply, rainfall, surface water, rivers and lakes, ground water, gravity systems, pumping engines. Design, construction and maintenance. *Two hours a week. First half of second semester.* Professor TERRELL.

52. Sewers and Sewage Disposal. Required of seniors in Civil Engineering. Sewerage systems, separate and combined, hydraulics and sewers, determination of size and capacity, surveys for drainage systems, design of system in detail, specifications and estimates of cost, inspection of work, methods of disposal, irrigation, filtration, chemical precipitation, bacteriological methods, house drainage, garbage disposal. Prerequisite, Civil Engineering 21. *Three hours a week. First half of second semester.* Professor TERRELL.

Surveying and Geodesy

61. Surveying. Required of all sophomores in Engineering. The study of ordinary methods of using the transit, level and compass in land surveys, leveling, municipal and topographic work, and the mathe-

matics and principles involved. *Two hours a week. First semester. Repeated second semester.* Assistant Professor NEWMAN.

62. Field Practice. Required of all sophomores in Engineering. This course is given in connection with Civil Engineering 61. General use of surveying instruments, note keeping, a series of field problems, with the accompanying computations, office work, drafting and mapping. *Four hours a week. First half of first semester. Repeated second half of second semester.* Assistant Professor NEWMAN.

63. Advanced Surveying. Required of all sophomores in Engineering. Continuation of Civil Engineering 61. Stadia, topography details and mine surveying. The use of the plane table, triangulation and base line measurements. Astronomical observation for azimuth, time, longitude and latitude. Precise, trigonometric and forometric leveling, map projections, and plotting and finishing topographic maps. *Two hours a week. Second semester. Repeated first semester.* Assistant Professor NEWMAN.

64. Advanced Field Practice. Required of all sophomores in Engineering. This course is given in connection with Civil Engineering 63. Practical problems in mine surveying, triangulation and base line measurement. The student is required to obtain complete field information and furnish a topographic map of a section of the campus, in which both stadia and the plane table will be brought into use. Office work, drafting and mapping. *Four hours a week. Second half of second semester. Repeated first half of first semester.* Assistant Professor NEWMAN.

65. Agricultural Surveying. For Agricultural students. Principles of land surveying, farm drainage, general use of engineering instruments on the farm. *Three hours a week. Second half of second semester.* Assistant Professor NEWMAN.

66. Topographical Surveying. Required of juniors in Civil Engineering. The use of the hand level, plane table, stadia and other instruments used in making topographical surveys are studied by means of recitations, lectures and field practice. A complete topographical survey is made, including field information, calculation and a complete map. *Field work and laboratory, six hours a week. First half of first semester.* Professor TERRELL.

67. Geodesy. Required of seniors in Civil Engineering. Precise methods of surveying. The most probable value of a line or angle; precise leveling; methods of making observations and the computation from field notes for time, latitude, longitude and azimuth; adjustment of level; net errors in a survey and how to adjust them. Prerequisites, Mathematics 6. *Two hours a week. First semester.* Assistant Professor NEWMAN.

68. Geodetic Surveying. Required of seniors in Civil Engineering. Methods of making geodetic surveys. Base line measurements; measurements of angles, horizontal and vertical; field methods for time, latitude, longitude and azimuth. Students are required to make and reduce observations illustrating the work of the course. Prerequisite, Mathematics 8. *Two hours a week. First semester.* Professor TERRELL.

Structural Engineering

71. Stresses. Required of juniors in Civil Engineering. This course takes up the analytical method of finding stresses in roof and bridge trusses and consists of the following: Roof trusses under dead and wind loads, final stresses for bridge trusses, bridge bracing, members and floors. *Three hours a week. First semester.* Associate Professor CARREL.

72. Graphic Statics. Required of juniors in Civil Engineering. Principles and methods, roof trusses, bridge trusses, locomotive wheel loads, trusses with broken cords, miscellaneous trusses. *Drawing, four hours a week. First semester.* Associate Professor CARREL.

73. Roof Truss Design. Required of juniors in Civil Engineering. The design of a simple steel roof truss is taken up, design sheets and complete shop drawings are made and traced. *Drawing, four hours a week. Second half of first semester.* Associate Professor CARREL.

74. Structural Design. Required of juniors in Mechanical and Electrical Engineering. This is a combination of courses 72 and 73. It takes up the calculation of stresses by Graphic Statics and the design of simple steel structures such as buildings and roof trusses. *Drawing four hours a week. Second semester.* Associate Professor CARREL.

75. Highway Bridge Design. Required of juniors in Civil Engineering. Complete design and shop drawings for a highway bridge. *Drawing eight hours a week. First half of second semester.* Associate Professor CARREL.

76a. Railroad Bridge Design. Required of seniors in Civil Engineering. Complete designs and details for a single track railroad bridge. Recitations, lectures and drawing room periods. *Drawing eleven hours a week. First semester.* Associate Professor CARREL.

76b. Railroad Bridge Design. Required of seniors in Civil Engineering. Continuation of 76a. *Drawing eight hours a week. First half of second semester.* Associate Professor CARREL.

77a. Mine Structures. Required of seniors in Mining Engineering. Analytical and graphical solutions of stresses in roof trusses, head frames and tipples. Design and complete shop drawings of head

frame or tipple. *Four hours a week. First semester.* Associate Professor CARREL.

77b. Mine Structures. Required of seniors in Mining Engineering. Continuation of Course 77a. *Six hours a week. First half of second semester.* Associate Professor CARREL.

For Graduates

Prerequisites for Graduate Work. Students desiring to take any of the following courses should have a thoro working knowledge of chemistry, physics and mathematics. These courses are offered to graduates and to such practicing engineers as may be qualified to pursue them. For major work, a candidate must hold a baccalaureate degree in Civil Engineering.

201. Construction. Advanced work in plane and reinforced concrete. General methods of construction; form building; mixing; transporting and placing material; water proofing; placing reinforcing; testing of beams, slabs and arch rings. Design of simple beams, continuous beams, floor slabs, T beams and columns. Complete design of building; plans and specifications. Theory and design of plane and reinforced concrete arches, retaining walls, hydraulic structures. Investigation of the concrete ship. Lectures, recitations, reading, report writing, designing. *Twenty hours a week. Thruout the year.*

231. Highway Engineering. Advanced course, designed for graduate Civil Engineers who wish to enter the field of Highway Engineering. Comparative study of the road laws of the various states. Organization of county, State and Federal highway departments. Designing the road to meet traffic conditions. Contracts, cost data, specification, materials used in construction and their behavior under actual traffic conditions. Investigation of material by laboratory test. Maintenance of highways. Financing a county, State or Federal highway system. The economic value of roads. Highway structures, their design and maintenance. Lectures, recitations, reading, laboratory work and design. *Twenty-four hours a week. Thruout the year.*

241. Railroad Engineering. Advanced work in location, construction and maintenance. This course will cover the economics of location and all factors entering into the final selection of the line. Detail of construction, including cost data, mass diagram and overhaul curves. Valuation of railroads. The present day methods of maintenance. Railroad structures and their maintenance. Lectures, recitations, reading, and report writing. *Fifteen hours a week. Thruout the year.*

251. Sanitary Engineering. Advanced work in sewer systems and disposal plants. General layout of a sewer system. Flow in pipes

and channels. Investigation of sewer pipes by laboratory test. Design of masonry sewers, street inlets, catch basins and manholes. Sewage pumping stations. General procedure in constructing sewer systems. Sewage treatment, sewage disposal, design of a sewage disposal plant. (Course in water analysis, sewage analysis and bacteriology should be taken in connection with this course.) Lectures, recitations, reading, report writing, design and laboratory work. *Twenty hours a week. Thruout the year.*

271. Structural Engineering. Advanced work in theory of structures. Investigation of stresses by analytical and graphical calculations. The designing of tall buildings. Railroad and highway bridges. The use of influence diagrams. Detail drawings, lectures, recitations, report writing. *Eighteen hours a week. Thruout the year.*

COLLATERAL ACTIVITIES

Dean Anderson, All Heads of Departments and Others

1. Junior Inspection Trip. Required of all juniors in Engineering. Five days in March or April are given up to a visit to some of the many points of engineering interest in the vicinity of Cincinnati, Hamilton and Dayton, Ohio. Professor FRANKEL, Assistant Professor CURTIS, Assistant Professor BUREAU, Assistant Professor NEWMAN.

2. Senior Inspection Trip. Required of all seniors in Engineering. This trip includes visits to some of the most important places of engineering in Chicago and vicinity. One week in March or April is devoted to the itinerary, and among the places carefully studied from an engineering standpoint are the following: The Indiana Steel Company, and the American Bridge Company, Gary, Ind.; the water intakes and pumping stations of the Chicago Water Works; the Municipal Pier; the generating stations of the Commonwealth Edison Company; the packing plant of Armour & Company; the Hawthorne plant of the Western Electric Company; the power plant of the Blackstone Hotel; the main office of the Chicago Telephone Exchange; the tunnels of the Chicago Warehouse and Terminal Company; the Division Street plant of the Peoples Gas, Light and Coke Company; Sears, Roebuck & Company; the Crane Company; and the Lockport hydroelectric plant of the Chicago Sanitary District. Professor ANDERSON, Professor FREEMAN, Professor TERRELL, Professor BARR, Assistant Professor DICKER.

3. Thesis. The Thesis work in Engineering may be directed along any of the following lines: (1) an engineering problem assigned to an individual or to a small group of two or more men; (2) the making of a complete set of plans and specifications for a modern central energy power plant, of a university engineering building or of a manu-

facturing plant by a large part or all the class; (3) a complete study and discussion of some problem in modern industrial efficiency methods by a group of men or by all of the class. The conditions existing in a large consulting engineering office are duplicated as far as possible, the idea being to give the men a clear insight into the operation of such an office as well as to thoroly acquaint them with the details of the problem assigned. *Twenty-six hours a week. Last half of second semester.* Professor ANDERSON, Professor FRANKEL, Professor FREEMAN, Professor TERRELL, Professor BARR, Mr. HAWKINS.

4. Thesis Assembly. The senior class is assembled for one hour each week for the purpose of discussing the work which each man is doing in connection with the preparation of his thesis. In this way each student is given the benefit of any interesting work that is being done individually by the other members of the class. *One hour a week. Last half of second semester.* Professor ANDERSON, Professor FRANKEL, Professor FREEMAN, Professor TERRELL, Professor BARR, Mr. HAWKINS.

5a. Magazine Digest. Required of all seniors in Engineering. This time is devoted to a review of the current engineering and scientific journals. Each student is assigned one magazine or part of a magazine to review and discuss before the class at each meeting. *From one hour alternate weeks to two hours a week to suit the schedule of students in the various branches of Engineering. First semester.* Professor CARREL, Professor BARR, Assistant Professor BUREAU, Mr. JACKSON.

5b. A continuation of Course 5a. *From one hour a week to two hours a week to suit the schedule of students in the various branches of engineering. Second semester.* Professor CARREL, Professor BARR, Assistant Professor BUREAU, Mr. JACKSON.

6a. A. S. M. E. and A. I. E. E. Each student in the senior class in the College of Mechanical and Electrical Engineering is enrolled as a student member of the American Society of Mechanical Engineers and the American Institute of Electrical Engineers. They receive the transactions of these two Societies, which are issued monthly. The material contained in these form the basis of papers and discussions which are prepared and presented by the students. Many lectures are given by prominent men under the auspices of these student branches. *One hour alternate weeks. First semester.* Assistant Professor BUREAU, Mr. JACKSON.

6b. A continuation of Course 6a. *One hour alternate weeks. Second semester.* Assistant Professor BUREAU, Mr. JACKSON.

7. Class Societies. Each class in the College of Engineering is organized into a society which holds meetings at least once a month at times to suit the regular schedule. Mr. JACKSON.

DRAWING

Professor Nollau, Assistant Professor Horine, Assistant Professor Curtis, Miss Webb

The Department of Drawing is located partly in Mechanical Hall and partly in the Civil Engineering and Physics Building. The drawing room for sophomores, the blue print and photographic laboratories, a recitation room and the office of the head of the department are located in Mechanical Hall. The drawing room for freshmen and an office are in the Civil Engineering and Physics Building. The Physics lecture room is used for lectures and recitations for freshmen.

Photographic Laboratory

Commodious and convenient quarters are arranged for giving a good course in practical photography. The equipment consists of excellent cameras for all classes of subjects, and the facilities for making lantern slides, copies and enlargements are first class.

Blue Print Laboratory

The attic of the administration part of Mechanical Hall is devoted to the art of blue printing. Large frames for sun and artificial printing are included in the equipment.

COURSES OF INSTRUCTION

Drawing

1a. Mechanical Drawing. Required of all freshmen in Engineering. Comprising: (a) Freehand lettering; (b) Exercises in the use of instruments; (c) Projections from Pictorial Views and from descriptions; (d) Exercises in tinting and shading; (e) Tracing; (f) Blueprinting. *Seven hours a week. First semester.* Professor NOLLAU, Assistant Professor HORINE, Miss WEBB.

1b. Mechanical Drawing. Continuation of Drawing 1a. During the latter part of the semester the time is devoted to descriptive geometry drawing. *Four hours a week. Second semester.* Assistant Professor HORINE, Miss WEBB.

3a. Descriptive Geometry. Required of all freshmen in Engineering. This work includes, first, the discussion of descriptive geometry as a branch of pure mathematics, later comes a consideration of the application of descriptive geometry principles as an aid to engineering drawing. The lectures and recitations are supplemented by work in the drawing room under Course 1b. Prerequisite, Mathematics 2. *Three hours a week. First semester.* Professor NOLLAU, Assistant Professor HORINE, Assistant Professor CURTIS.

3b. Descriptive Geometry. Continuation of Drawing 3a. *Two hours a week. Second semester.* Professor NOLLAU, Assistant Professor HORINE, Assistant Professor CURTIS.

4a. Advanced Drawing. Required of all sophomores in Engineering. Comprising: (a) Working drawings of parts of machines and complete machines, both detail and assembly; (b) Technical sketching; (c) Plotting of surveys. Prerequisites, Drawing 1a and 1b. *Four hours a week, first half, and eight hours a week, second half of first semester.* Professor NOLLAU.

4b. Advanced Drawing. Continuation of Drawing 4a. *Eight hours a week. First half, and four hours a week, second half of second semester.* Professor NOLLAU.

5. Photography. Required of all seniors in Engineering. Lectures on the chemistry and optics of photography especially prepared with reference to the latest practice in photographic art. The student also has laboratory practice in photography which gives him a good practical working knowledge of picture taking and picture making with particular application to engineering subjects. *Recitations one hour a week; laboratory two hours a week. Second half of second semester.* Professor NOLLAU.

ELECTRICAL ENGINEERING

Professor Freeman, Assistant Professor Bureau

The Department of Electrical Engineering is located in Mechanical Hall. There is a comfortable recitation room with seventy-three seats and a projectoscope, a large, well-lighted drawing room used jointly with the Department of Mechanics of Engineering, an office and the laboratories.

Laboratory

The equipment for carrying on experimental work in electrical engineering includes, direct current generators and motors, alternating current generators and motors, motor generator sets, transformers, photometers, watt-hour meters, a complete line of portable indicating instruments, several complete experimental telephone outfits, furnished by the Western Electric Co., the Kellogg Switchboard and Supply Co., the American Electric Telephone Co., the General Railway Signal Co., and the Automatic Electric Co.

Library

In addition to the general University Library the department has a library for the especial use of students in Electrical Engineering. The leading electrical journals are placed in this library.

COURSE OF STUDY AND DEGREES

The course of study prescribed for students in Electrical Engineering is outlined below. This course leads to the degree of Bachelor of Science in Mechanical Engineering. For information regarding the advanced degree E. E. (Electrical Engineering), see the announcement of the Graduate School, page 301.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN MECHANICAL ENGINEERING

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits*
Art and Design 11a	129	Freehand Drawing		1	0.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1a	250	Mechanical Drawing		7	2.3
Drawing 3a	250	Descriptive Geometry	3		3.0
English 1a	150	English Composition	3		3.0
Mathematics 5	166	College Algebra	5		5.0
Prac. Mech. 1 & 3a	279	Wood Working and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

Second Semester

Art and Design 11b	129	Freehand Drawing		1	0.3
Chemistry 1b	124	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1b	250	Mechanical Drawing		4	1.3
Drawing 3b	251	Descriptive Geometry	2		2.0
English 1b	150	English Composition	3		3.0
Mathematics 4	166	Trigonometry	5		5.0
Physics 4	179	Elementary Physical Measurements		4	2.0
Prac. Mech 2 & 3b	279	Pattern Making and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

*A credit represents one hour of recitation or two hours of laboratory a week for one semester.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 61	244	Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3a	151	History of English Literature	3		3.0
Mathematics 6	166	Analytical Geometry	5		5.0
Mech. of Engin. 5	266	Slide Rule Practice	1		1.0
Practical Mech. 4	279	Forge Shop		6	2.0
Physics 3a	179	General College Physics	4		4.0
Physics 5	179	Measurements in Mech. and Heat	1	4	3.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Civil Engin. 62	245	Field Practice		4	1.0
Drawing 4a	251	Advanced Drawing		4	0.7
		Second Half			
Drawing 4a	251	Advanced Drawing		8	1.3

Second Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 63	245	Advanced Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3b	151	History of English Literature	3		3.0
Mathematics 7a	167	Calculus, First Part	5		5.0
Physics 3a	179	General College Physics	4		4.0
Physics 6	179	Measurements in Elec. Sound and Light	1	4	3.0
Practical Mech 5	279	Machine Shop		6	2.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Drawing 4b	251	Advanced Drawing		9	1.5
		Second Half			
Civil Engin. 64	245	Adanced Field Practice		4	1.0
Drawing 4b	251	Advanced Drawing		5	0.8

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Chemistry 17	135	Gas Analysis		2	1.0
Collateral Activ. 7	249	Class Society			
Elec. Engin. 1	256	Elements of Electrical Engin.	3		3.0
Elec. Engin. 9a	257	Electrical Laboratory		2	1.0
Mathematics 7b	167	Calculus, Second Part	3		3.0
Mech. of Engin. 1	265	Mechanics of Materials	5		5.0
Mech. of Engin. 2	265	Testing of Materials		2	1.0
Mech. of Engin. 3	266	Kinematics	3		3.0
Mech. of Engin. 4	266	Kinematics Drawing		12	4.0
Metallurgy 4	277	Metallurgy of Iron and Steel	2		2.0

Second Semester

Civil Engin. 21	242	Hydraulics	2		2.0
Civil Engin. 74	246	Structural Design		4	2.0
Collateral Activ. 1	248	Junior Inspection Trip			
Collateral Activ. 7	249	Class Society			
Elec. Engin. 2	256	Direct-Current Dynamos	3		3.0
Elec. Engin. 3	256	Alternating Currents	3		3.0
Elec. Engin. 7	257	Dynamo Design		6	2.0
Elec. Engin. 9b	257	Elec. Laboratory		2	1.0
Mech. Engin. 8	264	Steam Laboratory	1	2	2.0
Mech. of Engin. 6	266	Analytical Mechanics	5		5.0
Mech. of Engin. 7	266	Machine Design		6	2.0

SENIOR YEAR

A student to be eligible to any class scheduled for the senior year must report for class work on September 17, and must have received credit in all subjects scheduled for the three preceding years.

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Collateral Activ. 5a	249	Magazine Digest			
Collateral Activ. 6a	249	A. S. M. E. and A. I. E. E. } Alternate Weeks	1		1.0
Collateral Activ. 7	249	Class Society			
Economics 5a	141	Economics for Engineers	2		2.0
Elec. Engin. 4	256	Generation and Transmission of Power	4		4.0
Elec. Engin. 10a	257	Electrical Laboratory	1	2	2.0
Elec. Engin. 6	256	Switchboard Design		4	1.3
English 101a	150	Technical Composition	3		3.0
Mech. Engin. 1	263	Thermodynamics	4		4.0
Mech. Engin. 2 & 3	263	Valve Gears and Steam Boilers	4		4.0
Mech. Engin. 6 & 7	263	Steam Engine and Turbine Design		6	2.0
Mech. Engin. 9a	264	Steam and Gas Engine Laboratory	1	2	2.0

Second Semester

Collateral Activ. 5b	249	Magazine Digest			
Collateral Activ. 6b	249	A. S. M. E. and A. I. E. E.	1		1.0
Collateral Activ. 7	249	Class Society			
English 101b	151	Technical Composition	3		3.0
		First Half			
Economics 5b	141	Economics for Engineers	2		2.0
Elec. Engin. 5	256	Applications of Electricity	4		2.0
Elec. Engin. 8	257	Transformer Design		4	0.7
Elec. Engin. 10b	257	Electrical Laboratory	1	2	1.0
Mech. Engin. 4	263	Steam Engineering of Power Plants	2		1.0
Mech. Engin. 5	263	Gas Engineering	4		2.0
Mech. Engin. 9b	264	Steam and Gas Engine Laboratory	1	2	1.0
Mech. of Engin. 8	267	Heating and Ventilating	2		1.0
Mech. of Engin. 9	267	Heating and Ventilating Design		6	1.0
		Second Half			
Collateral Activ. 2	248	Senior Inspection Trip			
Collateral Activ. 3	248	Thesis		26	4.5
Collateral Activ. 4	249	Thesis Assembly	1		0.3
Drawing 5	251	Theory and Practice of Photography	1	2	0.8

COURSES OF INSTRUCTION

Electrical Engineering

1. Elements of Electrical Engineering. Required of all juniors in Engineering. Elective for juniors or seniors in Industrial Chemistry. This work covers a study of the fundamental laws of electrical engineering, direct current circuits and transmission lines, and the fundamental theory of direct current generators and motors, and batteries. Prerequisite, Physics 3b. Mathematics 7a (Calculus, first part) must have been completed or be taken co-ordinately. *Three hours a week. First semester.* Professor FREEMAN.

2. Direct Current Dynamos. Required of juniors in Mechanical and Electrical Engineering. This course involves a more intensive study of direct current generators and motors than is covered in Course 1. Prerequisite, Electrical Engineering 1. *Three hours a week. Second semester.* Professor FREEMAN.

3. Alternating Currents. Required of all juniors in Engineering. Elective for juniors or seniors in Industrial Chemistry. This work involves a study of the fundamental laws of alternating current measuring instruments, generators, motors, transformers and converters. Prerequisite, Electrical Engineering 1. Mathematics 7b (Calculus, second part), must have been completed or be taken co-ordinately. *Five hours a week. Second semester.* Professor FREEMAN.

4. Generation and Transmission of Power. Required of seniors in Mechanical and Electrical Engineering. This involves a study of the design and operation of central stations and of the construction of transmission lines. Considerable time is devoted to a study of the theory and operation of the switching apparatus commonly used in modern central stations. Prerequisites, Electrical Engineering 1, 2 and 3. *Four hours a week. First semester.* Professor FREEMAN.

5. Applications of Electricity. Required of seniors in Mechanical and Electrical Engineering. A brief course in illumination, telephony, telegraphy and electric wiring. Prerequisites, Electrical Engineering 1, 2 and 3. *Four hours a week. First half of second semester.* Professor FREEMAN.

6. Switchboard Design. Required of seniors in Mechanical and Electrical Engineering. Each student is given a problem in switchboard design which involves a study of parallel operation of generators and the arrangement of bus bars, control apparatus and feeder circuits. The work is for the most part done in the drawing room and is supplemented with lectures, whenever necessary, in order to give the student a clear idea of the methods of procedure which he should

employ. Prerequisites, Electrical Engineering 1, 2 and 3. *Four hours a week. First semester.* Assistant Professor BUREAU.

7. Dynamo Design. Required of juniors in Mechanical and Electrical Engineering. This work involves all the calculations necessary in the design of a direct current generator or motor, together with a complete set of detailed drawings. Each student is assigned an individual problem. Prerequisite, Electrical Engineering 1. Electrical Engineering 2 must have been completed or be taken co-ordinately. *Six hours a week. Second semester.* Professor FREEMAN, Assistant Professro BUREAU.

8. Transformer Design. Required of seniors in Mechanical and Electrical Engineering. A complete set of calculations and detailed drawings are made of a common type of transformer. Each student is assigned an individual problem. Prerequisites, Electrical Engineering 1, 2 and 3. *Four hours a week. First half of second semester.* Assistant Professor BUREAU.

9a. Electrical Laboratory. Required of all juniors in Engineering. Elective for juniors or seniors in Industrial Chemistry. The electrical experiments given in this course are elementary in character and are designed to parallel as far as possible the work in Course 1, the plan being to give the student practical illustrations of the theory covered in the class room. A comprehensive report of each experiment is required of each student within one week after the experiment is completed. Prerequisite, Physics 6. Electrical Engineering 1 must have been completed or must be taken co-ordinately. *Two hours a week. First semester.* Assistant Professor BUREAU.

9b. Electrical Laboratory. Required of all juniors in Engineering. Elective for juniors or seniors in Industrial Chemistry. . This is a continuation of Course 9a and is intended to parallel Course 3. Prerequisite, Electrical Engineering 9a, Electrical Engineering 3 must have been completed or be taken co-ordinately. *Two hours a week. Second semester.* Assistant Professor BUREAU.

10a. Electrical Laboratory. Required of seniors in Mechanical and Electrical Engineering. This is a continuation of Course 9b. The experiments are of a more advanced nature and deal with the more complex theory, particularly of alternating current machines. A comprehensive report on each experiment is required of each student within a week after the experiment is performed. Prerequisite, Electrical Engineering 9b. *Lectures and recitations one hour a week; laboratory two hours a week. First semester.* Assistant Professor BUREAU.

10b. Electrical Laboratory. This is a continuation of Course 10a. Prerequisites, Electrical Engineering 10a. *Lectures and recita-*

tions one hour a week; laboratory two hours a week. First half of second semester. Assistant Professor BUREAU.

For Graduates

201a. Advanced Alternating Currents. This course involves an intensive study of the fundamental theory of alternating current phenomena and machines. Designs of machines and layouts for central stations and distributing systems are made. *Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week. First semester.* Professor FREEMAN.

201b. Advanced Alternating Currents. A continuation of course 201a. *Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week. Second semester.* Professor FREEMAN.

202. Telephone Engineering. A study of the theory and operation of modern telephone exchanges. Layouts and designs are made to meet different assumed conditions. *Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week. First semester.* Professor FREEMAN.

203. Illumination. A study of the principles underlying both exterior and interior illumination. The characteristics of the various commercial illuminants are compared and layouts for lighting systems are made. *Lectures and recitations five hours; laboratory ten hours, and drawing ten hours a week. Second semester.* Professor FREEMAN.

MECHANICAL ENGINEERING

Dean Anderson, Assistant Professor Curtis, Mr. Hawkins, Mr. Jackson

The Department of Mechanical Engineering is located in Mechanical Hall. The recitation room is provided with a projectoscope and has seats for 77 persons. The drawing room, which will accommodate thirty students, has a modern indirect system of illumination. Offices are provided for all instructors.

The equipment for carrying on experimental work in mechanical engineering includes: Steam boilers, pumps, engines; steam turbine; surface condenser; injector; gas engines; water turbine; feed-water heater; pressure blower; automobile test plant; optical indicator for use on automobile engines; absorption brakes; pyrometer; shaft dynamometer; hydraulic ram; coal calorimeter; gas calorimeter; wet and dry gas meters; water meters; platform and spring scales; revolution counters; pressure and vacuum gauges; draft gauges and manometers; thermometers, micrometer calipers, and planimeters; throttling and separating steam calorimeters; flue gas analyzer; steam engine indicators; gas engine indicator.

COURSE OF STUDY AND DEGREES

The course of study prescribed for students in Mechanical Engineering outlined below, leads to the degree of Bachelor of Science in Mechanical Engineering. For information regarding the advanced degree of M. E. (Mechanical Engineer), see the announcement of the Graduate School, page 301.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN MECHANICAL ENGINEERING

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits*
Art and Design 11a	129	Freehand Drawing		1	0.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1a	250	Mechanical Drawing		7	2.3
Drawing 3a	250	Descriptive Geometry	3		3.0
English 1a	150	English Composition	3		3.0
Mathematics 5	166	College Algebra	5		5.0
Prac. Mech. 1 & 3a	279	Wood Working and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

Second Semester

Art and Design 11b	129	Freehand Drawing		1	0.3
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1b	250	Mechanical Drawing		4	1.3
Drawing 3b	251	Descriptive Geometry	2		2.0
English 1b	150	English Composition	3		3.0
Mathematics 4	166	Trigonometry	5		5.0
Physics 4	179	Elementary Physical Measurements		4	2.0
Prac. Mech. 2 & 3b	279	Pattern Making and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

*A credit represents one hour of recitation or two hours of laboratory a week for one semester.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 61	244	Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3a	151	History of English Literature	3		3.0
Mathematics 6	166	Analytical Geometry	5		5.0
Mech. of Engin. 5	266	Slide Rule Practice	1		1.0
Practical Mech. 4	279	Forge Shop		6	2.0
Physics 3a	179	General College Physics	4		4.0
Physics 5	179	Measurements in Mech. and Heat	1	4	3.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Civil Engin. 62	245	Field Practice		4	1.0
Drawing 4a	251	Advanced Drawing		4	0.7
		Second Half			
Drawing 4a	251	Advanced Drawing		8	1.3

Second Semester

Civil Engin. 63	245	Advanced Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3b	151	History of English Literature	3		3.0
Mathematics 7a	167	Calculus, First Part	5		5.0
Physics 3b	179	General College Physics	4		4.0
Physics 6	179	Measurements in Elec. Sound and Light	1	4	3.0
Practical Mech. 5	279	Machine Shop		6	2.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Drawing 4b	251	Advanced Drawing		9	1.5
		Second Half			
Civil Engin. 64	245	Advanced Field Practice		4	1.0
Drawing 4b	251	Advanced Drawing		5	0.8

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Chemistry 17	135	Gas Analysis		2	1.0
Collateral Activ 7	249	Class Society			
Elec. Engin. 1	256	Elements of Electrical Engin.	3		3.0
Elec. Engin. 9a	257	Electrical Laboratory		2	1.0
Mathematics 7b	167	Calculus, Second Part	3		3.0
Mech. of Engin. 1	265	Mechanics of Materials	5		5.0
Mech. of Engin. 2	265	Testing of Materials		2	1.0
Mech. of Engin. 3	266	Kinematics	3		3.0
Mech. of Engin. 4	266	Kinematics Drawing		12	4.0
Metallurgy 4	277	Metallurgy of Iron and Steel	2		2.0

Second Semester

Civil Engin. 21	242	Hydraulics	2		2.0
Civil Engin. 74	246	Structural Design		4	2.0
Collateral Activ. 1	248	Junior Inspection Trip			
Collateral Activ. 7	249	Class Society			
Elec. Engin. 2	256	Direct Current Dynamos	3		3.0
Elec. Engin. 3	256	Alternating Currents	3		3.0
Elec. Engin. 7	257	Dynamo Design		6	2.0
Elec. Engin. 9b	257	Elec. Laboratory		2	1.0
Mech. Engin. 8	264	Steam Laboratory	1	2	2.0
Mech. of Engin. 6	266	Analytical Mechanics	5		5.0
Mech. of Engin. 7	266	Machine Design		6	2.0

SENIOR YEAR

A student to be eligible to any class scheduled for the senior year must report for class work on September 17, and must have received credit in all subjects scheduled for the three preceding years.

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Collateral Activ. 5a	249	Magazine Digest } Alternate			
Collateral Activ. 6a	249	A. S. M. E. and A. I. E. E. } Weeks	1		1.0
Collateral Activ. 7	249	Class Society			
Economics 5a	141	Economics for Engineers	2		2.0
Elec. Engin. 4	256	Generation and Transmission of Power	4		4.0
Elec. Engin. 10a	257	Electrical Laboratory	1	2	2.0
Elec. Engin. 6	256	Switchboard Design		4	1.3
English 101a	150	Technical Composition	3		3.0
Mech. Engin. 1	263	Thermodynamics	4		4.0
Mech. Engin. 2 & 3	263	Valve Gears and Steam Boilers	4		4.0
Mech. Engin. 6 & 7	263	Steam Engine and Turbine Design		6	2.0
Mech. Engin. 9a	264	Steam and Gas Engine Laboratory	1	2	2.0

Second Semester

Collateral Activ. 5b	249	Magazine Digest } Alternate			
Collateral Activ. 6b	249	A. S. M. E. and A. I. E. E. } Weeks	1		1.0
Collateral Activ. 7	249	Class Society			
English 101b	151	Technical Composition	3		3.0
		First Half			
Economics 5b	141	Economics for Engineers	2		2.0
Elec. Engin. 5	256	Applications of Electricity	4		2.0
Elec. Engin. 8	257	Transformer Design		4	0.7
Elec. Engin. 10b	257	Electrical Laboratory	1	2	1.0
Mech. Engin. 4	263	Steam Engineering of Power Plants	2		1.0
Mech. Engin. 5	263	Gas Engineering	4		2.0
Mech. Engin. 9	264	Steam and Gas Laboratory	1	2	1.0
Mech. of Engin. 8	267	Heating and Ventilating	2		1.0
Mech. of Engin. 9	267	Heating and Ventilating Design		6	1.0
		Second Half			
Collateral Activ. 2	248	Senior Inspection Trip			
Collateral Activ. 3	248	Thesis		26	4.5
Collateral Activ. 4	249	Thesis Assembly	1		0.3
Drawing 5	251	Theory and Practice of Photography	1	2	0.8

COURSES OF INSTRUCTION

Mechanical Engineering

1. Thermodynamics. Required of seniors in Mechanical, Electrical, Civil and Mining Engineering. This work consists of a study of the laws of thermodynamics, thermal capacities, and the application of thermodynamics to the steam engine, steam turbine and locomotive. *Four hours a week. First semester.* Professor ANDERSON, Mr. HAWKINS.

2. Valve Gears. Required of seniors in Mechanical and Electrical Engineering. The study of various forms of standard engine valves and methods of designing. *Four hours a week. First half of first semester.* Professor ANDERSON, Mr. HAWKINS.

3. Steam Boilers. Required of seniors in Mechanical and Electrical Engineering. A study of the various commercial steam boilers, consumption of fuel, incrustations, determining of horse power of boilers, boiler tests, the design of boilers for efficiency and economy, and the methods of heat transmission. *Four hours a week. Second half of first semester.* Professor ANDERSON, Mr. HAWKINS.

4. Steam Engineering of Power Plants. Required of seniors in Mechanical and Electrical Engineering. In this course the theory, design and operation of the steam appliances used in connection with the generation of power in steam central stations are studied together with the manner in which the apparatus is associated in a complete plant. *Two hours a week. First half of second semester.* Professor ANDERSON, Mr. HAWKINS.

5. Gas Engineering. Required of seniors in Mechanical and Electrical Engineering. This comprises a study of the theory, design and operation of the various types of internal combustion engines. *Four hours a week. First half of second semester.* Professor ANDERSON, Assistant Professor CURTIS.

6. Steam Engine Design. Required of seniors in Mechanical and Electrical Engineering. A study is made of valve details and construction, a complete design of a valve for an assumed engine being worked up. Simple, compound and triple compound engines are studied thru the construction of ideal indicator cards, the drawing of tangential effort diagrams and finally in the complete computation and preliminary layout of a given engine. *Six hours a week, thirteen weeks of first semester.* Professor ANDERSON, Mr. HAWKINS.

7. Steam Turbine Design. Required of seniors in Mechanical and Electrical Engineering. This course consists in making all preliminary calculations and finally designing the blades and nozzles for a specified turbine of a combined impulse-reaction type. *Six hours a*

week. Four weeks of first semester; two weeks of second semester. Professor ANDERSON, Mr. HAWKINS.

8. Steam Laboratory. Required of juniors in Mechanical, Electrical, Mining and Metallurgical Engineering. This laboratory course involves a study of the apparatus used by the steam engine and the experiments are intended to familiarize the student with the simple methods of measuring heat units and determining mechanical power. *Recitations one hour a week; laboratory two hours a week. Second semester.* Professor ANDERSON, Mr. JACKSON.

9a. Steam and Gas Engine Laboratory. Required of seniors in Mechanical, Electrical and Mining Engineering. A series of experiments with steam and gas apparatus and machinery, for the purpose of training men in the refinements of steam and gas engineering. The experiments are as far as possible arranged so as to emphasize the theory and principles taught in the class room. *Recitations one hour a week; laboratory two hours a week. First semester.* Dean ANDERSON, Mr. JACKSON.

9b. Steam and Gas Engine Laboratory. Required of seniors in Mechanical, Electrical and Mining Engineering. A continuation of Course 9a. *Lectures and recitations one hour a week. First half of second semester.* Dean ANDERSON, Mr. JACKSON.

For Graduates

201a. Automotive Engineering. An advanced course on the essentials of motor vehicle design, construction, and operation. Prerequisite, degree of B. S. in M. E. or its equivalent. *Recitation five hours a week; design ten hours a week, and laboratory fifteen hours a week. First semester.* Professor ANDERSON.

201b. Automotive Engineering. A continuation of Course 201a. *Recitation five hours a week; design ten hours a week; laboratory fifteen hours a week. Second semester.* Professor ANDERSON.

202a. Power Plants. An advanced course on the engineering of central power plants. Prerequisite, degree of B. S. in M. E. or its equivalent. *Recitation five hours a week; design fifteen hours a week. First semester.* Professor ANDERSON.

202b. Power Plants. A continuation of Course 202a. *Recitation five hours a week; design fifteen hours a week. Second semester.* Professor ANDERSON.

MECHANICS OF ENGINEERING

Professor Frankel, Assistant Professor Curtis, Mr. Hawkins, Mr. Jackson

The Department of Mechanics of Engineering is located in Mechanical Hall. There is a recitation room with 66 seats, a large, well-lighted drawing room, used jointly with the Department of Electrical Engineering, and the laboratory.

Laboratory

The facilities for the study of the physical characteristics of engineering materials are as follows: a two hundred thousand pound Olsen, specially designed, automatic, autographic, motor-driven testing machine arranged for testing columns up to fifteen feet and transverse specimens up to twenty feet; a 100,000 pound Riehle Testing Machine; an automatic cement testing machine and a Standard Rattler for the investigation of paving brick and materials of similar class, with a very complete equipment of accessories for use in connection with these machines.

COURSES OF INSTRUCTION

Mechanics of Engineering

1. **Mechanics of Materials.** Required of all juniors in Engineering. This course presents to the student the laws governing the behavior of the different materials used in construction under the action of forces. Beams, columns and shafts of different shapes and materials are analyzed with reference to their resistance and deformation when subjected to compressional, tensional and torsional strains. Problems including the design of truss members, floors, girders and reinforced concrete construction are given. Prerequisite, Physics 3a, Mathematics 7b (Calculus, second part), must have been completed or must be taken co-ordinately. *Five hours a week. First semester. Repeated second semester.* Professor FRANKEL.

2. **Testing of Materials.** Required of all juniors in Engineering. In the testing of materials laboratory experiments are conducted to verify the laws governing materials under stress and to establish the principles of the mechanics of materials. Experimental investigation of woods, irons, cements and bricks in their various forms are made with a view of impressing the students with the factors entering into the use of such materials in engineering construction. Mechanics of Engineering 1 must have been completed or be taken co-ordinately. *Two hours a week. First semester.* Professor FRANKEL, Assistant Professor CURTIS.

3. Kinematics. Required of juniors in Mechanical and Electrical Engineering. This course is intended to familiarize the student with the mutual dependence of the movements in the parts of a machine. Special attention is given to the analysis of mechanisms involving link-motions, gear teeth, cams, communication of motion by rolling and sliding contact and quick-return motions. Prerequisites, Mathematics 2, 4, and 5 and Drawing 3. *Three hours a week. First semester.* Assistant Professor CURTIS.

4. Kinematic Design. Required of juniors in Mechanical and Electrical Engineering. This course is given in conjunction with Mechanics of Engineering 3. It consists of eight plates of design of spur, bevel and worm gearing, and other mechanisms which illustrate the general principles discussed in kinematic problems. Prerequisites, same as Course 3, and also Drawing 1 and 4. *Twelve hours a week. First semester.* Professor FRANKEL, Assistant Professor CURTIS.

5. Slide Rule Practice. Required of all sophomores in Engineering. This course is intended to familiarize the student with the theory and use of the slide rule. Prerequisites, Mathematics 4 and 5. *One hour a week. First semester.* Mr. JACKSON.

6. Analytical Mechanics. Required of all juniors in Engineering. This subject is given with a view of encouraging original analysis, logical proofs and rational conclusions with respect to the treatment of the equilibrium and motion of bodies under the action of forces. The application of the fundamental principles of mechanics to engineering problems is treated in a way calculated to interest the student in the application of analytical mechanics in his engineering work. Prerequisite, Physics 3a. Mathematics 7b (Calculus, second part), must be completed or taken co-ordinately. *Five hours a week. Second semester.* Professor FRANKEL.

7. Machine Design. Required of juniors in Mechanical and Electrical Engineering. A complete design of some modern machine tool is required of each student taking this work. This includes a written digest of the analysis of similar machines on the market and complete shop drawings of the special machine assigned to the individual student according to given specifications. This work is supplemented by a course of lectures to emphasize particularly the best practices in machine building as represented by the design of our modern machines. The cutting speeds and feeds of high speed tools, the design of variable speed boxes, design of bearings, the analysis of the stresses set up in the parts of machines and the calculations of the sizes of parts are all discussed. Special machines that involve some of the more interesting problems of design are taken as a whole and analyzed in detail. Prerequisites, Mechanics of Engineering 1, 2, 3 and 4. *Six hours a*

week. Second semester. Professor FRANKEL, Assistant Professor CURTIS.

8. Heating and Ventilating. Required of seniors in Mechanical and Electrical Engineering. This is a study of the calculations necessary for the design of modern heating and ventilating installations. Details of the construction of the apparatus required and the best methods of erecting same are carefully considered. The relative merits of different systems under particular conditions are emphasized. *Two hours a week. First half of second semester.* Professor FRANKEL.

9. Heating and Ventilating Design. Required of seniors in Mechanical and Electrical Engineering. The class work in heating and ventilating is supplemented by work in the drawing room where for a given building, heating plants of three systems are designed and working drawings made showing the location and size of apparatus. A bill of material and the estimated cost are also included in the requirements. *Six hours a week. First half of second semester.* Professor FRANKEL, Mr. HAWKINS.

For Graduates

201a. Heating and Ventilating. An advanced course relative to the design of modern heating and ventilating plants. This course includes air conditioning problems. Prerequisite, degree of B. S. in M. E. or its equivalent. *Recitation five hours a week; design twenty hours a week. First semester.* Professor FRANKEL.

201b. Heating and Ventilating. A continuation of Course 201a. *Recitation five hours a week; design twenty hours a week. Second semester.* Professor FRANKEL.

MINES AND METALLURGY

Professor Norwood, Professor Barr, Professor Crouse

The Department of Mines and Metallurgy occupies two brick buildings. The main building is 45x100 feet, with two stories and a basement. It contains adequate class rooms, drawing rooms, library and offices. In addition the State Geological Museum and the offices of the State Department of Mines are located in this building. The other building is 40x80 feet and is two stories high. It is used as a mining and metallurgical laboratory.

Apparatus and Laboratories

The equipment for illustrating the most common processes in mining and metallurgical engineering and for experimental work is very complete and includes mining machines and tools; ore separators; assay furnaces; hoists; pumps; safety lamps; signals; telephones; mine gas detecting apparatus; coal washers; ventilating fans; apparatus for studying various extraction and separation processes, pyrometry, metallography, and ventilation. There is also a complete line of apparatus for giving training in mine rescue work. Instruction in first aid to the injured is given by the Department of Anatomy and Physiology.

Library

The department has a good library specially selected for the use of students in mining and metallurgical engineering. The leading journals pertaining to these branches of engineering are placed in this library.

COURSE OF STUDY AND DEGREES

The Department of Mines and Metallurgy offers the following courses:

Course in Mining Engineering
Course in Metallurgical Engineering
Two Years' Course in Mining
Course for Practical Miners
Extension Work

The courses of study prescribed for students in Mining and Metallurgical Engineering are outlined below. They lead to the degrees of Bachelor of Science in Mining Engineering, and Bachelor of Science in Metallurgical Engineering as indicated in each case. For information regarding the advanced degrees E. M. (Mining Engineer) and Met. E. (Metallurgical Engineer) see the announcement of the Graduate School, page 301.

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN MINING ENGINEER

FRESHMAN YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits*
Art and Design 11a	129	Freehand Drawing		1	0.3
Chemistry 1a	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1a	250	Mechanical Drawing		7	2.3
Drawing 3a	250	Descriptive Geometry	3		3.0
English 1a	150	English Composition	3		3.0
Mathematics 5	166	College Algebra	5		5.0
Prac. Mech. 1 & 3a	279	Wood Working and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

Second Semester

Art and Design 11b	129	Freehand Drawing		1	0.3
Chemistry 1b	134	General Inorganic Chemistry	3	4	5.0
Collateral Activ. 7	249	Class Society			
Drawing 1b	250	Mechanical Drawing		4	1.3
Drawing 3b	251	Descriptive Geometry	2		2.0
English 1b	150	English Composition	3		3.0
Mathematics 4	166	Trigonometry	5		5.0
Physics 4	179	Elementary Physical Measurements		4	2.0
Prac. Mech. 2 & 3b	279	Pattern Making and Foundry		8	2.7
Military Science	169	Infantry Drill		3	1.0
Physical Education	175	Gymnasium or Field Athletics		2	0.7

*A credit represents one hour of recitation or two hours of laboratory a week for one semester.

SOPHOMORE YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 61	244	Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3a	151	History of English Literature	3		3.0
Mathematics 6	166	Analytical Geometry	5		5.0
Mech. of Engin. 5	266	Slide Rule Practice	1		1.0
Practical Mech. 4	279	Forge Shop		6	2.0
Physics 3a	179	General College Physics	4		4.0
Physics 5	179	Measurements in Mech. & Heat	1	4	3.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Civil Engin. 62	245	Field Practice		4	1.0
Drawing 4a	251	Advanced Drawing		4	0.7
		Second Half			
Drawing 4a	251	Advanced Drawing		8	1.3

Second Semester

Civil Engin. 63	245	Advanced Surveying	2		2.0
Collateral Activ. 7	249	Class Society			
English 3b	151	History of English Literature	3		3.0
Mathematics 7a	167	Calculus, First Part	5		5.0
Physics 3b	179	General College Physics	4		4.0
Physics 6	179	Measurements in Elec. Sound and Light	1	4	3.0
Prac. Mech. 5	279	Machine Shop		6	2.0
Military Science	169	Infantry Drill		3	1.0
		First Half			
Drawing 4b	251	Advanced Drawing		9	1.5
		Second Half			
Civil Engin. 64	245	Advanced Field Practice		4	1.0
Drawing 4b	251	Advanced Drawing		5	0.8

JUNIOR YEAR

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Chemistry 4	134	Qualitative Analysis	1	6	4.0
Collateral Activ. 7	249	Class Society			
Elec. Engin. 1	256	Elements of Electrical Engin.	3		3.0
Elec. Engin. 9a	257	Electrical Laboratory		2	1.0
Geology 2a	156	Elementary Geology	2		2.0
Geology 4	156	Mineralogy		4	2.0
Mathematics 7b	167	Calculus, Second Part	3		3.0
Mech. of Engin. 1	265	Mech. of Materials	5		5.0
Mech. of Engin. 2	265	Testing of Materials		2	1.0
Metallurgy 4	277	Iron and Steel	2		2.0
Mining 2 and 3	275	Excavating, Quarrying, Boring, etc.	4		4.0

Second Semester

Civil Engin. 21	242	Hydraulics	2		2.0
Collateral Activ. 1	248	Junior Inspection Trip			
Collateral Activ. 7	249	Class Society			
Elec. Engin. 3	256	Alternating Currents	3		3.0
Elec. Engin. 9b	257	Electrical Laboratory		2	1.0
Geology 2b	156	Elementary Geology	2		2.0
Mech. of Engin. 8	267	Steam Laboratory	1	2	2.0
Mech. of Engin. 6	266	Analytical Mech.	5		5.0
Metallurgy 6 and 7	277	Copper, Lead, Zinc, Silver, Gold, etc	5		5.0
Mining 4	275	Development, Methods	3		3.0
		First Half			
Chemistry 10	135	Quantitative Analysis	1	8	3.0
		Second Half			
Mining 11	27	Advanced Mine and Land Survey		9	2.2

SENIOR YEAR

A student to be eligible to any class scheduled for the senior year must report for class work on September 17 and must have received credit in all subjects scheduled for the three preceding years.

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 77a	246	Mine Structures		4	1.3
Collateral Activ. 7	249	Class Society			
Economics 5a	141	Economics for Engineers	2		2.0
English 101a	150	Technical Composition	3		3.0
Mech. Engin. 1	263	Thermodynamics	4		4.0
Mech. Engin. 9a	264	Steam and Gas Engine Laboratory	1	2	2.0
Metallurgy 1	276	Assaying		8	2.7
Metallurgy 17	278	Ore Dressing	2		2.0
Mining 5	276	Mining Geology	3		3.0
Mining 6	276	Ventilation	3		3.0
Mining 8	276	Mining Machinery	2		2.0

Second Semester

Collateral Activ. 5	249	Magazine Digest	1		1.0
Collateral Activ. 7	249	Class Society			
English 101b	151	Technical Composition	3		3.0
		First Half			
Anatomy & Physi.	123	First Aid		4	0.7
Civil Engin. 77b	247	Mine Structures		6	1.0
Economics 5b		Economics for Engineers	2		1.0
Metallurgy 12	277	Metallography		4	0.7
Metallurgy 18	278	Ore Dressing Laboratory		6	1.0
Mining 7	276	Gases and Accidents	5		2.5
Mining 9	276	Examination and Valuation	3		1.5
		Second Half			
Collateral Activ. 2	248	Senior Inspection Trip			
Collateral Activ. 3	248	Thesis		26	4.5
Collateral Activ. 4	249	Thesis Assembly	1		0.3
Drawing 5	251	Photography	1	2	0.8

OUTLINE OF COURSE LEADING TO THE DEGREE B. S. IN METALLURGICAL ENGINEERING

FRESHMAN, SOPHOMORE AND JUNIORS YEARS

The work during the first three years is the same as for Mining Engineering which is outlined on the pages immediately preceding.

SENIOR YEAR

A student to be eligible to any class scheduled for the senior year must report for class work on September 17, and must have received credit in all subjects scheduled for the three preceding years.

First Semester

Course	See Page	Subject	Hrs. Rec.	Hrs. Lab.	Credits
Civil Engin. 77a	246	Mine Structures		4	1.3
Collateral Activ. 5a	249	Magazine Digest	2		2.0
Collateral Activ. 7	249	Class Society			
Economics 5a	141	Economics for Engineers	2		2.0
English 101a	150	Technical Composition	3		3.0
Metallurgy 1	276	Assaying		8	2.7
Metallurgy 9, 10, 11	277	Silver, Gold, Zinc, Copper, Lead, etc.	5		5.0
Metallurgy 14	278	Metallurgical Calculations	3		3.0
Metallurgy 17	278	Ore Dressing	2		2.0
Mining 5	276	Mining Geology	3		3.0
Mining 8	276	Mining Machinery	2		2.0

Second Semester

Collateral Activ. 5b	249	Magazine Digest	1		1.0
Collateral Activ. 7	249	Class Society			
English 101b	151	Technical Composition	3		3.0
		First Half			
Economics 5b	141	Silver, Gold, Zinc, Copper,			
Metallurgy 2	276	Assaying and Lab. Ore Tests		4	0.7
Metallurgy 5	277	Metallurgy of Iron and Steel	5		2.5
Metallurgy 6	277	Elements of Matallography	2		1.0
Metallurgy 12	277	Metallography		4	0.7
Metallurgy 13	277	Fuel Testing		4	0.7
Metallurgy 16	278	Electro-Metallurgy	2		1.0
Metallurgy 18	278	Ore Dressing Lab.		6	1.0
Mining 9	276	Examination and Valuation	3		1.5
		Second Half			
Collateral Activ. 2	248	Senior Inspection Trip			
Collateral Activ. 3	248	Thesis		26	4.5
Collateral Activ. 4	249	Thesis Assembly	1		0.3
Drawing 5		Photography	1	2	0.8

TWO YEARS' COURSE IN MINING

A two years' course is offered for young men who for any reason may not be prepared to take the full engineer's course of four years, but who desire to obtain more than an elementary training in the methods of mining. It is intended especially for persons who desire to fit themselves for such positions as mine manager, mine superintendent, assistant engineer and mine inspector; also for those to whom a knowledge of mining will be of service professionally or in business dealings even though they should not be directly connected with mining operations. Requirements for entrance are less exacting than those for the full course, just as the range of instruction is less comprehensive. No degree is conferred but a certificate of proficiency is given. The course is quite flexible, to suit the preparedness of the student, and advanced work may be taken in lieu of such subjects in the specified list as the student may have completed satisfactorily elsewhere.

Special information relating to the course will be sent upon application to the head of the Department of Mines and Metallurgy, University of Kentucky, Lexington, Ky. This course affords a great opportunity to many young men to acquire a technical training who might otherwise be prevented from attending college.

PRACTICAL MINERS' COURSE

A short course is offered for practical miners, mine foremen, and mine managers who desire to improve their knowledge of the principles that underlie correct mining. This course, which covers eight weeks, is given in the spring. Details concerning the course are set forth in a special circular, which may be obtained upon application to the head of the department. Persons desiring to take the examinations for Mine Foreman and for Assistant Inspectors of Mines will find the course quite helpful.

EXTENSION WORK

The purpose of extension is in part to extend the instructional work of the Department of Mines and Metallurgy thru the formation and supervision of local classes in the mining fields for men and youths employed at the mines, and thru free lectures at mining centers and other appropriate places; also to disseminate information concerning the utilization of such of the mineral deposits of the state as require extended investigation in the laboratory for a full determination of their commercial applications.

For classes formed in the mining regions a program of studies is prepared by instructors in the Department, examinations are held by representatives of the Department and a certificate is awarded to such persons as satisfactorily complete the work laid out for them.

COURSES OF INSTRUCTION

Mining

1. Elements of Mining. For law students. A series of lectures presenting a general view of mining operations. *Second half of second semester.* Professor BARR.

2. Excavating, Quarrying. Required of juniors in Mining and Metallurgical Engineering. (a) Excavation in soft ground and in rock. (b) Explosives and blasting; kinds and effects of explosives; theory and practice of blasting; placing, charging and firing holes under various conditions; substitutes for explosives. (c) Quarrying: plants and methods for various sorts of rock; underground quarries. *Two hours a week. First semester.* Professor BARR.

3. Boring, Shaft-Sinking, Shaft-Boring. Required of juniors in Mining and Metallurgical Engineering. (a) Boring: methods with auger, with rods and with rope; rotary boring; casing; drive piping. (b) Shaft-sinking: general principles; methods in soft ground and in rock; hoisting, ventilating and draining during sinking; timbering, walling, tubing and linings for special cases; sinking linings in watery ground and in quicksand. (c) Shaft-boring: general observations; various methods described and compared. *Two hours a week. First semester.* Professor BARR.

4. Development, Methods of Working and Extraction. Required of juniors in Mining and Metallurgical Engineering. (a) Exploration and development: choice of exploratory methods—shafts, adit, slope; location of openings with reference to development; laying out the workings and order of exploration; driving tunnels, drifts, gangways, slopes, levels, cross-cuts; upraises—vertical and inclined; winzes—methods of sinking and raising. (b) Methods of working and of supporting excavation: general rules as to choice of mode of working away, etc.; breaking ground (1) in coal mining, and (2) in metal mining; support of excavations (1) by pillars of mineral, (2) by timbering (3) by caving and filling; methods of working applicable to deposits according to their origin, thickness, inclination and character; extraction and removal of material; mine and surface haulage roads; rope and other means of haulage; hoisting; drainage. *Three hours a week. Second semester.* Professor BARR.

5. Mining Geology. Required of seniors in Mining and Metallurgical Engineering. (a) Mining geology: origin of ores, classification of ore deposits; irregularities and disturbances of beds and veins. (b) Prospecting; systematic methods; value of geology; tracing outcrops; construction of sections; application of descriptive geometry to the solution of mining geology problems. (c) Open cuts and stream workings: hydraulic mining; dredging. (d) Metal mining. *Three hours a week. First semester.* Professor BARR, Professor CROUSE.

6. Ventilation. Required of seniors in Mining Engineering. Theoretical considerations; methods of ventilation; distribution of air supply. *Three hours a week. First semester.* Professor BARR.

7. Gases and Accidents. Required of seniors in Mining Engineering. (a) Mine gases and illumination. (b) Accidents: causes; places; explosions; safeguards; rescue and relief. *Five hours a week. First half of second semester.* Professor BARR.

8. Mining Machinery. Required of seniors in Mining and Metallurgical Engineering. Machinery and appliances for mining, hoisting, draining, ventilating, hauling, screening, loading, storing, etc. *Two hours a week. First semester.* Professor BARR.

9. Examination and Valuation of Mines, Etc. Required of seniors in Mining and Metallurgical Engineering. Methods and precautions in examination and valuation: "salting"; concealing exhausted workings, etc.; relation of capital invested to actual dividends; mine management; cost sheets. *Three hours a week. First half of second semester.* Professor BARR.

10. Advanced Mine and Land Surveying. Required of juniors in Mining and Metallurgical Engineering. Field work and maps. The application of the art of surveying to the work of mining engineering is emphasized. *Six hours a week. First semester.* Professor BARR.

Metallurgy

1. Assaying. Required of seniors in Mining and Metallurgical Engineering. The fire-assay of gold and silver ores, and of lead and copper ores for base metals. *Laboratory eight hours a week. First semester.* Professor CROUSE.

2. Assaying and Laboratory Ore Tests. Required of seniors in Metallurgical Engineering. The fire-assay of gold and silver ores; galena and coinage for silver; bullion—base, Dore, silver and gold; copper-bearing material (ores, mattes, blister copper, etc.), for silver and gold; copper and lead slags; zinciferous ores and metallurgical products (e. g., residues from zinc distillation, and cyanide zinc precipitates) for silver and gold; copper, lead and tin ores for base metal.

Also, the assay of mercury, as an exercise in distillation, and the electrolytic assay of copper and lead ores. The determination of the heating power of coal by reduction of litharge is also given, as a speedy, though not accurate, method useful in emergencies. Exercises in the determination of the suitability of certain wet extraction processes for a given ore include: (1) Tests of ores for cyaniding; (2) tests of gold ores for chlorinating; and regulation tests for chloridized-roasting of silver ores. *Laboratory four hours a week. First half of second semester.* Professor CROUSE.

3. **Assaying Laboratory.** Required of juniors in Civil Engineering. An elementary course. *Four hours a week. First half of second semester.* Professor CROUSE.

4. **Metallurgy of Iron and Steel.** Required of all juniors in Engineering. *Two hours a week. First semester.* Professor CROUSE.

5. **Metallurgy of Iron and Steel.** Required of seniors in Metallurgical Engineering. Metallurgy 4, extended. *Five hours a week. First half of second semester.* Professor CROUSE.

6. **Metallurgy of Copper, Lead and Zinc.** Required of juniors in Mining and Metallurgical Engineering. *Courses 6 and 7 total five hours a week. Second semester.* Professor CROUSE.

7. **Metallurgy of Silver, Gold and Minor Metals.** Required of juniors in Mining and Metallurgical Engineering. *Courses 6 and 7 total five hours a week. Second semester.* Professor CROUSE.

8. **Elements of Metallography.** Requirel of seniors in Metallurgical Engineering. Lectures and recitations. *Four hours a week. First half of second semester.* Professor CROUSE.

9. **Metallurgy of Copper, Specialized.** Required of seniors in Metallurgical Engineering. *Five hours a week. Second half of first semester.* Professor CROUSE.

10. **Metallurgy of Lead, Specialized.** Required of seniors in Metallurgical Engineering. *Courses 10 and 11 total five hours a week. First half of first semester.* Professor CROUSE.

11. **Metallurgy of Silver, Gold, Zinc and Minor Metals.** Required of seniors in Metallurgical Engineering. *Courses 10 and 11 total five hours a week. First half of first semester.* Professor CROUSE.

12. **Metallography.** Required of seniors in Mining and Metallurgical Engineering. Includes the preparation of samples of iron and steel, and descriptions of their structures, and studies of some of the alloys. *Laboratory four hours a week. First half of second semester.* Professor CROUSE.

13. **Fuel Testing. Pyrometry.** Required of seniors in Metallurgical Engineering. *Laboratory four hours a week. First half of second semester.* Professor CROUSE.

14. Metallurgical Calculations. Required of seniors in Metallurgical Engineering. *Three hours a week. First semester.* Professor CROUSE.

15. Metallurgy. For students in Industrial Chemistry. A general account of Metallurgical procesees. *Two hours a week. Second semester.* Professor CROUSE.

16. Electro-Metallurgy. Required of seniors in Metallurgical Engineering. *Two hours a week. First half of second semester.* Professor CROUSE.

17. Ore Dressing. Required of seniors in Mining and Metallurgical Engineering. In addition to the usual wet methods of concentration, magnetic, electrostatic, and flotation processes of separation are studied. This course also includes coal washing. Lectures and recitations. *Two hours a week. First semester.* Professor CROUSE.

18. Ore Dressing. Laboratory. Required of seniors in Mining and Metallurgical Engineering. In addition to the usual wet methods of concentration, magnetic, electrostatic, and flotation processes of separation are studied. This course also includes coal washing. *Six hours a week. First half of second semester.* Professor CROUSE.

PRACTICAL MECHANICS

Assistant Professor Dicker, Mr. Thurman, Mr. Saunier, Mr. Arkle, Mr. Tucker, Mr. Crowder

The Department of Practical Mechanics is located in Mechanical Hall. The mechanical engineering recitation room is used for lectures and recitations.

The Shops

The equipment in the various shops is briefly indicated as follows:

The wood shop contains completely equipped benches and wood turning lathes; band saw; jig saw; circular saw; trimmer; mortising machine; and grindstone.

The foundry contains a 30-inch cupola furnace; a brass furnace; moulders tools; core oven; and other equipment such as is usual in practical foundry operation.

The forge shop is equipped with down-draft forges, each having a complete set of blacksmith's tools, and a power hammer for heavy work.

The machine shop contains lathes, milling machines, planer, drilling machines, shapers, grinders, vises for bench work, an air compressor, power hack saws, pneumatic tools, and a punch and shear.

The tool room is equipped with an assortment of such tools and supplies as are used in the shops.

COURSES OF INSTRUCTION

Practical Mechanics

1. Wood Working. Required of all freshmen in Engineering. This work includes: (a) Recitations on the forms of wood-working tools and the cutting and peculiarities of timber. (b) Lectures on the operation of the various forms of wood-working machinery. (c) Bench-work in wood, including exercises in the following operations: planing, sawing, rabbeting, plowing, notching, splicing, mortising, tenoning, dovetailing, framing, paneling and the general use of carpenters' tools. (d) Wood-turning, involving the various principles of lathe-work in wood. *Courses 1 and 3a total eight hours a week. First semester.* Assistant Professor DICKER, Mr. ARKLE, Mr. TUCKER.

2. Pattern Making. Required of all freshmen in Engineering. This is a continuation of the course in wood-working, and is intended to give the student experience in the construction of patterns for use in making iron and brass castings. The work in the shop is supplemented by frequent lectures and recitations on the theory of pattern making. *Courses 2 and 3b total eight hours a week. Second semester.* Assistant Professor DICKER, Mr. ARKLE, Mr. TUCKER.

3a. Foundry Work. Required of all freshmen in Engineering. This includes the various operations of molding, core-making and the melting and casting of iron, brass and other commercial alloys. The practical work in the foundry is supplemented by lectures and recitations on the proper construction and use of patterns, core making, cupola practice, making of alloys, the modern system of hand and machine molding and the processes involved in producing sound, suitable castings in a first-class foundry. *Courses 1 and 3a total eight hours a week. First semester.* Mr. CROWDER.

3b. Foundry Work. Required of all freshmen in Engineering. A continuation of Course 3a. *Courses 2 and 3b total eight hours a week. Second semester.* Mr. CROWDER.

4. Forge Shop Work. Required of all sophomores in Engineering. Exercises in iron and steel forging. Prerequisites, Practical Mechanics 1 and 2. *Six hours a week. First semester.* Mr. THURMAN, Mr. SAUNIER.

5. Machine Shop Work. Required of all sophomores in Engineering. (a) Exercises in vice work in metal. (b) General machine work, including screw cutting, drilling, planing and the milling of iron, brass and steel. Prerequisites, Practical Mechanics 1 and 2. *Six hours a week. Second semester.* Mr. THURMAN, Mr. SAUNIER.

COURSES OF STUDY IN THE COLLEGE OF ARTS AND SCIENCE REQUIRED OF ENGINEERING STUDENTS

Anatomy and Physiology

Professor Pryor

First Aid. Required of seniors in Mining Engineering. *Four hours a week. First half of second semester.* Professor PRYOR.

Art and Design

Assistant Professor Beck, Miss Anderson

11a. Freehand Drawing. Required of all freshmen in Engineering. *One hour a week. First semester.* Miss ANDERSON.

11b. Freehand Drawing. Required of all freshmen in Engineering. A continuation of Course 11a. *One hour a week. Second semester.* Miss ANDERSON.

Chemistry

Professor Tuttle, Professor Maxson, Assistant Professor Bancroft, Mr. Mitchell, Mr. Bedford

1a. General Inorganic Chemistry. Required of all freshmen in Engineering. Chemistry of the non-metallic elements. *One lecture, two recitations, and four laboratory hours a week. First semester.* Professor MAXSON and others.

1b. General Inorganic Chemistry. Required of all freshmen in Engineering. Chemistry of the metals. Prerequisite, Chemistry 1a. *One lecture, two recitations and four laboratory hours a week. Second semester.* Professor MAXSON and others.

4. Qualitative Analysis. Required of juniors in Mining and Metallurgical Engineering. Prerequisite, Chemistry 1b. *One recitation and six laboratory hours a week. First semester.* Professor MAXSON.

10. Quantitative Analysis. Required of juniors in Mining and Metallurgical Engineering. *One recitation and eight laboratory hours a week. First half of second semester.* Professor TUTTLE.

17. Gas Analysis. Required of juniors in Mechanical and Electrical Engineering. A laboratory course in the analysis of illuminating, natural and flue gases, using the methods and apparatus of Hempel, Orsat and others. Prerequisite, Chemistry 1b. *Two hours a week. First semester.* Mr. BEDFORD.

51. General Inorganic Chemistry. For freshmen in Engineering who have had one year of high school chemistry. *One hour lecture and four hours laboratory a week. First semester.* Professor MAXSON and others.

Economics and Sociology

Professor Wiest

5a. Economics for Engineers. Required of all seniors in Engineering. This course includes business organization, corporation finance, labor turnover and other such labor problems met with by a going concern. *Two hours a week. First semester.* Professor WIEST.

5b. Economics for Engineers. Required of all seniors in Engineering. A continuation of Course 5a. *Two hours a week. First half of second semester.* Professor WIEST.

English Language and Literature

Professor Dantzler, Professor Farquhar, Assistant Professor Mabie, Miss Jewell, Miss Hopkins, Mr. Whiting

1a. English Composition. Required of all freshmen in Engineering. The object of this course is to give training in the writing of correct and clear English. Accuracy of expression is desired rather than proficiency in style. A text book will be used but the instruction will also be based upon the study of representative English masterpieces. *Three hours a week First semester. Repeated second semester.* All instructors.

1b. English Composition. Required of all freshmen in Engineering. A continuation of Course 1a. *Three hours a week. Second semester. Repeated first semester.* All instructors.

3a. History of English Literature. Required of all sophomores in Engineering. This course is designed to give the student a general survey of English literature from the Old English period to the present. Extensive readings will be made from selected masterpieces, with weekly written themes by the student. Prerequisite, English 1a and 1b. *Three hours a week. First semester. Repeated second semester.* Professor DANTZLER, Professor FARQUHAR, Miss JEWELL, Mr. WHITING.

3b. History of English Literature. Required of all sophomores in Engineering. A continuation of Course 3a. *Three hours a week. Second semester.* Professor DANTZLER, Professor FARQUHAR, Miss JEWELL, Mr. WHITING.

101a. Technical Composition. Required of all seniors in Engineering. This is an advanced course in technical composition. Scientific models will be studied. *Three hours a week. First semester.* Professor DANTZLER.

101b. Technical Composition. Required of all seniors in Engineeing. A continuation of Course 101a. *Three hours a week. Second semester.* Professor DANTZLER.

Geology

Professor Miller

2a. Elementary Geology. Required of juniors in Civil, Mining and Metallurgical Engineering. *Two hours a week. First semester.* Professor MILLER.

2b. Elementary Geology. Required of juniors in Civil, Mining and Metallurgical Engineering. Continuation of 2a. *Two hours a week. Second semester.* Professor MILLER.

4. Mineralogy. Required of juniors in Mining and Metallurgical Engineering. The object of the study is to render the student familiar with the composition and physical characters of those common minerals likely to be met with both in the course of every-day observation and geological pursuits. *Four hours laboratory a week. First semester. Repeated second semester.* Professor MILLER.

7. Engineering Geology. Required of students in Civil and Mining Engineering. A study of rocks and rock minerals and structures especially as related to engineering problems. Outline of historical geology; soil formation; drainage, surface and underground; wave action and shore currents in relation to improvement of harbors and mouths of rivers; glacial deposits; building stone; geological materials for road making and for lime, cement and plaster; coal; petroleum; ore deposits. Text book and lectures. *Two hours a week. First semester.* Professor MILLER.

8. Oil Geology. Required of students in Civil and Mining Engineering. A course designed to prepare students to qualify as prospectors for oil and gas. *Two hours a week. First half of second semester.* Professor MILLER.

Mathematics and Astronomy

Professor Boyd, Professor Davis, Associate Professor Rees, Assistant Professor Downing, Mr. Smith, Miss Pollitt

2. Solid Geometry. This is given primarily for engineering students who have not had this subject in high school. It is a prerequisite for Mathematics 4. *Three hours a week. Second semester.* Mr. SMITH.

4. Plane Trigonometry. Required of all freshmen in Engineering. A thorough course in plane trigonometry supplemented by enough algebra to fill out a semester's work. *Five hours a week. Second semester. Repeated first semester.* All instructors.

5. College Algebra. Required of all freshmen in Engineering. Elementary algebra is first reviewed in a way to give greater clearness as to assumptions, the number concept and the functional idea,

and to introduce graphs and determinants. Following this, topics are taken up that will, together with those included in Course 2, furnish the student with a fairly complete view of the subject. *Five hours a week. First semester. Repeated second semester.* All instructors.

6. Analytic Geometry. Required of all sophomores in Engineering. A somewhat extended course in which particular emphasis is laid on the graphical representation of the various types of functions. The derivative is introduced as a tool for the study. The work is given by lectures, with mimeographed outlines. Prerequisites, Courses 2, 4 and 5. *Five hours a week. First semester. Repeated second semester.* Professor BOYD, Professor DAVIS, Associate Professor REES, Assistant Professor DOWNING.

7a. Calculus, First Part. Required of all sophomores in Engineering. A course covering most of the subject as presented in the larger texts and including much drill work in the solution of problems. Prerequisites, Courses 2, 4, 5 and 6. *Five hours a week. Second semester. Repeated first semester.* Professor BOYD, Professor DAVIS, Associate Professor REES, Assistant Professor DOWNING.

7b. Calculus, Second Part. Required of all juniors in Engineering. Prerequisite, course 7a. *Three hours a week. First semester. Repeated second semester.* Professor BOYD, Professor DAVIS, Associate Professor REES, Assistant Professor DOWNING.

8. Spherical Trigonometry; Method of Least Squares. Required of juniors in Civil Engineering. *Two hours a week. Second semester.* Assistant Professor DOWNING.

Military Science

Major Byars

Reserve Officers' Training Corps

The University of Kentucky has established and maintains an Infantry Unit of the Senior Division of the Reserve Officers' Training Corps in conformity with the provision of the National Defense Act of 1916. The purpose of the Reserve Officers' Training Corps as defined in this act is "To qualify by systematic and standard methods of training students at civil educational institutions for reserve officers," primarily the lower grade of officers in reserve.

Requirements

Freshman and Sophomore. Every male student over fourteen years of age whose physical condition indicates that he is fit to perform military duty under the U. S. Army regulations, is required to

drill three times each week thruout the *freshman* and *sophomore* years. The successful completion of two years of military work is *requisite to graduation* in every course in the University.

No student will be excused from drill as heretofore for reasons of age, athletics or self-support. In cases, certain classes of men may be excused; but in no case will athletics be taken as a substitute for drill.

Junior and Senior. A cadet who desires to qualify for the "Reserve Officers' Corps" may continue his military training during the *junior* and *senior* years. He will first submit application to the President of the University and to the Commandant. If his application be accepted, and he agree in writing to take military training for the remainder of his course, his military duties will be as follows:

a. Drill five hours a week during the junior and senior years.
b. Pursue the regular military course of instruction.
c. Attend at least two summer training camps.
d. Conform to certain physical requirements.

Equipment and Expenses Furnished by the Government

According to the provisions as promulgated in General Orders 49, War Department, Sept. 20, 1916, the U. S. Government will assume the following expense:

a. Give one free uniform to each member of the Reserve Officers' Training Corps units.

b. Give an additional uniform to all members attending summer training camps.

c. Pay to all *junior* and *senior* students who *volunteer* for the last two years of their college course to take the military training, the sum of 30 cents a day as commutation for rations.

d. Furnish modern arms and equipment.

e. Furnish non-commissioned officers of the Army as instructors and as assistants to the officer of the Army stationed at the University.

Physical Education

Professor Boles, Assistant Professor Gill

Physical training is required of all students in the University for the first year, two periods a week.

Students will not be excused from the work in physical education, unless an equivalent subject is substituted, or upon presentation of satisfactory evidence of an equal amount of outdoor activities, or evi-

dences of physical deformities prohibiting gymnastic exercises, or completion of similar prescribed courses in other universities, or upon written recommendation of a physician subject to change at the discretion of the medical examiner.

The required work is designed to give the student a higher degree of vitality, more perfect physical development, greater mental efficiency and muscular co-ordination.

Physics

Professor Pence, Professor Webb, Associate Professor Killebrew, Mr. States

1a. General Elementary Physics. First half. Required of students who have had no previous training in physics. Course covers the elementary theory of mechanics and heat, particular attention being given to the solution of appropriate problems. Each student is required to perform, and report on, 25 laboratory exercises. *Lectures and recitations four hours, laboratory two hours a week. First semester.* Associate Professor KILLEBREW, Professor PENCE.

1b. General Elementary Physics. Second half. This is a continuation of Physics 1a. The course covers the elementary theory of electricity, magnetism, sound and light, with problems. Each student is required to perform and report on twenty-five additional laboratory exercises. *Lectures and recitations four hours; laboratory two hours a week.* Associate Professor KILLEBREW, Professor PENCE.

3a. General College Physics. Required of all sophomores in Engineering. Prerequisites, one year of high school Physics, Mathematics 2 and 3 and Physics 4. Should be accompanied by 5b. Lectures, recitations, and problems in mechanics, sound and heat, especial attention being given to mathematical deductions. *Four hours a week. First semester.* Associate Professor KILLEBREW, Professor WEBB, Mr. STATES.

3b. General College Physics. This is a continuation of 1b. Should be accompanied by Physics 6b. Lectures, recitations and problems in electricity, magnetism and light. *Four hours a week. Second semester.* Professor WEBB, Associate Professor KILLEBREW, Mr. STATES.

4. Elementary Physical Measurements. Required of all freshmen in Engineering. Laboratory work accompanied by recitation periods. Departmental notes used as laboratory manual. *Four hours laboratory a week. Second semester.* Professor PENCE, Mr. STATES.

5. Measurements in Mechanics and Heat. Required of all sophomores in Engineering. Prerequisites, Physics 4 and credit in or the

simultaneous study of Physics 1b. Laboratory work, accompanied by recitation periods; special attention given to appropriate problems. *Laboratory four hours, recitation one hour a week. First semester.* Professor WEBB, Associate Professor KILLEBREW, Mr. STATES.

6. Measurements in Electricity, Sound and Light. Required of all sophomores in engineering. Prerequisites, Physics 4, and credit in or the simultaneous study of Physics 2b. Laboratory work, accompanied by recitation periods, special attention being given to appropriate problems. *Laboratory four hours, recitation one hour a week. Second semester.* Associate Professor KILLEBREW, Professor WEBB, Mr. STATES.

COLLEGE OF LAW

OFFICERS OF INSTRUCTION AND ADMINISTRATION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

WILLIAM THORNTON LAFFERTY, A. B., A. M.
Dean and Professor of Law

CHALKLEY, LYMAN, B. L.
Professor of Law

KELLY, MARTIN T., LL. B.
Professor of Law

SUMMERS, WALTER LEE, A. B., LL. B., JUR. DR.
Professor of Law

Special Lecturers

BUSH, JAMES R.
Lecturer on Legal Ethics

DURELLE, GEORGE, LL. B.
Lecturer on Federal Court Procedure

NORWOOD, CHARLES J., M. S.
Lecturer on Mine Construction and Operation

STOLL, RICHARD C., A. B., LL. B., LL. D.
Lecturer on Corporations

*_____
Lecturer on Bankruptcy

*To be selected.

Introductory Statement

The College of Law of the University of Kentucky, was organized under the provisions of an act of the Legislature passed in 1908, and was opened for the admission of students in September of that year.

After the experience of the first year, the course of study was so amended as to meet the requirements of the Association of American Law Schools; application for admission to membership in that association was made, and soon thereafter granted. Other improvements are constantly being made in order to keep pace with the most approved law schools of the country.

Our country is experiencing remarkable growth and development. The requirements for a successful career in all lines of business and in all professions, necessitate the laying of a broader foundation before encountering these greatly changed conditions. The design of this College is to teach the student the fundamental principles of English and American law, and to so extend the course of study as to fit him for the bar in any state. The course offered is thorough and comprehensive, giving such training as will prepare him for usefulness as a citizen, and success as a practitioner. The instruction will not be limited to persons who may choose the law as a profession, but will be given also to students who may elect to take the whole or a limited course, which will be found useful in the pursuit of some other business or occupation. A good knowledge of the law is now being generally recognized as necessary and fundamental in making up a well-rounded preparation for a business life. Besides this, the study of the law as now taught with its collateral work, is an important part of a liberal education.

Admission

Applicants for admission to the first year classes of the College of Law must be at least eighteen years of age. Each of such applicants, if required, must present evidence of good character.

Entrance Requirements

Any graduate of an accredited high school will be admitted who presents three units of English, one unit of Algebra, one unit of Plane Geometry and ten other units selected from any subjects counted by an accredited school toward graduation. Four units in vocational subjects may be counted in this number.

Students not graduates of an accredited school must pass examinations for admission.

No student will be admitted who has an entrance condition.

College Requirements

Law students who enter prior to September 1921 must complete 30 credits of college work, the equivalent of the freshman year in this University, in addition to the required law work, before being classified as seniors. All law students entering from and after that date must offer 30 credits of such work for admission. No extra charge will be made for work done by law students in other colleges or departments of this University.

Advanced Standing

Applicants for admission to advanced standing in law must first satisfy the foregoing entrance requirements by presentation of satisfactory certificates issued by an approved law school, which requires entrance credits equal to the above, or by examination. Such applicants may then be granted any advanced credits in law to which they are entitled. Under certain conditions advanced credit will be given to those who have engaged in the practice of law in this state. All law credits offered for advanced standing must be submitted to the Dean for adjustment. In no event will credit be given for more than two years of law work done outside of this college.

Special Students

Persons who are at least twenty-one years of age, whose preliminary preparation is not such as to entitle them to enter the regular courses as candidates for a degree, or persons who have read law for a considerable period before making application for admission, are allowed to become special students, with the privilege of pursuing the courses of study in any of the specified subjects, but without the privilege of being enrolled as candidates for a degree. All such students must satisfy the Law faculty that they are qualified to pursue the work with profit to themselves, and will be required to complete the subjects selected with the same thoroness as regular students.

Should a special student desire subsequently to become a candidate for a degree, he must make up the work required for admission and do the required college work before the beginning of the year in which he proposes to graduate.

Combined Arts-Law Course

Students in the College of Arts and Science who have completed 97 credits of their work, may take during their senior year, the first year Law course and upon the completion of the same will be granted the degree of Bachelor of Arts. Upon completing the two remaining years in Law, such students will be granted the degree of Bachelor of Law, thus obtaining both degrees in six years.

INSTRUCTION

Method of Instruction

The case method of instruction has been adopted, and the students are required to carefully brief the cases as assigned and report them in class recitations. No student will be eligible for final examination for credit in any subject until he presents his notebook containing the brief of each case assigned in the subject. Special lectures will be delivered from time to time by persons specially qualified in the topics they will discuss.

Court Practice

The training given in a law school is not complete unless the student acquires a knowledge of actual practice. This is secured by the introduction of the practice court, which is presided over by one of the professors, and this work is required of all students in their senior year. A room is especially equipped for this work, with all the furnishings usually found in a well regulated court-room. The court will be provided with a full corps of officers made up of the students, each of whom will alternate in official service until each member of the class has had sufficient practice to become familiar with the duties of each office.

Students will be required first to acquaint themselves with the various courts, their jurisdiction, original, concurrent and appellate. They will then be required to carry many default cases in common law and in equity, from the filing of the original papers to the conclusion. Each student will be required to write out and explain all steps possible to be taken in each case, including the duties to be performed by the various officers of the court. In this connection they will be taught the actual use of the practice code of this and other states, as well as the application of the common law procedure.

Many cases will be prepared setting forth facts upon which issues will be joined. For the purposes of this work, court will be opened in regular order, and in the contests in making issues, the practice of handling pleadings, demurrers and motions of every kind will be experienced.

Contested equity cases will be made upon given statements of facts, students will be assigned as attorneys on each side of the cases, other students will act as special judges of the court. In each case, the attorneys will be required to look up the law thoroughly, debate their cases before the special judges, and file briefs with same. The court will deliver written opinions. Students will alternate in this kind of service.

Actual controversies will be arranged and assigned for trial on issues of fact before regularly impaneled juries made up of students, when witnesses will be examined, depositions and other evidence heard, juries instructed upon the law of the cases, arguments made before the court and jury, and all other incidents of a contested trial will be had. Some of these cases will be prosecuted to the Court of Appeals.

Students will at intervals attend the courts of Fayette county, which are in continuous session. Experience gathered there and in the practice court of the College will give a good knowledge of the practical part of the course of instruction.

Students who may desire to spend some part of their spare time in the office of a practicing attorney, in order to gain some acquaintance with the office work and the manner of handling business by the active practitioner, will have this opportunity offered them.

Privileges and Library

Students of the College of Law will be admitted to all the privileges of the literary societies, gymnasium and University library, upon equal terms with other students of the University. They may also attend any of the classes or lectures in other departments of the University without extra charge. A law library containing 10,000 volumes of carefully selected law books has been accumulated and placed in the library rooms of the College of Law, and is open daily for the free use of students. This library embraces the entire National Reporter system, and the separate volumes of the reports of all but six of the states from the beginning up to the publication of that system. The Supreme Court reports and all other Federal Court reports are complete. There is a complete set of all reported English cases from 1650 to the present time; Trinity system, Halsbury's Laws of England, CYC., L. R. A. Corpus Juris, encyclopedias, and many other valuable sets of law books, including a large collection of the best text books. All the best publications of law books being issued are obtained for this library.

Henry Clay Law Society

The Henry Clay Law Society is an organization composed of the law students, which convenes once each week in a hall provided for its use. In this society the students by study and actual practice will learn the rules of parliamentary law and their use in deliberative assemblies. They will organize legislative assemblies and learn the procedure in the framing and passage of bills, both state and federal. Subjects of a public nature will be discussed so as to familiarize the

students with the affairs of the country which will confront them in their experience as citizens and professional men.

Examinations and Grading

Examinations will be conducted at intervals in each class as may be determined by the respective instructors to enable them to understand the character of work being done. At the end of the semester written examinations will be held, and only students who have briefed each case assigned them in class will be eligible for examination so as to receive credit for the subject. A. B. C. and D. signify passing grades of varying degrees of merit. E. means a failure, and the subject must be taken over in class. I. means a small part incomplete, for some reason satisfactory to the instructor, and may be completed within one month after the end of the semester. An unavoidable absence from examination may be treated the same way. For unsatisfactory work a student will be dropped.

HONORS AND EXPENSES

Scholarships

A number of Scholarships, Fellowships and Assistantships, paying respectively $200, $500 and $400 each, are offered by the University to encourage research and scholarship. Students doing graduate work in the College of Law are eligible for appointment to these positions.

The Blackstone Institute Prize

The Blackstone Institute of Chicago offers a prize to the student who makes the best general average in the junior year, a set of fifteen volumes of Modern American Law.

Callaghan & Company Prize

Callaghan & Company, Law Book Publishers of Chicago, offer as a prize to the student who makes the second best general average in the junior year, a copy of the Cyclopedia Dictionary.

The W. H. Anderson Company Prize

The W. H. Anderson Law Publishing Company of Cincinnati, Ohio, offers as a prize to the student who makes the best general average in the first year, a set of Page on Contracts, three volumes.

The Baldwin Law Book Company Prize

The Baldwin Law Book Company, of Louisville, Kentucky, offers a prize which will be announced before the beginning of the next school year, to the student of the senior year who makes the best general average.

Bennett Prize

A prize of $20.00 in gold is offered by Mr. Bennett, of New York, to any student of the University who shall submit the best paper on some subject relating to the Origin and Development of Parliamentary Institutions.

The Degree of Bachelor of Laws (LL. B.)

The degree of Bachelor of Laws (LL. B.) will be conferred upon students who have satisfied the entrance requirements, completed the required work, have passed the final examination, and have reached the age of twenty-one years.

The Degree of Master of Laws (LL. M.)

Persons who can offer the required entrance credits and are regular graduates from an acceptable law school, may become candidates for the degree of Master of Laws (LL. M.), For details concerning this degree address the Dean of this College.

Certificates

A student who has been connected with the College for a period not entitling him to graduate, may on application to the Registrar receive an official certificate of attendance and the degree of his attainments in the subjects taken.

Expenses

Each student will be charged an incidental fee of $20.00, and a student's activity fee of $4.50 each semester. No diploma fee will be charged. The books for the required work can be secured here at a reduced price and will cost about $25.00 a year. An effort is being made to establish a book exchange at the University so that a further reduction may be made in this expense. Good board and lodging can be had in private families at prices ranging from $4.00 to $6.00 a week, or rooms may be secured in private homes and meals obtained at the University dining hall at very reasonable rates.

Pre-Legal Course

In the preparation for the study of law, students should do an amount of college work which is now regarded as very necessary to properly equip them for the practice of the profession. Under the heading of College Requirements it will be seen that this school is approaching the period when such work will be required of all law students who become candidates for degrees. No particular college course is designated, but it is urged that the work be so related that

it will be of particular value to the lawyer. It should include courses in English, Public Speaking, American Government, History of the English and American Constitutions and some work in the Economic and Social Sciences. The assistance of the Dean of the College of Law may be enlisted in aiding students to make out a consistent course.

Collateral Reading Course

Students in Law are urged to pursue a course of reading under the supervision of the Law Faculty while they are in the University, but not to an extent that might interfere with the regular law work. This course is not required, but those who may take some part of it will find it of great value, adding much to the accomplishments of the young lawyer, and it should go with the knowledge of the law. The books will be supplied from the law library, and will include any part of the following: History of English Bench and Bar; Pollock and Maitland, History of English Law; Warren, History of American Bar; Bryce, Studies in History and Jurisprudence; Gest, The Lawyer in Literature; Dillon, Laws and Jurisprudence of England and America; Holmes, The Common Law; Pound, Readings on the History and System of the Common Law; White, The Law in Shakespeare; Train, The Prisoner at the Bar. Legal Masterpieces: Eminent Lawyers; Holland, Jurisprudence; Stowell, International Law; Blackstone, History of Civil Law; Campbell, Lives of the Chancellors; Maine, History of Ancient Law; Reed, Conduct of a Lawsuit; Davis, Letters to a Young Lawyer; Sources of English Law.

Kentucky Law Journal

The Kentucky Law Journal is a publication issued bi-monthly during the college year by the College of Law, and has for its chief purpose the dissemination of legal literature among law students and members of the Bench and Bar of the State. It contains contributions from leading law teachers and members of the Bar both in and outside the State. This Journal has been made the official organ of the Kentucky Bar Association and is sent free of charge to the members of that association.

Admission to the Bar

Admission to the bar in this State is regulated by statute which requires the Court of Appeals of Kentucky to make and adopt rules and regulations fixing the moral qualifications, standards of acquirement both academic and legal, to entitle applicants to admission.

Under the present rules, one committee hearing proof passes upon the moral character and fitness of applicants; their report, if favorable, may be rejected by either the Court or the Board of Examiners. If the report is accepted and the applicant has studied law for a period of at least two years in a law school or law office, he will be examined by the Board of Examiners on his knowledge of the law and their report will be made to the Court, and license granted if the report is favorable. Examinations will be in writing and be held three times a year.

COURSES OF INSTRUCTION

First Year

1. Contracts. The formation of contracts; offer and acceptance, consideration, contracts under seal. The Statute of Frauds. Parties affected by contracts; contracts for the benefit of third persons, assignments, joint and several contracts. The performance of contracts; express and implied conditions, impossibility of performance. Illegal contracts. Discharge of contracts. Huffcut and Woodruff's *Cases on Contracts. Three hours a week. Thruout the year.* Professor SUMMERS.

2. Torts. Breach of legal duty; duty of care; contributory negligence; care in the use or occupation of land; extra-hazardous occupations; joint torts; deceit; defamation; slander; libel; privilege; malicious prosecution; interference with social and business relations; inducing breaches of duty; unfair competition; strikes; boycotts; business combinations. Ames and Smith's *Cases on Torts* (Pound's Edition). *Five hours a week. First semester.* Professor CHALKLEY.

3. Criminal Law. Jurisdiction; the criminal act, complete and incomplete; criminal intent, actual and constructive; insanity; intoxication; duress and mistake of fact of law; justification; parties in crime; crimes against the person; crimes against property. *Mikell's Cases on Criminal Law. Three hours a week. First semester.* Dean LAFFERTY.

4. Property I. Personal Property. Possession; the nature of possession; rights based on possession; some methods of acquiring titles to chattels; bona fide purchase; purchase at judicial sale; statute of limitations; accession; confusion; satisfaction of judgment; gifts; distinction between sale and bailment; liens and pledges; acquisition and enforcement; loss by surrender of possession; assignability; conversion; acts constituting conversion. Warren's *Cases on Property. Two hours a week. First semester.* Professor SUMMERS.

5. Persons and Domestic Relations. Contracts to marry, breaches of promise; marriage; formal requisites, capacity, etc.; property rights of husband and wife; status of married woman at common law and under statutes; transactions between husband and wife; torts affecting the marital relations; divorce and separation; parent and child; custody, services and earnings; torts to children; torts by children; adoption; bastardy; infancy; voidable acts; disaffirmance; ratification; contracts for necessaries; liability for tort; insanity; drunkenness; aliens. Kales' *Cases on Persons. Two hours a week. Second semester.* Professor ————.

6. Agency. Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency; termination; ratification. Huffcut's *Cases on Agency. Two hours a week. Second semester.* Professor ————.

7. Property II. Real Property. Introduction to the law of conveyancing; tenure; estates or tenancies; joint tenants; parceners, and tenants in common; reversions and remainders; seisin and disseisin; common law methods of creating, or transferring estates; rents; the Statute of Uses; rights incident to the ownership of land or estates therein; the land itself; air; water; fixtures; emblements; waste; profits; easements; licenses; covenants running with the land. Warren's *Cases on Property. Two hours a week. Second semester.* Professor SUMMERS.

8. Common Law Pleading. Pleading in tort actions; trespass, ejectment, case, trover, replevin; pleadings in contract actions; general and special assumpsit, debt, convenant; principles of general application concerning substance form objections to defects, curing defects, dilatory objections, cross demands. Whittier's *Cases on Common Law Pleading. Two hours a week. Second semester.* Professor CHALKLEY.

9. Sales. Subject matter of the contract; transfer of property and title; destruction of goods and risk of loss; obligations of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; remedies of the buyer on the contract; Statute of Frauds. Woodward's *Cases on Sales. Two hours a week. Second semester.* Professor ————.

Second Year

10. Property III. Titles and Conveyancing. Adverse possession; prescription; accretion; dedication; mode of conveyance, at common law, under the Statute of Uses, and under modern statutes; execution and delivery of deeds; boundaries; exception and reservation; crea-

tion of easements by implications; estates; covenants for title; estoppel by deed; priorities. Aigler's *Cases on Titles. Three hours a week. First semester.* Professor SUMMERS.

11a and 11b. Equity. Basis of equity jurisdiction; specific performance of contracts; reformation, re-execution, rescission and cancellation; injunction in relation to torts; bills of peace, quia timet, interpleader, account; position of equity in the legal system. Boke's *Cases on Equity. Two hours a week. Thruout the year.* Professor CHALKLEY.

12a and 12b. Corporations. Characteristic features of a corporation; formation; powers and liabilities; rights of stockholders; directors; legislative control; dissolution; creditors of the corporation. Richard's *Cases on Corporations. Two hours a week. Thruout the year.* Professor ————.

13. Evidence. Rules of admissibility: real evidence; circumstantial evidence; testimonial evidence; rule for preference of documentary originals; rules for preference between differnt kinds of witnesses; the hearsay rule and its exceptions; rules of conditional and absolute conclusion; procedure of admissibility; law and fact, judge and jury; burden of proof and presumptions; judicial notice; parol evidence rule. Wigmore's *Cases on Evidence* (Second Edition). *Four hours a week. First semester.* Dean LAFFERTY.

14. Bills and Notes. Formal requisites of negotiability; acceptance; delivery; consideration; negotiation; by delivery, by endorsement; rights and duties of holders; liability of maker, acceptor, drawer, endorser; discharge; the subject being treated both at common law and under the Negotiable Instruments Law. Smith and Moore's *Cases on Bills and Notes. Three hours a week. First semester.* Professor ————.

15. Property IV. Future Interests. Rights of entry for condition broken; escheat and possibilities of reverter; reversions, vested remainders and executory interests; contingent remainders; limitations to classes; freehold interests subject to a term; rule against perpetuities; illegal restraints and conditions. Kales' *Cases on Future Interests. Three hours a week. Second semester.* Professor SUMMERS.

16. Office Practice and Criminal Procedure. Administrative duties as counselor, drafting of legal documents, such as contracts, bills, deeds, mortgages, loans, trust deeds, assignments, powers of attorney, partnership, agreements, articles of incorporations, wills, abstracting of titles, administration of estates. The various phases criminal procedure up to the court trial will be taught. *Two hours a week. Second semester.* Dean LAFFERTY.

17. Code Pleading. Form of action: parties to action; the "real party in interest"; joinder of parties; the complaint; facts distinguished from conclusions of law and evidence; the statement of facts; the prayer for relief; the joinder of actions; the answer; general and specific denials; "New Matter" in justification or excuse, and in discharge; equitable defenses; union of defenses; counter-claims and set-offs; the reply; by way of denial and of new matter; departure; demurrers. Sunderland's *Cases on Code Pleadings. Two hours a week. Second semester.* Dean LAFFERTY.

18. Constitutional Law. Making and changing constitutions; function of judiciary in enforcing constitutions; separation and delegation of powers of government; personal liberty; interstate privileges and immunities of citizens; operation of the fourteenth amendment; due process and equal protection of law; eminent domain; protection to persons accused of crime; powers of federal governmental money, banking, postal, military powers; citizenship and suffrage; foreign relations; territories, dependencies, new states; federal taxation; regulation of commerce; inter-governmental relations; state laws impairing obligations of contracts; retroactive civil laws. Hall's *Cases on Constitutional Law. Three hours a week. Second semester.* Professor CHALKLEY.

Third Year

19. Insurance. Nature of the contract; insurable interest; making the contract; concealment; representations; warranties; implied conditions of forfeiture; waiver and estoppel; rights under the contract; construction of the policy. Vance's *Cases on Insurance. Two hours a week. First semester.* Professor ————.

20. Damages. Exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty; compensation; physical and mental suffering; aggravation and mitigation; value; interest; special rules in certain actions of tort and contract. Beale's *Cases on Damages. Two hours a week. First semester.* Professor CHALKLEY.

21. Property V. (Wills, Descent and Administration). History of the law of wills and testaments; testamentary capacity and intent; kinds of wills and testaments; execution, revocation, republication and revival of wills; descent; probate; executors and administrators; survival of rights and liabilities; priority of claims; assets; payment of legacies and distribution; ademption and lapse of legacies. Costigan's *Cases on Wills, Descent and Administration. Three hours a week. First semester.* Professor SUMMERS.

22. Suretyship. Kinds of suretyship; statute of frauds; surety's defenses due to original defects in his obligation or in its subsequent discharge; surety's right of subrogation, indemnity, contribution, or exoneration; creditor's right to surety's remedies. Ames' *Cases on Suretyship. Two hours a week. First semester.* Professor ————.

23. Quasi-Contracts. Restitution at law for mistake, misrepresentation, duress and undue influence; illegality; impossibility; benefits received under contracts within and without the statute of frauds; benefits received without contracts. Thurston's *Cases on Quasi Contracts. Two hours a week. First semester.* Professor CHALKLEY.

24. Partnership. The formation and nature of a partnership; the powers and duties of partners; the rights of firm and individual creditors; dissolution; accounting and distribution; limited partnership. Gilmore's *Cases on Partnership. Two hours a week. Second semester.* Professor SUMMERS.

25. The Law of Mines and Mining. Several property in mineral in place, and contracts disposing of mining rights; use of the surface, and vertical and subjacent support. State and Federal systems of ownership and operation. Joint ownership and joint participation in mining ventures by tenants in common and partnerships. Covenants and conditions in oil and gas leases; rents and royalties. Rights of adjoining owners of oil and gas wells. The validity of statutory regulation of operation. Underground trespass, and the measure of damages. *Two hours a week. Second semester.* Professor CHALKLEY.

26. Public Utilities. Consideration will be given to the numerous class of businesses and undertakings which have a double aspect of being privately owned and conducted for private profit but are subjected to abnormal duties of public service; common carriers, hotels, telephone, telegraph, express, gas, electric light, irrigation, pipe line, businesses, etc.; the basis of imposing this status and the method of imposing it; common law, statutes; the character and extent of its peculiar obligations at common law and under statutes; undiscrimatory service, provision of adequate facilities, reasonable rate, and the determination of reasonable rates. Case book to be selected. *Two hours a week. Second semester.* Professor ————.

27. Trusts. Nature and requisites of a trust; express resulting, and constructive trusts; charitable trusts; appointment and office of trustee; nature of cestui's interest; transfer of trust property by trustee of cestui; cestui interest as affected by death, marriage or bankruptcy of the cestui; duties of trustee; extinguishment of trust; removal or resignation of trustee; accounting; assignment of choses in action. Ames' *Cases on Trusts* (Second Edition). *Two hours a week. Second semester.* Professor CHALKLEY.

28. Conflict of Laws. Nature of the subject; penal laws; procedure; judgments; domicile; capacity; form; particular subjects; obligations; family law; inheritance; foreign administrators. Lovenzen's *Cases in Conflict of Laws. Three hours a week. Second semester.* Dean LAFFERTY.

29a and 29b. Court Practice. This course is designed to fit the student for actual court practice following his training in the various subjects of substantial law and office practice. This training will give a substantial knowledge of the work the young lawyers will experience in their professional career including work in the various courts, trial practice and appeals. All proceedings will be conducted in the main under the Kentucky code, but treated as to give a fair understanding of like work in other states. Further information can be found under the general title "Court Practice." *Two hours a week. Thruout the year.* Dean LAFFERTY.

THE GRADUATE SCHOOL

OFFICERS OF ADMINISTRATION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

GLANVILLE TERRELL, A. M., PH. D.
Chairman of the Graduate School Committee,
Professor of Philosophy

INTRODUCTORY STATEMENT

The Purpose of the School

The purpose of the Graduate School is to prepare students for teaching, to develop the power of independent thinking, and to promote the spirit of research and scientific investigation. The student assumes a new attitude towards his studies, endeavors to form opinions on his own account, weighs and examines the opinions of others, however high the authority on which they may rest. Above all, he begins to specialize, and should endeavor to make himself not only expert, but an authority, in his own chosen department of knowledge.

Admission

All candidates for higher degrees should first communicate with Professor Glanville Terrell, Chairman of the Graduate School Committee. No applicant is admitted unless his previous education has been such as to prepare him for work of graduate character. In general, this means that the candidate must hold a first degree either from the University of Kentucky or from some other university or college whose work is accepted by this University. Admission to particular courses or departments will be granted only when in the judgment of the professors giving such courses the student's undergraduate work has prepared him to take them.

Students of mature age who do not hold a first degree, but who satisfy the Graduate School Committee and the officers of the departments in which they wish to work of their earnestness of purpose and special fitness, may be permitted to take work in the Graduate School without reference to candidacy for a degree. In order to secure this permission, however, a candidate must have had

such preliminary preparation for the work he wishes to take up as would justify his admission to the Graduate School as a candidate for a degree if he could meet the other requirements fully.

All courses which count towards a degree must be approved by the Graduate School Committee.

Before the assignment of work the student must present a receipt from the business agent showing that he has paid the fee of $15.00.

Requirements For Degrees

Candidates for the degree of Master of Arts or Master of Science in the College of Arts and Sciences or for the advanced degrees in the College of Agriculture are required to do at least one year's work in residence and to write a thesis. Three summer terms, with the approval of the Graduate School Committee, may fulfill the residence requirement. The degree of Master of Science is more highly technical than the degree of Master of Arts, and implies specialization in one of the sciences.

Every candidate for a graduate degree must carry at least twelve credit hours, of which the thesis will count as three. The thesis may be allowed to count for half of the required work, if in the judgment of the major professor, with the approval of the Graduate School Committee, the student's time can be more profitably spent in this manner. A candidate for a master's degree may, with the approval of the Graduate School Committee, do all his work in one subject, or he may select a major and one minor, or a major and two minors. The candidate must give at least one-half of his time to his major subject.

Thesis

1. Thesis subjects must have the approval, in advance, of the head of the department in which it is proposed to carry on major work.

2. A first draft of a thesis must be submitted for suggestion, correction, etc., and at the option of the one who has the work in charge other drafts may be required before it has assumed its final form.

3. Candidates who expect to receive their degrees at the December meeting of the Board of Trustees must submit the first draft not later than October first, and the completed thesis not later than November fifteenth. Candidates for degrees at the June Commence-

ment must submit the first draft not later than April fifteenth, and the completed thesis May fifteenth.

4. A folder containing detailed information concerning the final form of the thesis will be sent each candidate for advanced degrees.

5. Second degrees are conferred upon such graduates of the College of Engineering of this University as have been engaged in acceptable professional work away from the University for at least three years after receiving the bachelor's degree, on the presentation of a thesis in compliance with the above rules or upon graduates of this University or of another institution of equal standing engaged in prearranged residence work for the bachelor's degree.

Graduate students will consider their major professor as their adviser who, together with the Chairman of the Graduate School Committee, should be consulted in regard to registration, any changes in courses, and all matters pertaining to their studies.

Fellowships

For the encouragement of research and scholarship the following scholarships and fellowships have been established in the various departments of the University of Kentucky.

Five University scholarships with a stipend of $200 each.

Two University fellowships with a stipend of $500 each.

Ten assistantships with a stipend of $400 each.

The scholars and fellows will be expected to devote their whole time to graduate work. The assistants will do no regular teaching, but will assist the heads of the departments in such work as they may require, as in laboratories, reading papers, etc. In general, they will be expected to spend two years in the University before receiving their first advanced degree.

These fellowships are open to those who already hold, or will receive at the close of the current academic year, a bachelor's degree, or its equivalent, 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.

Application for a fellowship should be made to Professor Glanville Terrell, Chairman of the Graduate School Committee, by April 1. The applicant should state his age, the degree held and the institution conferring it, with the date.

DEPARTMENTS OF INSTRUCTION

For a description of the graduate courses, see the announcements of the various colleges.

College of Agriculture

In the College of Agriculture and in the Experiment Station, excellent opportunities are afforded the student to do graduate work in the following subjects: Soil fertility, soil physics and farm crops, dairying and poultry husbandry, animal nutrition and the feeding of live-stock, the study of market classes of beef cattle, sheep and swine, agricultural chemistry, entomology, seed analysis and plant breeding, the cultivation, curing and grading of tobacco, food and drug technology, bacteriology and animal pathology, including studies in immunity, hog cholera, etc.

Deserving students who have graduated from the College of Agriculture are given every opportunity to pursue some special line of work in the Experiment Station, where they come in contact with investigators and men of high standing in the sciences pertaining to agriculture. As a rule students who have taken such work at the Experiment Station have secured good positions elsewhere. There is now a constant demand for men trained in the several branches of Experiment Station work. The graduate student in Agriculture may select any of the above subjects as a major study leading to the degree of Master of Science in Agriculture. Two or more minor subjects will be assigned. At least one year's resident work at the University will be required of candidates for the degree of Master of Science in Agriculture.

College of Engineering

The College of Engineering offers instruction leading to the following advanced degrees:

C. E.—Civil Engineer.
E. E.—Electrical Engineer.
M. E.—Mechanical Engineer.
Met. E.—Metallurgical Engineer.
E. M.—Mining Engineer.

The major subjects that may be taken for these degrees are outlined under the courses of instruction offered by the various departments. Minor subjects may be selected from the other departments of the College of Engineering or from the College of Arts and Science.

The course of study should be arranged in consultation with the head of the department in which the student expects to take his major work, and must have the approval of the Dean of the College of Engineering and of the Graduate School Committee.

Any of the advanced engineering degrees may be obtained by a resident student one year after taking the Bachelor's degree from the University of Kentucky, or any institution of equal requirements, provided he has done the work assigned him satisfactorily, passed his examination, and presented an acceptable thesis.

A non-resident student may obtain the degree M. E., or E. E., three years after graduation, if he has been engaged in practical engieering work during that time, and presents an acceptable thesis. At least one year's notice must be given to the Chairman of the Graduate School Committee that graduate work is being done, and the work must be approved by the major professor and by the Graduate School Committee.

THE SUMMER SESSION

OFFICERS OF ADMINISTRATION AND INSTRUCTION

FRANK LEROND MCVEY, PH. D., LL. D.
President of the University

JAMES THOMAS COTTON NOE, A. M.
Professor of Education, Director of the Summer Session

BAKER, GEORGE MARSHALL, A. M.
Associate Professor of Education

BECK, MINNA MCLEOD, A. M.
Assistant Professor of Art and Design

BEDELL, FLORENCE J., B. A.
Supervisor of Home Economics, Atchison County High School, Kansas

BOLES, STANLEY ATWOOD, A. M.
Director of Physical Education and Athletics

BOYD, PAUL PRENTICE, PH. D.
Dean of the College of Arts and Science, Head of the Department of Mathematics

CORNELL, CLARE BROWN, PH. D.
Acting Head of the Department of Psychology

DAVIS, JAMES MORTON, A. M.
Professor of Mathematics

DANTZLER, LEHRE LIVINGSTON, A. M.
Professor of English, Head of the Department

DICKER, JOHN BORN
Instructor in Woodwork

DOWNING, HAROLD HARDESTY, B. C. E., S. M.
Assistant Professor of Mathematics

ELLIOTT, N. R., B. S. in AGR.
Horticulture

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

FREEMAN, WILLIAM EDWIN, A. B., E. E.
Professor of Electrical Engineering

FUNKHOUSER, WILLIAM D., PH. D.
Professor of Zoology and Head of the Department

GOOD, EDWIN STANTON, M. S.
Professor of Animal Husbandry, Head of the Department

HORINE, JOHN SHERMAN, M. E.
Assistant Professor of Drawing

JAMES, MCNEAL C., B. S. in AGR., A. B.
Professor of Agricultural Education

JONES, THEODORE TOLMAN, A. M.
Professor of Ancient Languages

KILLEBREW, CINCINNATUS DECATUR, M. S.
Associate Professor of Physics

KING, MARGARET, A. B.
Librarian of the University, Instructor in English

KINNEY, EDMUND, M. S. in AGR.
Associate Professor of Agronomy

MACKINNON, JEAN G., M. S.
Professor of Home Economics

MELCHER, COLUMBUS RUDOLPH, A. M.
Professor of German

RHOADS, MCHENRY, M. A., PH. M.
State Supervisor of Secondary Education

ROBERTS, GEORGE, M. S.
Professor of Agronomy, Head of the Department

ROBERTSON, JAMES R., PH. D.
Professor of History and Political Economy in Berea College

SHULL, CHARLES ALBERT, PH. D.
Professor Plant Physiology, Head of the Department of Botany

THURMAN, GORDON
Assistant in Engineering Laboratory

TUTTLE, FRANKLIN ELLIOTT, PH. D.
Professor of Chemistry, Head of the Department

WIEST, EDWARD, A. M., PH. D.
Professor of Economics and Sociology, Head of the Department

ZEMBROD, ALFRED CHARLES, A. M.
Professor of Romance Languages, Head of the Department

Red Cross Lecturers

COLBERT, R. J.
Assistant Division Director, Lakes Division

MCCORMACK, J. N., M. D.
Secretary State Board of Health

STREET, ELWOOD
Director of Social Service

WATTS, SHELLY D.
Supervisor of Field Organization

Introductory Statement

The Purposes of the School

The Summer Session of the University of Kentucky will be from June 23d to August 2d, a period of six weeks. The work of the summer session is designed for teachers, students and persons seeking information and training. With the instruction are to be given a number of special features during the six weeks of the session. From the program of studies it will be possible to make up plans of work suitable for teachers and workers in many fields. The entire plant of the University is available for use, including laboratories, libraries and buildings. The faculty of the University of Kentucky for the summer session of 1919 has been greatly enlarged. Work will be offered to satisfy the demands of teachers in every field of school activity. It is no longer necessary for the high school teachers of the State, the city superintendents and members of college faculties to leave the State for university work during the summer. The University of Kentucky is meeting the needs of the State in Agriculture, Engineering, and all the Arts and Sciences. The multiplication and standardization of the high schools, the enlarged curricula of secondary schools and the new aims in education demand teachers qualified in many subjects and trained in the theories and practices of modern education, and the summer school of the University is organized largely to satisfy this demand.

Special Lectures

In addition to the regular work for teachers in the courses outlined in this bulletin, a number of popular and scientific lectures will be given free of charge during the summer session. President Frank L. McVey will deliver lectures of special interest to teachers. Members of the faculty will give popular lectures in their special fields. The music for the summer session will be in charge of Dr. C. B. Cornell who has had wide experience as a director of music and instructor in public school music and community singing. During the session there will be several lectures on community singing and music appreciation. Opportunity will be given for all students to take part in choral singing.

Beginning June 23rd Dr. Henri Charles Neel, Professor of Romance Languages, Syracuse University, will give a series of lectures on "The Most Notable Features of French Life."

The engagement of Professor Neel for the summer session at the University of Kentucky for these lectures on the most notable features of French Life will be appreciated by the students of the summer school and the public at large. Professor Neel is a noted lecturer and his theme is timely and interesting.

The following is an outline of the subjects:

1. Family Life; School Life; Social Life.
2. France, its picturesque country-side; legends; queer customs; survivals, etc.
3. Chief Epochs in French history; Caesar and the consequences of Roman conquest; the rivalry between France and England; the story of Joan of Arc; Louis XIV; the Eighteenth Century.
4. French Industries; chief exports; commercial situation and relations with the United States; how French art helps French industries.
5. French Science; an anecdotal survey of the discoveries of Pasteur, Fabre, Lavoisier, Laplace, and others.
6. Chief Movements in French Literature; the Epic; Chanson de Roland; the Renaissance; the Seventeenth Century; the Eighteenth Century; the Polemics upon questions of religious, political and judicial freedom; the Romantic School; Realism.
7. This entire lecture will be devoted to the study of a representative author.

Dr. Julian Morgenstern, of Cincinnati, Ohio, will give the following lectures to students of the summer school:

Tuesday evening, July 1st—The Creation Story.
Wednesday evening, July 2nd—The Paradise Story.
Thursday evening, July 3rd—The Flood Story.

Dr. Henry E. Jackson of the Bureau of Education, Washington, D. C., will give a series of lectures on the general subject of Community Organization which will deal with the problems of reconstruction. These lectures will be of special interest to teachers and school administrators and are designed especially to help Kentucky principals, superintendents and teachers.

Admission

No entrance examination is required for admission to any of the courses, but instructors must be consulted concerning prerequisite preparation in some courses.

Credit in the Summer School

Students who have full entrance credits to the University will be given credit toward degrees for college work in the summer school.

Four semester credits will be given for one double course consisiting of two hours a day for the session. Two semester credits will be given for a single course of one hour a day for the session.

No student will be allowed to make more than six semester credits in the summer school.

Agricultural and Vocational Education

Exceptional advantages will be offered in the summer school to students who are qualifying to teach Agricultural and Vocational Education under the provisions of the Smith-Hughes Bill. Professor McNeal C. James will offer courses in Agricultural Education and in Educational Psychology which will especially fit students for the organization and presentation of vocational work in the high schools of the State. Courses are also offered in Horticulture, Soil Fertility, Animal Husbandry and Farm Crops.

Graduate Work

Graduate work will be offered by special arrangement with the heads of departments and the Chairman of the Graduate Committee.

Patterson Hall and Boarding

Patterson Hall will be open for women for rooming. Meals will be served in the University cafateria at a minimum cost. There are several good boarding houses convenient to the University where board may be had at from $4.00 to $5.00 a week. Rooms may be had in the city convenient to the University.

Courses and Fees

The work in the summer school is given in Double and Single Courses. A Double Course means that the subject is taken two hours a day thruout the session. A Single Course is taken one hour a day for the full session. The fees are as follows:

Single Course	$ 5.00
Double Course	7.50
One Double and One Single Course	10.00
Three Single Courses	10.00

For information address the Registrar, University of Kentucky, Lexington, Ky.

DEPARTMENTS OF INSTRUCTION

Agriculture

Professor Roberts, Professor Good, Associate Professor Kinney, Mr. Elliott

Horticulture. The origin, history, characteristics, adaptation to Kentucky conditions and management of orchard and garden fruits. The practical details of propagation, seed selection, transplanting, spraying, etc. Such information relative to the production and handling of horticultural and vegetable products as are of importance to the teacher.

Soil Fertility. Nature and sources of plant food, crop requirements, manures and fertilizers, crop rotation, the effect of different systems of farming upon the productiveness of soils.

Animal Husbandry. A discussion of the various breeds of live stock; production of animal products and a study of the principles underlying animal nutrition.

Farm Crops. A study of the various farm crops, grasses and other forage crops, their adaptation, management and improvement.

Art and Design

Assistant Professor Beck

Art Appreciation and History of Art. This course will consider general art principles and their application to city planning, landscape gardening, architecture, interior decoration, costume design as well as to pictorial art, sculpture, etc. Lectures, reading, discussion. Single course.

Elementary Drawing and Painting and Art Structure. A combination course dealing with fundamental principles of design and giving a training in drawing from cast and still life. Double course.

Botany

Professor Shull

General Botany. A general survey of the plant kingdom, including clasification, structure, function, distribution and uses of plants. Methods of collection and preservation of materials for class use. A course adapted to the needs of teachers of Botany in the high schools of the State. Double course.

Plant Physiology. A study of the main processes of plant life. The laboratory exercises are simplified as to apparatus needed, so

as to adapt them to secondary school work. Teachers will find this work valuable in opening up a more interesting type of laboratory work for high school classes. Double course.

Chemistry

Professor Tuttle

3. Inorganic Preparations. A practical laboratory course devoted to the preparation of inorganic compounds from the crude material. Prerequisite, one-half year's work in General Chemistry.

8. Quantitative Analysis. A laboratory course accompanied by lectures and class-room exercises. Gravimetric and volumetric methods of analysis are studied in detail. Prerequisite, Chemistry 4.

9. Quantitative Analysis. A lecture and laboratory course devoted to the analysis of ores, alloys, etc. Prerequisite, Chemistry 8.

11. Agricultural Analysis. An introductory course in quantitative analysis arranged for the students in the course in agriculture. The elements of quantitative analysis are studied with special reference to the constituents of soil, fertilizers and agricultural products. Prerequisite, one year's work in General Chemistry.

12. Advanced Agricultural Analysis. A laboratory course having for its object the complete analysis of fertilizers, feeds, soils and agricultural products. Prerequisite, Chemistry 8 or 11.

14. Advanced Quantitative Analysis. The analysis of iron and steel, slags and rocks. Prerequisite, Chemistry 9.

Economics

Professor Wiest

Principles of Economics. A study of production, distribution, and consumption of wealth; the application of principles to some social and economic problems. Single Course.

Principles of Accounting. An introduction to the science and adaptation of accounts of a going concern together with sufficient practice for efficiency; partnership and corporation accounting; cost accounting. Single course.

Education

Professor Noe, Professor James, Associate Professor Baker

3s. Problems in City School Administration. A general course including a consideration of recent city surveys, city superintendents' annual reports, finances, age-grade distribution, standard units of

measurement, and principles of constructive supervision. Lectures, class discussions, and reports on assigned readings. Double course. Associate Professor Baker.

4s. History of Education. A general course with particular reference to the 17th, 18th and 19th century theorists, emphasizing Milton, Locke, Rousseau and Montessori. Lectures, class discussions and reports on assigned readings. Lectures will be illustrated with lantern slides. Double course.

5s. Technique of Teaching. A discussion of General and Special method, giving the background of psychology, and illustrated with lesson plans and the teaching of several subjects. Double course.

7s. Agricultural Education. This course will deal with the organization and teaching of agricultural courses in the Kentucky high schools. It is designed for those who have had courses in the fundamentals of agriculture in some Agricultural College. Double course.

8s. Educational Psychology. The laws of mental development, structure and function. Special attention to the laws of memory, habit, attention and their application to education. Designed primarily for Smith-Hughes students. Double course.

14s. Principles of Social Education. A study of the development of the social mind with special reference to education. Text-book, reading and reports. Double course.

Engineering

Professor Freeman, Assistant Professor Horine

Drawing 1. Mechanical Drawing. Four hours a day; drawing room. Professor Horine.

Drawing 3. Descriptive Geometry. One hour a day; lectures and recitation, two hours a day, drawing room. Professor Horine.

Electrical Engineering 3. Alternating Currents. Two hours a day, lectures and recitations. Professor Freeman.

Electrical Engineering 7. Dynamo Design. Three hours a day, drawing room. Professor Freeman.

Mechanics of Engineering 3. Kinematics. Two hours a day, lectures and recitations. Professor Horine.

Mechanics of Engineering 4. Kinematic Drawing. Four hours a day, drawing room. Professor Horine.

Mechanics of Engineering 6. Analytical Mechanics. Two hours a day, lectures and recitations. Professor Freeman.

English

Professor Dantzler, Professor Farquhar

1. English Composition. The object of this course is to give training in the writing of correct and clear English. Accuracy of expression is desired rather than proficiency of style. A text book will be used, but the instruction will also be based upon the study of representative English masterpieces. Students who take this course will be given credit for English 1 of the University curriculum. Double course.

2s. The Teaching of English Composition. This course is designed for teachers who wish to study the aims and methods of teaching composition in the high school. It includes practice in the writing and correction of themes. University credit given. Single course.

4s. General Survey of English Literature. This course is intended to give the student a general survey of English literature. Selections from representative authors will be studied. Collateral reading and frequent summaries will be required. University credit given. Double course.

6s. Shakspere. In this course a study will be made of Shakspere's development as a dramatist. A number of plays will be studied in detail from the standpoint of dramatic structure and characterization. Attention will also be given to the method of treating Shakspere in the high school. Students are advised to bring a copy of Shakspere with them. The Oxford edition is recommended. Double course.

8s. Contemporary Literature. In this course a study will be made of recent movements in the literature of England and America. University credit will be given. Single course.

9s. Library Methods for Teachers. This course aims to qualify high school teachers to take charge of high school libraries, and to prepare them to give instruction to high school students in the use of books and libraries. Single course.

9. American Literature. The literature of America will be studied in its relation to national life and thought. The leading authors will be studied in class, while the minor writers will constitute parallel reading. Single course.

22. Literature of the Bible. A literary study of the Bible by books. It assists to an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling. Open to all but freshmen. Single course.

French

Professor Zembrod

Elementary French. Single course.
Intermediate French. Single course.
Elementary Spanish. Double course.

German

Professor Melcher

1. Elementary German. Grammar with easy reading, composition and conversation based on matter read. Course will cover essentials of grammar. Single course.

2. Intermediate German. Rapid reading of elementary German with grammar drill, composition and conversation. Selected prose and poetry committed. Single course.

3. Scientific German. A course in introductory scientific German intended for students of science and journalism. Single course.

4. Advanced Reading and Composition. A course designed for those who have had at least three years of German. The literary merit of work read will be discussed, together with the period to which it belongs. Single course.

History and Political Science

Dr. Robertson

Modern Europe. A discussion of the history of Europe during the last half century. Lectures, reports and assigned readings. Single course.

United States History. A discussion of our relations with foreign countries with special emphasis on the policies for which we have stood and our broadening life. Single course.

Introduction to the Study of Government. The fundamental principles of government and a study of comparative modern governments. Single course.

Kentucky History. A study of the important problems of the American life from a local point of approach. Single course.

Home Economics

Miss Bedell

1. Selection, Preparation and Econmoic Uses of Food. Composition, uses and preparation of food; the changes in composition as the result of heat, cold and fermentation; economic buying. Prerequisite—Chemistry.

20. Dressmaking. Study and technical practice in drafting, cutting and making of simple cotton and linen garments. Study of cost and time.

Institutional Management. Management and equipment of institutional kitchens and dining rooms. Preparation of food in large quantities. One lecture, four hours laboratory.

Latin

Professor Jones

1. **Beginning Latin.** A thoro drill in declensions, conjugations, simple rules of syntax. A special effort will be made to show the close connection betwen Latin and English. Double course.

2. **Caesar (Selections).** The equivalent of four books will be read, but the selections will be taken mainly from the fifth, sixth and seventh books which portray the customs of the Britons, Germans and Gauls. Exercises in prose composition. Single course.

3. **Cicero and Sallust.** The four speeches of Cicero against Catiline, and Sallust's Catiline will be read. A comparative study of the orator and the historian. Single course.

4. **Virgil.** The first, second, fourth and sixth books of the Aeneid will be read. Special attention to the meter and to mythology. Single course.

5. **Livy or Horace.** The students registered in the course will select the author to be studied. Single course.

6. **Beginning Greek.** Declensions, conjugations, rules of syntax. English derivatives for Greek words will be noted. Single course.

Mathematics

Dean Boyd, Professor Davis, Assistant Professor Downing

1s. **Beginning Algebra.** A course designed for those who have never studied the subject, and also for those who have conditions in it. Single course.

2s. **Second Year Algebra.** A second course which will be fitted to the needs of the class desiring it. Pedagogical questions will receive attention. Single course.

3s. **Plane Geometry.** This course will complete as much of the Plane Geometry as possible. Double course.

4s. **Solid Geometry.** A thoro course open to Public School teachers and to those desiring to increase their credits for college entrance and to high school students who have been conditioned in the subject. Single course.

5s. **Trigonometry.** A standard course in Plane Trigonometry. Double course.

6s. **College Algebra.** This course covers the same ground as the usual freshman work. Double course.

7s. **Analytics.** Plane and Solid Analytics for college credit. Double course.

8s. **Calculus.** Differential or integral calculus covering a semester's work as usually given. Double course.

Physics

Associate Professor Killebrew

1s. **General Elementary Physics.** Lectures with experimental demonstrations and quizzes on Mechanics and Heat. An introductory course designed for students who wish to become acquainted with the results, methods and spirit of the science, whether they intend to pursue the subject further, or wish an elementary knowledge of Physics only as a matter of general interest. The course also meets the needs of secondary school teachers who wish to review the subject with reference to methods of presentation. Each student is required to perform and report on twenty-five laboratory exercises. Lectures and recitation five hours, laboratory four hours a week.

2s. **General Elementary Physics.** This is a parallel course with 1s covering the subjects of Electricity and Magnetism, Light and Sound. 1s is not a prerequisite for 2s. Students may register in either or both of these courses. Single course.

Courses in Physics 1a, 2a, 1b, 5a, 6a, 5b, 6b (for description see University catalog) will be offered if as many as four students register in any one of them. Double courses.

Physical Education and Athletics

Professor Boles

6s. **Baseball.** Theory and practice in batting; base running; proper methods of fielding each position; team work and coaching methods; study of the rules; physical condition; methods of indoor practice. Lectures and practical work. Double course.

7s. **Basketball.** Instruction will be given in basketball with the idea of fitting men to coach. The course will cover passing, goal throwing, dribbling, team play, how to condition a team, and the different styles of play used by the leading coaches. Lectures and practical work. Double course.

8s. **Football.** The theoretical work will take up the rules from the standpoint of coach players and officials; the several styles of

offense and defense with consideration of their special strength and weaknesses; generalship and strategy. The practical work will include: training, conditioning and player's equipment; punting, drop kicking, place kicking, kick off, and forward passing; tackling dummy and charging sled; special drills for linemen, ends and backs; following the ball, interference and team work; fundamental plays, freak plays, and signal systems. Lectures and practical work. Double courses.

9s. **Schoolroom Games and Gymnastics.** The possibilities of exercise for elementary grades and high school will be shown. A review of schoolroom hygiene, with emphasis on proper seating, lighting, ventilation and exercise. Single course.

10s. **Mass Athletics.** Methods of arrangement and squad division. Practical experience of adults in plays and games, progressively arranged. Particular attention to games that will employ a large number in a limited space. Single course.

Psychology

Dr. Cornell

1. **Elementary General Psychology.** A beginning course covering the fundamental facts and laws of normal human consciousness. The course will include the elements of physiological, descriptive, and experimental psychology. Lectures, recitations, and laboratory. Ground covered is equivalent of the complete one semester course. Double course.

105. **Mental Tests.** A course for training teachers in the fundamentals of mental diagnosis. Several standard tests will be studied and the student made proficient in the manipulation of at least one scale. This course will be conducted in connection with the Psychological Clinic. Single course.

Zoology

Professor Funkhouser

1. **Nature Study.** A course designed primarily for teachers who desire suggestions and material for presenting nature study to children in the classroom. Methods of collecting, preparing and mounting material for study, for drawing and for wall display. The course deals largely with the more common animals, plants and minerals which are suitable for elementary study. Lectures and laboratory. Single course.

2. **Bird Study.** A course in general ornithology with particular reference to the life histories, habits, songs, nests, migrations and economic importance of our native birds. Lectures, recitations, laboratory exercises and field trips. Single course.

3. **General Zoology.** A study of types of the principles phyla of animals with dissections and demonstrations. The first half of the course is devoted to invertebrates; the second half to vertebrates. Lectures, recitations and laboratory. Double course.

AMERICAN RED CROSS INSTITUTE

For the University of Kentucky Summer Session

R. J. Colbert, Assistant Division Director, Lakes Division, American Red Cross, Lecturer; Dr. J. N. McCormack, Secretary, State Board of Health, Bowling Green, Kentucky, Lecturer; Elwood Street, Director of Social Service, Louisville, Kentucky, Lecturer; Shelly D. Watts, Supervisor of Field Organization.

This Institute is established at the University of Kentucky by the American Red Cross for the purpose of providing instruction for students, who wish to enter into a permanent service of the American Red Cross or who desire a larger knowledge of the work, which this institution is doing for rural and small communities.

The course consists of a minimum of twenty-four (24) class periods and lectures and not less than one hundred fifty (150) hours of field work under the most careful supervision. The content of the course is designed to acquaint the student with the necessary information and principles and the methods for handling the social service needs in the rural and small town communities of Kentucky, especially those of central and western Kentucky. The topics receiving special attention are as follows:

1. Organization and information for meeting the war and demobilization problems—war risk insurance; legal advice; advice and assistance in regard to employment; allotment, allowance, arrears in pay, bonus, and other compensation problems, etc| A service to the man who served and to his family.

2. The principles and methods of social service in the home, how to get a home of low standard raised to a higher standard, or what the standard of the home should be.

3. The health problems of Kentucky and how to assist in meeting them. The acquaintance with the state, federal, and local forces working on health problems and how to work with them and assist them in realizing the largest possible scope of their aims.

4. An acquaintance with the fundamentals of child welfare, and of the laws and agencies of the State for meeting child welfare problems—the fiscal court, the State agency, the private homes and placing-out agencies.

5. The fundamental principles of community organization and the methods of creating and shaping public interest in the social needs of the community. How to work with other agencies in the community.

6. Community resources of a rural and small town community and how to develop them—social legislation; the schools and how to make the most of them; the country church; the State departments and the university and what they can contribute to each community. How to conduct educational work in a community; the Federal Loan Act.

The tuition cost of the course is $5.00.

Each student is expected to subscribe for the Survey Magazine, and it might be desirable for each one to own two or three of the most valuable books for future reference. The course is too brief to do much more than introduce the student to the field and the literature of the field.

UNIVERSITY EXTENSION

The University of Kentucky offers extension courses in two separate fields.: 1. The Extension Division of the College of Agriculture, supported by funds from the Federal Government under the Smith-Lever Act and appropriations from the State and University as described on page 229 of this catalog; 2. The Department of University Extension which offers, through its various bureaus, instruction and assistance to the citizens of the State in a wide field of educational activities.

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 thru four bureaus as follows:

I. Bureau of Correspondence Study.
II. Bureau of Lectures.
III. Bureau of Debating and Public Discussion.
IV. Bureau of General Information and Welfare.

I. BUREAU OF CORRESPONDENCE STUDY

Beginning with the first semester of the session of 1919-20, the University of Kentucky, this bureau offers a number of courses which are conducted by correspondence and may be undertaken in the leisure hours of students at their homes. This step is taken because in every community exists a considerable number of persons who find it difficult to avail themselves of the public system of education, yet having ability, ambition and time, they feel that if opportunities offered they would take advantage of correspondence courses.

The University, feeling it a duty to extend such opportunity for higher education to every man and woman of Kentucky who desires to enjoy its advantages at the smallest cost possible, has decided to supplement classroom instruction by correspondence methods and hopes, thereby, to be able to reach a helping hand to every citizen to the end that it may give practical help to farmer, to mechanic,

to business man, to professional man, employer and employe, to teacher, student, home-builder and housekeeper—indeed to all who must play their parts in the future well-being of the Commonwealth.

In pursuance of this purpose, the University hopes and plans to go even further than this in its efforts to be of service to the public, and invites opportunity to interest itself in the solution of problems that touch the thought and hope of the community in general and local affairs alike. It desires, thereby, to keep itself in closer co-ordination with the daily life of the people that it may assist in some measure in the forwarding of every movement that shall make for their usefulness, their welfare and their happiness.

The courses outlined herewith have been arranged with one purpose in view, and only one—that of real service; and just so far as the hearty co-operation of those interested in higher education, either student or teacher, shall be extended to it, shall its hopes be realized and its service justified.

The scope of the work may be outlined under the following divisions:

1. Certain regular university studies which may be taken for credit toward a degree.

2. Preparatory and secondary school studies which may be offered for entrance to the University but which are not open to students who are in attendance at any regular educational institution. These courses are intended for those who are not able to attend schools but who desire a knowledge of such courses as are usually offered in high schools. Students in secondary schools or those who have been in attendance in such schools within a year will not be admitted to these courses except on the express recommendation and request of their school principals.

3. Study outlines for clubs or other organizations which may desire to devote their attention to special fields of study.

A student who desires to take correspondence courses should send for an application blank on which he designates the subjects desired and other information required for the records of the bureau. On the return of this application blank and fee, the first lessons are sent together with instructions for study and methods of preparation and directions for returning reports. Each lesson is returned to the student with corrections, explanations and suggestions and each student is given individual attention.

A course consists of forty lessons or assignments and may be completed as rapidly as the student is able to pursue the subject.

No student is hurried in the work, but each course must be completed within one school year.

Students who have satisfied entrance requirements for the University may be allowed to offer a maximum of thirty-two units of correspondence work in regular University studies toward graduation.

Examinations are required if credits or certificates are sought and must be taken at the University or under the direction of the University.

The fee for one course in any subject is $15.00. This fee is deliberately put on the lowest possible operating basis and is not returnable if the student drops the subject after registration.

The following courses are offered for 1919-20. Those marked with an asterisk (*) are given by the College of Agriculture. Unless otherwise indicated in the description of the course, any of these subjects may be offered for college credit. Full information regarding any of the courses will be supplied on request.

---

*Agriculture

1. This course consists of (1) a study or origin, formation, classification and physical properties of soils; (2) the principles of soil fertility; (3) the practices essential to the maintenance of the productiveness of the soil, and (4) the production of general farm crops.

*Animal Feeding

1. This course embodies a study of how plants develop and produce feed for animals, the digestion and assimilation of feedstuff and the use of the same in the growing and fattening of animals, as well as for the production of milk, wool and work. A comprehensive study is made of the composition of different feeding stuffs and the formulating and balancing of rations. Forage and soiling crops and the ensiling of crops as well as the economic use of same are given due consideration.

Art and Design

1. **Art Appreciation.** A course consisting of (1) a study of general art principles, and (2) the application of these principles to city planning, landscape gardening, architecture, house furnishing, costume design and history of art. This course can be offered only to groups of not less than eight or ten members since class work is necessary to develop the community spirit so essential to the attainment of real constructive art purposes.

Botany

1. **General Botany.** A general survey of the vegetable kingdom; the first twenty exercises dealing largely with the non-vascular plants and the second twenty exercises dealing particularly with the vascular plants. This course is open only to students who can secure the use of a microscope or who are provided with that instrument.

Economics

1. **Principles of Economics.** A study of the production, consumption and distribution of wealth; the application of principles to some social and economic problems.

2. **Economic Evolution.** A systematic representation of the historical development of the economic process as a factor in civilization. Brief attention is given to the methods of livelihood of primitive and barbarous peoples. The major part of the course is occupied with the later stages of economic activity as manifested by the peoples of modern Europe and America and with the development of a world economy.

3. **Money and Banking.** Nature and functions of money; credit; Federal Reserve System and other national banking systems.

4. **Business Organization and Corporation Finance.** The sole trader; partnership and corporation; large scale industry; securities and conditions determining their use; fiscal policies; insolvency; receiverships and reorganizations.

5. **Principles of Accounting.** An introduction to the science and adaptation of accounts of a going concern; partnership and corporation accounting; cost accounting.

Education

1. **Principles of Education.**
2. **Social Education.**
3. **History of Education.**
4. **Administration and Supervision.**
5. **Agricultural Education.** A course in the history, aims and method of Agricultural Education. Credit for this course cannot be substituted for Agricultural Education 28 for Smith-Hughes students.

English

1. **Grammar Review and Elementary Composition.** An elementary course in composition. For those who are not prepared to take the freshman work in composition. No college credit.

2. **Commercial Composition.** A study of the various forms of commercial correspondence. Business letters, etc. No college credit.

3. **English Composition.** The object of this course is to give training in the writing of correct and clear English. Accuracy of expression is demanded rather than proficiency in style. This is the University freshman English course.

4. **Advanced Composition.** This course is for those who have acquired some proficiency in expression and who wish to do further work in the subject. A study of the essay and the short story with practice in writing. This is the University course in advanced composition.

5. **History of English Literature.** This course is designed to give the student a general survey of English literature from the old English period to the present. Extensive readings will be made from selected masterpieces.

6. **American Literature.** The literature of America will be studied in its relation to national life and thought. This is the University course in American literature.

7. **Debate and Public Speaking.** Tigh schools will be given aid by correspondence, personal interviews and special bulletins. Package library service for debating clubs.

*Farm Management

1. This course will deal with the business organization and management of the farm enterprise in such a way as to secure the greatest continuous profits. The student will be more familiar with the principles involved in the choice of a proper type of farming; the comparative merits of intensive and extensive farming; the relation of live-stock to farm management; the best size of farm; the relation of capital to farm profits; farm rental systems; the management of men and horse labor and machinery for greatest profits; the layout of fields and farm buildings; farm accounts including the annual inventory; the choice of a region for farming and important considerations in buying a farm and other fundamental factors of farm orgaization.

French

1. **Intermediate French.** A course open to students who have had two years of French in a high school or one year in college.

German

1. **Elementary German.** A course for students who desire to begin the study of the subject.

2. **Intermediate German.** Open to students who have had two years of German in a high school or one year in college.

3. **Advanced German.** A course in German literature for advanced students.

Greek

Any regular University course in Greek described in this catalog (see p. 127) may be obtained by correspondence.

History

1. **History of the United States Since 1750.** Open to students who have had a good high school course in American History or the equivalent of such a course.

2. **History of Europe in the Nineteenth Century.** Emphasizing the reform and revolutionary periods in the first three-quarters of the century and the social movements thereafter.

Latin

Any course in Latin described in the regular University catalog may be obtained by correspondence. Consult announcements of the College of Arts and Sciences, page 125 of this catalog.

*Marketing of Farm Products

1. **Marketing.** The course in marketing comprises a discussion of the fundamentals in marketing farm products together with the various types and functions of marketing institutions, with comparisons between methods pursued in agricultural marketing and marketing of manufactured products. The course also contains a discussion of the history, types and functions of co-operative organizations in the United States with special stress on their value in marketing agricultural products. The latter part of the course will be devoted to an independent study on the part of the student to some farm marketing problem within his own community. A two-thousand word paper will be required on the subject chosen.

Mathematics

Any course offered by the Department of Mathematics in the Colege of Arts and Sciences as announced in the regular University catalog (this volume, page 166) may be obtained by correspondence.

Mechanical Drawing

1. A course consisting of (1) Instructions in the care and use of drawing instruments; (2) Lectures on the application of drawing

to the industrial arts, and (3) A series of graded exercises to be executed one at a time and returned to the University for criticism.

Political Science

1. A course in American Government. The organization of the Federal Government; functions and powers of the President, Cabinet, Congress and Judiciary; State governments; a brief survey of county and city governments.

Psychology

1. **Elementary General Psychology.** A course covering the fundamental facts and laws of normal human consciousness. Includes a comprehensive study of the nervous system as a basis for an understanding of conscious processes. In addition to a standard text, students will be provided with supplementary notes outlining exercises and experiments.

Public Speaking

1. **Speech Composition.** A course on the preparation and writing of speeches for delivery.
2. **Argumentation and Debate.** A course on the principles of preparing and presenting arguments.

Road Building

1. A course designed to meet the wants of actual road builders such as road inspectors, county road engineers, members of fiscal courts, contractors, etc., the subject matter being presented in such a manner that it may be easily understood by the non-technical student. The lessons will cover general conditions, road economics, road laws, road administration, construction and maintenance of earth, sand-clay, gravel and macadam roads, the care and maintenance of bridges and culverts, road financing, bond issues, general and special tax, cost data, methods of making reports, history of Kentucky's roads and needed legislation. No college credit will be given for this course and the course will not be open to high school students.

Sociology

1. **Introduction to Sociology.** A scientific analysis of community life in its historical and current aspects. The course sets forth the basis and nature of sociality, the factors producing and directing social evolution, the characteristics of the principal social institutions, and the essential processes of social life. The treatment is concrete and affords an imtimate acquaintance with the interests and problems that make up the life of today.

2. **Statistical Method.** A study of the quantitative investigation of phenomena with a view to mathematical exactitude in the statement of facts and laws of human life. The course includes the planning of statistical research, the framing of schedules, the collection of material, classification and tabulation, averages, measures of variation, methods of correlation and the construction of index numbers.

3. **Sociological Topics.** This course is designed to accommodate individual interests. According to the desire of the student, it may be confined to a study of the Family, of Community Service, of the Sociology of Religion, of Rural Sociology, of Charities, of Criminology, or of such other sociological topics as the student desires. A combination of such topics may also be arranged.

Spanish

1. A course for students who have had two years of Spanish in high school or one year in college.

II. BUREAU OF LECTURES

The University offers thru this bureau:

1. Single lectures or series of such lectures.
2. Speakers for teachers' institutes.
3. Commencement addresses.
4. Special occasion lecturers, such as speakers for memorial or dedication exercises, convocations, civic and women's clubs, etc.

The charges will in each case be arranged thru this bureau and will vary according to the lecturer and subject, the locality, the time required for the engagement, etc.

III. BUREAU OF DEBATING AND PUBLIC DISCUSSION

This bureau offers assistance to any individual or organization interested in important social, political or educational problems and fosters forum activities in study and discussion. Clubs, debating societies, school organizations, business associations and similar organizations will be supplied with any material which the University is able to provide. The principal activities of this bureau are conducted under the following heads:

1. Subjects for debates with bibliographies.
2. Facts and arguments on special subjects.
3. Guides, reports and bulletins.

IV. BUREAU OF GENERAL INFORMATION AND WELFARE

This bureau is intended as a clearing-house thru which all reasonable inquiries of the people of the State on general matters may receive consideration. In general the activities of the bureau fall along the following lines:

1. Clearing house for inquiries.
2. Reports on special subjects—foods, sanitation, disease, etc.
3. Information on economic, political, social and ethical topics—social conditions, child labor, municipal problems, etc.
4. Assistance in community dramatics.

Detailed information regarding any of the above topics will be supplied on request. It may be stated in regard to the last item, that in order to enable the citizens of Kentucky to develop interest in drama, festivals and pageants as intimate, democratic mediums for self-expression of community life, the Department of English of the University offers assistance in the organization of community pageants, dramatic clubs and little theaters, advice on new plays worthy of support and suitable for presentation, advice in regard to drama study, and other forms of assistance and co-operation.

All inquiries should be addressed to the Department of University Extension, University of Kentucky, Lexington, Ky.

Part IV

DEGREES AND HONORS

1917-1918

DEGREES

Conferred on Commencement Day, 1918

COLLEGE OF ARTS AND SCIENCE

Bachelor of Arts in English

Harold Bowers McGregor	Lexington
Ruth Elizabeth Mathews	Lexington
Mary Ricketts Mayes	Mt. Sterling
Minnie Evelyn NeVille	Lexington

Bachelor of Arts in History

Ella Maude Harmon	Perry
Helen Elizabeth Morris	Lexington
*Virgil James Pritchett	Clay
Frances Boyle Spencer	Birmingham, Ala.
Arnold Henry Webb	Lexington.

Bachelor of Arts in Education

Lois Irvine Ammerman	Poindexter
Shelby Smith Elam	White Oak
Bessie Hughes	Edenton
Aileen Gilbert Kavanaugh	Lawrenceburg
Edna Rodgers Martin	Midway
Lucy Erwina Robinson	Owensboro
Anne Elizabeth Sloan	Lexington
May Sweeney Stephens	Williamsburg
Elmer Weldon	Sanders

Bachelor of Arts in Modern Languages

Lena Rivers Clem	Bedford
Edith Cary Dean	Owensboro
Robert Frederic Flege	Williamstown
Emma Gladys Holton	Forks of Elkhorn
Frieda Blanche Lemon	Providence
Annie Barkley Stagg	Lexington
Mary Josephine Thomas	Frankfort

*In military service.

Bachelor of Science in Education

Lela May Kerswill	Lexington
Sara Winn McConnell	Arlington
Bertha Klein Miller	Lexington

Bachelor of Science in Physics

Oscar William Irvin..	Greenville

Bachelor of Science in Industrial Chemistry

Alec Julius Zimmerman	Louisville

COLLEGE OF AGRICULTURE

Bachelor of Science in Agriculture

Everett Price Bleidt	Lexington
Clarence Carlisle Brown	Williamstown
Richard Boggess Fenley	Valley Station
John Blain Flege	Williamstown
William Richard Gabbert	Louisville
Constantine Georgieff	Bulgaria
*Henry Clay Haggan	Covington
John Lewis Hammond	Vanceburg
*Clyde Dugan Harrison	Lebanon
*William Shelton Hieronymus	St. Helens
Russell Aubrey Hunt	Utica
John William Lindsay	Covington
John Edwin McClure	Mt. Sterling
Arlie Estes McGuire	Salyersville
Charles Lee Morgan	Sirocco
Todor Nicholoff	Bulgaria
John Gilbert Stewart	Crittenden
James Cleveland Melvin	Sedalia
John Branch Taber	Elizabethtown
*Tilford Lanier Wilson	Lexington

Bachelor of Science in Home Economics

Celia Bartlett Cregor	Springfield
Lelah Vaughn Gault	R. R., Maysville
Laura Lee Jameson	Cynthiana
Lois Powell	Red House
Catherine Belt Snyder	Louisville
Mary Elizabeth Walker	R. R., Lexington

*In military service.

COLLEGE OF ENGINEERING

Bachelor of Science in Civil Engineering

Emile Barton Cavallo	Vicksburg, Miss.
Horace Burt Clarke	Maysville
Sherley Hudson	Louisville

Bachelor of Science in Mechanical Engineering

William Koontz Adkins	Depoy
Paul Maxmillian Andres	Louisville
John Alfred Brittain	Leadville, Colo.
John William Cooper	Nicholasville
Robert Morris Davis	Utica
Elbert Robert Dearborn	Cynthiana
*Dee Richard Ellis	Eminence
*Karl William Goosman	Richmond
*James Matt Hedges, Jr.	Lexington
*Hall Massillon Henry	Lakeland
George Lewis Jackson	Franklin
Henry J. Kolbe	Russia
John Dacosta Maddox	Lexington
Charles Ellsworth McCormick	R. R., Shepherdsville
William Darnall McDougle	Lexington
Harry L. Milward	Lexington
Constantine Nicholoff	Bulgaria
Harold Parks	Irvington
*T. Ellis Peak	LaGrange
Buford Bosia Russell	Elkton

Bachelor of Science in Mining Engineering

*Ernest Berry Fleming	Elizaville
*Jacob John Flocken	Louisville

COLLEGE OF LAW

Bachelor of Laws

*Morgan Marion Atchison	Owingsville
*Clyde Russell Barker	Brooksville
George Clifton Bradley	Lexington
Virgil Munday Chapman	Lexington
Richard Harold Jenkins	Georgetown
Jasper Johnson McBrayer	Lawrenceburg
Samuel Helm Morton	Owensboro
Archie Lloyd Northcutt	Burlington
Richard Clarence Northcutt	Burlington
Benjamin Harrison Scott	Louisville
*John Stewart Sherwood	Cynthiana

*In military service.

DEGREES GRANTED IN DECEMBER, 1918.

Bachelor of Arts

William Thornton Lafferty	Lexington

Bachelor of Arts in Education

Sterling A. Day	Flemingsburg
Vaught Mills	Kenton
Myrtle Rose Smith	LaGrange

HONOR GRADUATES

To be eligible for "Commencement honors" a student must have been in attendance at this University three full years. No student shall be eligible who has incurred a condition, or who has not maintained the following minimum standard in scholarship.

50 per cent A's
40 per cent B's
10 per cent C's

The names of those students who have the required standard in scholarship are submitted by the Registrar to the faculties of their respective colleges. Each faculty considers carefully the character and personality of each candidate and reports to the Registrar its selections of honor graduates.

College of Arts and Science

Emma Gladys Holton
Aileen Gilbert Kavanaugh
Frieda Blanche Lemon
Ruth Elizabeth Mathews

College of Agriculture

Celia Bartlett Cregor
Charles Lee Morgan

College of Mechanical and Electrical Engineering

Robert Morris Davis
T. Ellis Peak

College of Law

Virgil Munday Chapman
Benjamin Harrison Scott

THE GRADUATE SCHOOL

Master of Arts

Mathematics

HARRY RAYMOND ALLEN
VERNON GUY GROVE

History

RUTH BELL BRANHAM

Mechanical Engineering

WILLIAM THOMAS CARPENTER
ROBERT BOYD COTTRELL
LYNN BARKLEY EVANS
WILLIAM HENRY GRADY
THOMAS FRANCIS HAYNES

SCHOLARSHIPS, PRIZES AND HONORS

Tau Beta Pi Scholarship

Awarded to C. F. Johnson, Mayfield, Ky.

Bennett Prize

Awarded to Elmer Weldon, Sanders, Ky.

Barker Trophy

Won by the Union Literary Society.

Crum Declamation Prize

Awarded to Walter Clay Piper, R. H. 2, Lexington, Ky.

Patterson Oratorical Prize

Awarded to Charles Evans Planck, Lexington, Ky.

Union Declamatory Prize

Awarded to Earle Ware Foster, Covington, Ky.

Union Oratorical Prize

Awarded to E. S. Dabney, Hopkinsville, Ky.

The American Law Book Company Prize

Awarded to Virgil Chapman, Lexington, Ky.

Callaghan & Company Prize

Awarded to H. H. Green, Bruin, Ky.

W. H. Anderson Company Prize

Awarded to J. P. Barnes, Bardstown, Ky.

Representatives in the Georgetown-Kentucky Debate

E. E. Rice	Booneville, Ky.
E. A. Dabney	Hopkinsville, Ky.

Representatives in the Kentucky-Transylvania Debate

L. F. Bishof	Louisville, Ky.
E. S. Dummitt	Monett, Mo.

Representative in the Kentucky Intercollegiate Oratorical Association

E. A. Dabney	Hopkinsvile, Ky.

Arbor Day, 1918

President's Address	Virgil Chapman
Class Orator	Harry Milward
Class Prophet	Bertha Miller
Junior Class Rpresentative	Charles E. Planck

Class Day, 1918

President's Adress	Virgil Chapman
Roll Call	Aileen Kavanaugh
Class Poem	Helen Morris
Class History	Frieda Lemon
Class Grumbler	C. L. Morgan
Giftorian	Russel Hunt

Part V

THE ALUMNI ASSOCIATION

THE ALUMNI ASSOCIATION

The Alumni Asociation is an organization composed of alumni and former students of the University. It has been organized for the purpose of extending the influence of the University and keeping alive the bonds of friendship and social fellowship among its members.

The Association has taken a keen interest in the growth and development of the University for many years, but not until recently has it taken an active interest in the affairs of the University. As evidence of this, it secured thru the 1914 legislature an act giving the alumni representation on the Board of Trustees of the University.

Membership of the organization is widely scattered and alumni clubs have been formed in many of the larger cities thruout the country. Plans are also being formulated with a view to establishing clubs in the various counties of the Commonwealth. Annual business meetings and class reunions are held during commencement week of each year at the University. Club meetings are held at the will of the various clubs.

ALUMNI REPRESENTATIVES ON BOARD OF TRUSTEES

Philip P. Johnston, jr., Lexington, Ky.
J. Irvin Lyle, New York City.

OFFICERS OF THE ASSOCIATION

Harold Ammas, President, New York City.
Rodman Wiley, Vice-President, Frankfort, Ky.
J. D. Turner, Secretary-Treasurer, Lexington, Ky.
M. McLaughlin, Editor The Alumnus, Lexington, Ky.

Executive Committee

W. E. Freeman, Chairman, Lexington, Ky.
Frank Battaile, Lexington, Ky.
George Brock, London, Ky.
Mrs. Robert Graham, Urbana, Ill.
Louis E. Hillenmeyer, Lexington, Ky.
T. T. Jones, Lexington, Ky.
Presidents of the Clubs.
President and Secretary, *ex-officio.*

Class Secretaries

1916 Elsie Heller, Maysville, and L. H. Nelson, Lexington.
1915 Clyde Taylor, Harrodsburg, Ky.
1914 R. C. Dabney, Lexington, Ky., and E. H. Nollau, Office of Experiment Station, Washington, D. C.
1913 Mabel Pollet and Inis Gillis, Lexington, Ky.
1912 J. R. Duncan, University of Kentucky, Lexington, Ky.
1911 Olline Cruickshank, Georgetown, Ky.
1910 D. V. Terrell, University of Kentucky, Lexington, Ky.
1909 P. L. Blumenthal, Lexington, Ky.
1908 Frank Battaile, Lexington, Ky.
1907 L. E. Hillenmeyer, Lexington, Ky.
1906 Anna Wallis, 326 Aylesford Place, Lexington, Ky.
1905 Harry Edwards, R. F. D., Lexington, Ky.
1904 W. E. Freeman, University of Kentucky, Lexington, Ky.
1903 Marguerite McLaughlin, 226 E. Maxwell St., Lexington, Ky.
1902 T. J. Barr, University of Kentucky, Lexington, Ky.
1901 G. H. Hailey, Cleary-White Construction Co., Chicago, Ill.
1900 L. K. Frankel, University of Kentucky, Lexington, Ky.
1899 George Roberts, Experiment Station, Lexington, Ky.
1898 Chas. L. Straus, Lexington, Ky.
1897 Mary E. Clarke, Lexington, Ky.
1896 J. I. Lyle, 39 Cortlandt Street, New York City.
1895 Mary L. Didlake, Experiment Station, Lexington, Ky.
1894 Mrs. P. F. Kesheimer, Madison Place, Lexington, Ky.
1893 D. S. Roberts, West Point, Ky.
1892 and 1891 (To be selected.)
1890 Chas. R. Brock, Denver, Col.
1899 to 1869 A. M. Peter, Experiment Station, Lexington, Ky.

ALUMNI CLUBS

Birmingham, Alabama

J. Miles Sprague, '07, President, Ensley, Ala.
H. J. Wurtele, '04, Vice-President, Ensley, Ala.
A. B. Haswell, '13, Secretary-Treasurer, Ensley, Ala.

Chicago, Illinois

J. B. Sanders, '11, President, S. Stone Ave., La Grange, Ill.
G. K. McCorkle, '08, Vice-President, 1100 E. 5th Place, Chicago, Ill.
C. A. Johns, '09, Secretary-Treasurer, 5206 W. 23rd Place, Cicero, Ill.

Columbus, Ohio

A. E. Waller, '14, President, Department of Agronomy, O. S. U., Columbus, O.

Cincinnati, Ohio

Warner Sayers, President, 219 W. 4th Street, Cincinnati, Ohio
J. J. Thompson, '03, Vice-President, 201 Pearl Street, Cincinnati, Ohio.
H. L. Nagel, '12, Secretary-Treasurer, Bellevue, Ky.
E. L. Becker, '11, Scribe, 405 Government Bldg., Cincinnati, Ohio.

Detroit, Michigan

J. E. Rolling '15, Secretary, 212 Medbury Ave., Detroit, Mich.

Eastern Kentucky Club, Ashland

Lee Hunt, '13, President, Ashland, Ky.
Richard Garred, '12, Vice-President, Louisa, Ky.
Idie Lee Turner, '14, Secretary-Treasurer, Ashland, Ky.

Lexington, Kentucky

S. B. Marks, '99, President, Lexington, Ky.
Chas. L. Straus, '98, Vice-President, Lexington, Ky.
Marguerite McLaughlin, '03, Secretary, 226 East Maxwell Street, Lexington, Ky.
Mary L. Didlake, '95, Treasurer, 481 East Main Street, Lexington, Ky.

Louisville, Kentucky

S. L. Pottinger, '92, President, 627 East Broadway, Louisville, Ky.
Eugenia S. McCullough, '06, Secretary, 2304 Alta Avenue, Louisville, Ky.

Nashville, Tennessee

J. M. Foster, '11, President, 1909 Division Street, Nashvile, Tenn.
Eugene Gilliland, '04, Vice-President, 845 Meridan Street, Nashville, Tenn.
John J. Tigert, '09, Secretary-Treasurer, 1905 West End Avenue, Nashville, Tenn.

New York City

L. L. Lewis, '07, President, 39 Cortlandt Street, New York.
A. Akin, '05, Vice-President, 193 North 16th Street, East Orange, N. J.
R. T. Taylor, '15, Secretary, 588 St. Marks Avenue, Brooklyn, N. Y.

Philadelphia, Pennsylvania

Frank Daugherty, '07, President, 2109 Chestnut Street, Philadelphia, Pa.

K. F. Anderson, '07, Vice-President, University of Pennsylvania, Philadelphia, Pa.

Tulsa, Oklahoma

R. L. Gordon, '91, President, Tulsa, Okla.

C. R. Gilmore, '04, Secretary-Treasurer, Tulsa, Okla.

Pittsburgh, Pennsylvania

H. S. Fry, '04, President, Box 247, Rochester, Pennsylvania.

D. C. Estill, '07, Secretary-Treasurer, 1312 Oliver Building, Pittsburgh, Pennsylvania.

Schenectady, New York

S. C. Ebbert, '11, President, 24 Glenwood Building, Schenectady, New York.

C. M. Roswell, '08, President, 724 Brandywine Avenue, Schenectady, New York.

L. C. Hardesty, '12, Secretary, 21 Royle St., Schenectady, New York.

South Africa

H. W. Taylor, '06, President, Rusenburg, Transvaal, S. Africa.

J. duP. Oosthuizen, '12, Secretary-Treasurer, Vredefort, O. F. S., South Africa.

St. Louis, Missouri

A. C. Ball, '11, President, 721 Chemical Building, St. Louis, Mo.

Washington, District of Columbia

P. M. Riefkin, '06, President, Department of Interior, Bureau of Mines, Washington, D. C.

W. G. Campbell, '02, Vice-Pres., Department of Agriculture, Bureau of Chemistry, Washington, D. C.

F. H. Tucker, '09, Secretary, Chemist, Bureau of Standards, Wash-

Part VI

REGISTER OF STUDENTS

1. Fre
2. Sop
3. Jun

Agr., A
A. & S
Eng., E
Law, L

Acker,
Acree,
Adams
Adams
Adams
Adair,
Adcock
Akin,
Alexan
Alford
Allbrit
Allen,
Allen,
Allend
*Alling
Ambur
Amon,
Ander
Ander
Ander
Ander
Ander
Antrol
Arkle,
Arnold
Arnold

*Ki

REGISTER OF STUDENTS

ABBREVIATIONS

Classes

1. Freshman
2. Sophomore
3. Junior
4. Senior

Sp. Special Student

Courses

Agr., Agriculture
A. & S., Arts and Science
Eng., Engineering
Law, Law
Dft., Drafting
Grad., Graduate

Acker, Ralph Otis	Eng. 1	Livermore
Acree, Casper	Agr. 1	Erlanger
Adams, John Newell	Eng. 2	Somerset
Adams, Leslie Willis	Eng. 2	Lexington
Adams, Wilson	A. & S. 1	Cynthiana
Adair, Hiram Tyre	Sp. Eng.	Paris
Adcock, William Forrest	Law 2	Campbellsburg
Akin, George Burns	Eng. 1	Utica
Alexander, John David	Agr. 1	R. R. 1, Cadiz
Alford, Nell	Agr. 2	Hartford, Ala.
Allbritten, Ewen B.	Agr. 1	R. R. 7, Murray
Allen, Amy	Sp. A. & S.	Troy, Ohio
Allen, James March	A. & S. 1	Lexington
Allender, Edna Hite	Dft., Eng.	Lexington
*Allington, Ralph Bamford	A. & S. 2	Newport
Amburgy, Linville	Agr. 4	Hindman
Amon, Will Rice	Eng. 2	Lancaster
Anderson, Charles Roy	Agr. 1	R. R., Mayfield
Anderson, Crawford Covington	Eng. 2	R. R. Mayfield
Anderson, Frederick Paul, Jr.	Eng. 4	Lexington
Anderson, Joseph Caldwell	Eng. 1	R. R. 7, Lexington
Anderson, Julia N.	A. & S. 3	Cedar Falls, Iowa
Antrobus, Dewey Clarence	Eng. 2	Williamstown
Arkle, George Fithian	A. & S. 1	Paris
Arnold, Robert Raymond	Agr. 1	Morgan
Arnold, Robert Samuel	Eng. 4	Paint Lick

*Killed in accident, September 21, 1918.

Asbury, Maud Norman	Agr. 2	R. R., Petersburg
Asbury, Thomas Jackson	Agr. 1	R. R. 1, Dover
Asbury, William Taylor	Agr. 1	R. R. 1, Augusta
Ash, Philip Paul	Eng. 1	Louisville
Ashbrook, Tom Veach	A. & S. 1	Lexington
Asher, Jr., Thomas Jefferson	Eng. 2	Pineville
Atkerson, John Henry	Agr. 1	Salmons
Atkins, Luther Bromley	Eng. 1	Louisa
Augsburg, Fred King	A. & S. 2	Lexington
Austin, Roberta Kathrine	Agr. 1	Waverly
Aydelott, Boyd Alphonsa	Agr. 1	Water Valley
Bahan, Anna Elizabeth	Dft., Eng.	Lexington
Bailey, Joseph Harrison	Eng. 3	Bagdad
Baker, Mary DeHart	Sp. A. & S.	Hazard
Baker, William Ewing	Eng. 1	Winchester
Barger, Chelcie Reed	A. & S. 1	Columbia
Barker, Ida Agatha	A. & S. 1	R. R. 9, Lexington
Barker, William Jennings	Agr. 1	R. R. 9, Lexington
Barkley, Marie Rodes	Agr. 3	Lexington
Barlow, Victor Hugo	Eng. 2	Barlow
Barnes, George Ivan	Agr. 4	Lexington
Barnes, Jacob Pennebaker	A. & S. 1	Bardstown
Barnes, Porter	Eng. 1	Beaver Dam
Barnette, Orie F.	Law 2	Hustonville
Barnhill, Roy	Agr. 1	Madisonville
Bartee, Bruce Orlean	Eng. 2	Louisville
Barton, Vasco Rogers	Eng. 1	Wilton
Bartlett, Thomas Glenn	Agr. 1	Owensboro
Bastin, Arthur Lee	Eng. 2	Lexington
Bastin, Pearl Allyne	Sp. A. & S.	Lexington
Batsel, Cecil Norman	Eng. 4	Fulton
Bauer, Louis Henry	Eng. 4	Louisville
Baugh, Joseph Franklin	Eng. 1	London
Baugh, Walter Scott	Eng. 4	London
Baulch, Ernest Langley	Eng. 2	Fulton
Baulch, Walter Monroe	Eng. 2	Fulton
Baumgarten, George Woerner	Eng. 1	Louisville
Baute, Edward Arthur	A. & S. 2	Somerset
Beall, Mary	A. & S. 4	Mt. Sterling
Beam, Thomas Jerry	A. & S. 1	Bardstown
Beasley, Helen Margaret	A. & S. 1	Williamstown
Beatty, Emile B.	Law 2	Beattyville
Becker, Herman Louis	A. & S. 1	Louisville

Bedford, Henrietta Clay	A. & S. 1	Winchester
Begby, Ottis Earl	Law 3	Hyden
Belew, Martha Clarice	A. & S. 1	Fulton
Bell, Auryne Elliott	A. & S. 2	Eminence
Bell, Frank Homer	A. & S. 4	Madisonville
Bell, Herrick Fritzlen	Eng. 2	Lexington
Bell, Jane Stanberry	Agr. 3	Nicholasville
Bell, Mary Archer	A. & S. 2	Bluefield, W. Va.
Bell, Reynolds	Eng. 1	Berea
Bell, Trice Morton	Eng. 4	Madisonville
Belt, Newton Osborne	Eng. 2	Wickliffe
Belt, Rupert Arthur	Agr. 3	Sheridan
Bennett, Hub H.	Agr. 3	R. R. 7, Mayfield
Bennett, Oscar Kelly	Eng. 1	Hartford
Bennett, Peter Mitchell	Sp. Eng.	Wolf Creek
Benson, George Wesley	Eng. 1	Williamstown
Berkele, Edna King	A. & S. 4	Lancaster
Berry, Jr., Bailey Dawson	A. & S. 1	Lexington
Besten, Emil Alexis	A. & S. 1	Lexington
Biggs, Napoleon	Eng. 1	Sebree
Biggs, Paul J.	Eng. 1	Sebree
Bigstaff, James Morrison	Agr. 1	R. R. 3, Mt. Sterling
Billings, Lougenia	A. & S. 1	Paducah
Bird, Margaret Tilford	Agr. 3	R. R., Shelbyville
Bischof, Laurence Francis	Eng. 3	Louisville
Bitzer, Adelaide Lucille	A. & S. 1	Shiveley
Bivins, Johnnie Lloyd	A. & S. 1	North Middletown
Black, James Gilbert	A. & S. 2	Harrodsburg
Blacketer, Thomas	A. & S. 1	Junction City
Blackburn, Roberta Dexter	A. & S. 2	Lexington
Blaine, Robert G.	A. & S. 1	Dry Ridge
Blair, Hattie DuPree	A. & S. 1	Clinton
Blair, Paul Clifton	A. & S. 1	Columbia
Blair, Robert Richard	Eng. 1	Moscow
Blake, Clyde Munroe	Sp. Eng.	Lexington
Blake, William Ellis	Eng. 1	Jackson
Blakey, Hubert McGuire	Law 2	Beattyville
Blakey, Lula Beatty	Law 2	Beattyville
Bland, Clyde	Agr. 3	Cynthiana
Bland, Leroy H.	Agr. 1	Cynthiana
Blane, Homer Dabney	A. & S. 1	Cadiz
Blatz, Lucille C.	Agr. 3	Louisville
Block, Raymond William	A. & S. 1	Louisville

Boardman, Minerva Sue	A. & S. 1	R. R. 3, Paris
Boaz, Harvyl	A. & S. 1	Star R., Mayfield
Boggess, William Wallace	Eng. 2	Lawrenceburg
Bolinger, Harry Ebert	Eng. 1	Uz
Bolser, Alma Louise	A. & S. 3	Dayton
Booth, Gertrude	A. & S. 2	R. R. 2, Carlisle
Bondurant, James Lee	Agr. 1	Hickman
Boone, Hervey Parks	Eng. 3	Lexington
Bosler, John Nicholas	Eng. 1	Louisville
Bosler, Richard Edward	Eng. 1	Louisville
Bostick, Raymond	A. & S. 1	Clinton
Boswell, William Marvin	Agr. 2	Wilmore
Botts, Minnie	Sp. A. & S.	Midway
Bowen, Helen Esther	A. & S. 1	Winchester
Bowles, Isaac Anderson	A. & S. 4	Tyner
Bowmer, Robert Henrique	Law 2	Madisonville
Boyer, George Roy	Agr. 1	Campbellsburg
Bradbury, Cecil Powell	A. & S. 1	Middleport, Ohio
Bradner, James Wood	Eng. 1	Ashland
Bradshaw, Arthur James	Eng. 1	Somerset
Branaman, Roger Bryan	Eng. 1	Lexington
Brand, Kathleen	Agr. 3	Mayfield
Bratcher, Emmit Evart	A. & S. 4	Caneyville
Braun, William Theodore	Eng. 1	Louisville
Breeck, Loraine L.	Sp. Agr.	Carrollton
Breen, John Ryan	A. & S. 1	Flemingsburg
Brittingham, Vertner D.	Eng. 1	R. R. 6, Lexington
Broach, Herman Lee	Law 2	Murray
Broderick, William Carton	Eng. 1	Falmouth
Bromagen, Jerry	Eng. 3	Louisville
Brophy, William A.	Agr. 1	Paris
Brown, Ella Nute	A. & S. 1	R. R. 1, Lexington
Brown, Herbert Lee	Eng. 1	Williamstown
Brown, Lois Real	Agr. 4	Providence
Brown, Oakley	Agr. 1	Louisville
Brown, Robert Charles	Agr. 1	Somerset
Brown, Ross Charley	Law 2	Salem, Ind.
Brown, Rufus Henry	Agr. 1	Elizabethtown
Brown, Walter Edwin	Eng. 1	McHenry
Brown, William Coleman	Law 3	Owensboro
Bruner, Gus Blant	Eng. 1	Ekron
Bruner, Jacob Franklin	Agr. 3	Hartford
Bryan, Holland Gaines	Law 3	R. R. 2, Paducah

Buckner, Nancy Jane	Agr. 2	Shelbyville
Burbank, Julia Yeomans	Agr. 4	Upper Montclair, N. J.
Burch, Robert Albert	A. & S. 1	Paducah
Burge, Lofton V.	A. & S. 4	R. R. 5, Mayfield
Burkard, Wendel Frank	A. & S. 1	Covington
Burks, Daniel Stephens	Eng. 1	Louisville
Burke, Jr., Samuel W.	Eng. 1	Junction City
Burnham, Lawrence S.	Eng. 1	Paducah
Burrier, Mattie Craig	Dft., Eng.	Keene
Burton, Clyde Orbin	Law 2	Bowling Green
Byrd, Uva Seldon	Agr. 2	Murray
Cablish, Ellsworth Lynnwood	A. & S. 1	Maysville
Caden, Camillus Edward	Eng. 1	Norwood, Ohio
Caldwell, Bertha Hume	A. & S. 1	Newport
Cambron, Joe W.	Law 3	Morganfield
Cameron, Arthur Arden	A. & S. 2	Lexington
Campbell, Ada	Agr. 1	Mackville
Campbell. William Reynolds	Eng. 2	Lexington
Card, Elizabeth Lloyd	A. & S. 3	Pineville
Cardwell, Ruth Howard	A. & S. 4	Shelbyville
Carman, Herman	Agr. 3	Lexington
Carroll, Jr., Owen	A. & S. 1	Newcastle
Carter, Charles Hulchen	Eng. 1	Burksville
Carter, Mary Jo	Agr. 1	Lexington
Cash, John Franklin	Eng. 2	Stanford
Casner, John Ford	Eng. 1	Providence
Cassidy, John Thomas	Law 4	Lexington
Cassidy, Laura	Agr. 4	Lexington
Cave, Sallie Bullock	Sp. A. & S.	Lexington
Chancellor, Herbert Hall	A. & S. 3	Sturgis
Chandler, Alta Mae	A. & S. 2	Owingsville
Chenault, Carlisle	A. & S. 1	Maysville
Chenault, Thomas Douglas	Eng. 1	Richmond
Cheshansky, Frank	A. & S. 1	Matowan, N. J.
Choate, Davie Craik	Eng. 3	Covington
Choate, Emile Doris	Sp. Eng.	Paducah
Church, Archibald	Agr. 1	Helena
Clar, Jr., Robert	Eng. 2	Louisville
Clare, Fulton Warren	Eng. 1	Lexington
Clark, Lucille Goff	A. & S 1	Indian Fields
Clark, Maurice Vernon	Eng. 1	Paris
Clay, Alice Rogers	Dft. Eng.	Paris
Clay, Charles Donald	Eng. 1	Lexington

Clayton, Ruth Amanda	A. & S. 1	R. R. 7, Lexington
Cleaton, Harry Ernest	A. & S. 1	Louisville
Cobb, Forrest Reginald	A. & S. 1	Maysville
Cochran, Thomas Loraine	Law 2	R. R. 3, Springfield
Cole, Margaret Haggan	A. & S. 1	Lexington
Coleman, John Winston	Eng. 3	R. R. 7, Lexington
Coleman, Sally Henri	Agr. 3	Paradise
Collins, Marie	A. & S. 4	North Middletown
Collins, Sarah Mildred	Agr. 4	North Middletown
Colpitts, James William	Eng. 1	Lexington
Conkwright, Bessie Taul	A. & S. 4	Winchester
Conkwright, Nelson Bush	A. & S. 1	Winchester
Connell, John Thornton	A. & S. 4	Paris
Connell, Raymond Joseph	Law 2	Paris
Conner, Harold Owen	A. & S. 1	Burlington
Conner, Reuben Tinsley	A. & S. 1	Union
Cook, John Valentine	Eng. 1	Lancaster
Cooke, John White	Eng. 1	Smith's Grove
Coons, Margaret Ferguson	A. & S. 1	Lexington
Cooper, David Spears	Agr. 1	R. R. 1, Wilmore
Coryell, Earl Dimmitt	A. & S. 1	R. R. 3, Maysville
Coursey, William Levi de	Law 2	Lewisburg
Coward, Mary R.	Agr. 2	Owensboro
Cox, Richard Farrar	Eng. 1	Mt. Vernon
Crabb, Jerry Owen	A. & S. 1	Eminence
Cracroft, Lucy Jane	A. & S. 3	R. R. 2, Georgetown
Craig, Jesse Baskett	Law 2	Henderson
Craig, Raymond Hicks	Eng. 1	Lexington
Crawford, Jane Walton	Agr. 2	Louisville
Creason, Charles Wesley	A. & S. 1	Benton
Creech, Grover Howard	Agr. 4	Pineville
Cregor, Helene Minton	A. & S. 1	Springfield
Crenshaw, Archie Douglas	Law 3	Cadiz
Croft, Virginia Halbert	Agr. 3	Louisville
Cromwell, Lillie Victor	A. & S. 2	Cynthiana
Cropper, John Kirtley	Law 2	R. R. 1, Burlington
Cross, Early Thomas	Eng. 2	Benton
Crowder, Charles Walter, Jr.	A. & S. 1	St. Matthews
Crowe, Jr., John M.	Law 2	Morganfield
Crume, Charles Edward	Agr. 1	Taylorsville
Cummings, Daniel Leonard	Sp. Eng.	Flemingsburg
Curd, Houston Goebel	A. & S. 1	R. R. 7, Murray
Curle, Mary Elizabeth	Dft., Eng.	Cynthiana

Dabney, Edward Settle	Law 3	Hopkinsville
Dale, Roger Lane	Eng. 1	Star Route, Mt. Sterling
David, Harold Thomas	Eng. 2	Winchester
David, William Russell	Eng. 4	Lexington
Davidson, Frank Read	Eng. 1	Lexington
Davidson, Jr., James Mercer	Eng. 1	Lexington
Davidson, Nancy Elizabeth	A. & S. 3	Hartford
Davied, Clementina	Agr. 2	Cynthiana
Davis, Garland Hale Barr	A. & S. 2	Lexington
Davis, James Foxworthy	A. & S. 1	Flemingburg
Davis, John Henry	A. & S. 3	Lexington
Davis, Mary Elizabeth	A. & S. 3	Leesburg, Fla.
Davis, Pearl Virginia	Agr. 3	Lexington
Davis, Shreve Tuttle	A. & S. 1	Columbia
Davis, Walter Ford	Eng. 1	Utica
Davis, William Bradley	Eng. 1	Lovela[illegible]
Dawes, James Stephenson	Eng. 1	R. R. 6, Fulton
Dealtry, Reginald Ernest	Eng. 2	Louisville
Dean, Lucille Minerva	A. & S. 3	Marcellus
Deane, Silas Miller	A. & S. 1	Owensboro
Dearing, Raymond Bryan	Sp. Eng.	R. R. 6, Lexington
Deboe, Era Pickens	A. & S. 2	Mario[illegible]
DeBoe, William Robert	Eng. 1	Uniontown
DeBrovy, Sol Henry	Eng. 2	Louisville
DeLaine, Vivian E.	A. & S. 4	Carrollton
deMey, Charles Frederic	Eng. 4	Louisville
Denker, Carl Henry	Law 4	Paducah
Denton, Catherine G.	Agr. 3	Robards
Denton, John Milton	Eng. 2	Lexington
Denton, Mary Lou	A. & S. 2	Lexington
Devereux, James Barry	A. & S. 1	Lexington
Devereux, Marianna	Law 3	Lexington
DeWitt, William Wallace	A. & S. 1	Frankfort
Diamond, Ruby Earl	Eng. 4	Louisville
Dickey, Isabelle Converse	A. & S. 2	Walton
Dinning, James Donald	A. & S. 1	Franklin
Dishman, Joseph Anthony	Law 3	Henderson
Dixon, James A.	A. & S. 3	Louisville
Dodd, Jessie Cecile	A. & S. 1	Lexington
Dodge, Joseph Griswold	Agr. 1	R. R. 5, Lexington
Doerler, Albert Jacob	A. & S. 1	Cincinnati, Ohio
Dorman, William Kennedy	Eng. 1	Corinth

Dorr, John Manning	Agr. 2	Lexington
Douglass, Clara Mae	Agr. 1	Lexington
Dowell, Thomas Hayden	Agr. 1	Elizabethtown
Downing, Charles Goff	Agr. 2	R. R. 4, Maysville
Downing, George Dewey	Law 3	R. R. 1, Lexington
Downing, Virginia Crutcher	Agr. 1	Lexington
Draddy, William Cabel	A. & S. 2	Newport
Drane, Stephen Tibet	Agr. 1	R. R. 1, Eminence
Drummy, John Ready	Eng. 2	Lexington
Duckwall, Luanna	A. & S. 1	Louisville
Duckwall, Ruth Montgomery	Agr. 4	Louisville
Dudley, David Russell	Eng. 4	Earlington
Dudley, Hobson	Agr. 1	R. R. 2, Ewing
Dugan, Dawson Dwight	A. & S. 4	Sparta
Dugan, Mark James	A. & S. 1	Louisville
Duke, John K.	Agr. 1	Cloverport
Dummit, Stephen Eldon	Law 3	R. R. 4, Monett, Mo.
Duncon, Richard Lindsay	Agr. 4	La Grange
Dunn, Charles Malcolm	A. & S. 1	Smithland
Dunn, Mamie Stormes	A. & S. 2	Lancaster
Dunn, Vera	A. & S. 2	Murray
Duvall, Fay Elizabeth	Agr. 1	Lexington
Eaker, Charles Thomas	A. & S. 1	Princeton
Eaker, Eleanor Flora	A. & S. 4	Princeton
Eastwood, Frank	Eng. 2	R. R. 1, Slaughters
Eaton, William Park	Agr. 1	Ashland
Ebbert, Edward Anderson	Eng. 1	Paducah
Eblen, Mervin Kohl	Law 2	Henderson
Eddleman, Richard Neat	Eng. 1	Louisville
Eddleman, Roy Burton	Eng. 1	Springfield
Edens, George Edward	Eng. 1	Burkesville
Edmonds, Jr., Eben Thomas	Sp. A. & S.	Lexington
Edmonds, Eugene Allen	Eng. 4	Lexington
Edwards, Boyd Sherman	Eng. 1	Carrollton
Edwards, Claude Dewey	Eng. 1	Mayfield
Edwards, Clyde Burns	Eng. 1	Coal Creek, Tenn.
Edwards, Philip	Agr. 1	Owensboro
Eiseman, Francis Albert	A. & S. 1	Ludlow
Elam, Shelby Smith	Grad.	White Oak
Elder, Otto Vernon	Eng. 1	Providence
Elliott, Foster Floyd	Agr. 4	Eubank
Elliott, Paul Phillips	Eng. 1	Lancaster

Elliott, William Whitfield	Grad.	Darlington Heights, Va.
Ellis, Percy Victor	A. & S. 1	Ghent
Ellis, William Coakley	Eng. 1	R. R. 1, Calhoun
Elsey, Edward Everett	Eng. 3	R. R. 9, Lexington
Embry, Bert Elkin	Eng. 2	Lexington
Emrath, Philip Cassity	A. & S. 1	Norwood, Ohio
Endicott, William Earle	Eng. 2	Winchester
English, Sam Owens	A. & S. 1	Louisville
Enlow, J. Harold	Agr. 1	Hodgenville
Epstein, Joseph	A. & S. 1	Midway
Estes, James Edgar	A. & S. 2	Shawhan
Evans, Charles	Agr. 1	Nicholasville
Evans, Dennis Graves	A. & S. 2	Tomkinsville
Evans, Elizabeth Irene	Agr. 2	Lebanon
Evans, Josephine Ray	Agr. 1	Lebanon
Everett, Jr., John Chenoweth	Agr. 1	Maysville
Ewing, Christopher Leroy	Eng. 1	Bedford
Ewing, Robert Griffith	A. & S. 1	Owensboro
Eyl, Joseph Michael	Eng. 1	R. R. 3, Lexington
Eyl, Ann Beatrice	Agr. 2	R. R. 3, Lexington
Farmer, James C.	A. & S. 1	Lexington
Farmer, Roy Harold	Agr. 2	R. R. 1, Midway
Farris, Allen Leighton	Eng. 1	R. R. 6, Lexington
Faulconer, Barren Owen	Eng. 1	Lexington
Faulconer, William Parker	A. & S. 1	Lexington
Featherstone, Elizabeth	A. & S. 4	Lexington
Feigel, Frederick Ambrose	Eng. 1	St. Matthews
Feigel, Madeline Louise	Agr. 4	St. Matthews
Feltner, Joseph	Eng. 1	Hazard
Fendley, Samuel Duerson	Eng. 1	Frankfort
Fiedler, George Frederick	Eng. 1	Louisville
Figg, Ola Logan	A. & S. 4	Shelbyville
Filbeck, Clyde	A. & S. 1	Benton
Fincel, Neville	A. & S. 3	Frankfort
Finn, William Goebel	Agr. 1	R. R. 1, Burlington
Fishback, George Benjamin	Law 3	Paris
Fisher, Dale	A. & S. 1	R. R. 4, Bardwell
Fischer, John Stewart	Agr. 1	Tunnel Hill
Fischer, Jr., Samuel	Agr. 1	Tunnel Hill
Fletcher, Ethel Constance	Sp. A. & S.	Jackson
Flick, Sheldon Emerson	A. & S. 2	Grant
Fogg, William O'Rear	Law 3	Lexington
Ford, Margaret Evelyn	A. & S. 2	Shelbyville

Ford, William Harney	Agr. 1	Fordsville
Forester, Edgar Smith	Eng. 2	Harlan
Forkner, Amanda Louise	A. & S. 1	R. R. 6, Winchester
Forman, Morris	Eng. 3	Louisville
Fowler, Edward Carl	Eng. 1	Owensboro
Frank, Everett Monroe	Eng. 1	R. R. 7, Paducah
Frankel, Gilbert	Eng. 4	Louisville
Fratman, Alleene Everman	Agr. 1	Lexington
Frazier, Emery Lee	Law 3	Lawrenceburg
Frazier, Lewis A.	Eng. 1	R. R. 2, Greenville
Fremd, Harrye Lee	Sp. A. & S.	Eminence
Friedman, Eli Baerlo	A. & S. 4	Paris
Friedman, Evelyn Baerlo	Agr. 1	Paris
Frost, Basil	Eng. 1	Central City
Frye, Hallie Kay	A. & S. 1	Waddy
Fuchs, Joe	A. & S. 1	Henderson
Funk, Charles Paul	A. & S. 1	Alexandria
Futrell, William Daniel	Eng. 1	R. R. 7, Paducah
Gaines, Howard Tate	A. & S. 1	Louisville
Gaines, Virgil W.	Law 2	R. R. 1, Burlington
*Gale, George M.	A. & S. 2	Erlanger
Gambert, Henry John	A. & S. 1	Louisville
Gann, Alsie	Agr. 1	Hustonville
Garner, William Howard	Eng. 1	Fanbush
Garnett, Ralph Taylor	A. & S. 1	Columbia
Garrett, William Milton	Agr. 1	Levee
Garrow, Allen Stillwell	Eng. 1	Paducah
Gault, Lelah V.	Grad.	Maysville
Gay, Augustus Benjamin	Agr. 3	Lexington
Gay, James Dunlap	Agr. 1	R. R. 1, Winchester
Gentry, Effie Lee	Agr. 4	Prentiss
Gentry, Frank Marion	A. & S. 1	Lexington
Gentry, Mabel	Agr. 1	R. R. 9, Lexington
Gentry, William Bradley	Agr. 1	Lexington
Gibbons, Clyde Rogers	Eng. 1	Lexington
Gibson, Boen George	Eng. 1	Lexington
Gibson, James Porter	A. & S. 1	Lexington
Gibson, Mary James	A. & S. 1	Lexington
Gillespie, Halley Smith	Sp. Eng.	Mt. Sterling
Glasgow, James Prentice	A. & S. 1	Murray
Glass, Myrtle E.	A. & S. 2	Marion

*Killed in accident September 21, 1918.

Gleaves, James Wilson	Eng. 1	Paducah
Glenn, Raymond Anthony	Eng. 2	Frankfort
Godbey, Ewart Gordon	Agr. 3	Middleburg
Goff, Jr., Levi	Eng. 1	Indian Fields
Goldberg, Louis	A. & S. 4	Newport
Goodman, Margaret Mae	Agr. 1	Owensboro
Gordon, Marie Taylor	Agr. 1	Lexington
Gorham, William Thomas	Eng. 1	R. R. 1, Bardwell
Gorman, Thomas Leo	Eng. 3	Lexington
Gotherman, Edward Earl	A. & S. 4	Macon, Ohio
Grabfelder, Arthur L.	A. & S. 1	Louisville
Graham, Carmon McWade	Agr. 1	R. R. 1, Murray
Graham, Charles Danne	Eng. 1	Lexington
Graham, Mildred Hazen	A. & S. 4	Louisville
Graham, Robert Carey	Agr. 1	Frankfort
Graham, Virginia Taylor	A. & S. 4	Lexington
Granaghan, Harry Terhune	Eng. 1	Nashville, Tenn.
Graves, Mary Marshall	A. & S. 2	Lexington
Graves, William Byron	Law 2	Arlington
Gray, Roy Cooper	Agr. 1	Flemingsburg
Green, David Luckett	Eng. 1	Greenville
Greene, Elizabeth Mae	A. & S. 1	R. R. 6, Lexington
Greene, Herbert Horton	Law 4	Bruin
Green, Nicholas Price	Eng. 1	R. R. 2, Lawrenceburg
Green, Todd Heron	Agr. 3	LaGrange
Gregg, Edward Robert	Eng. 2	Louisville
Gregg, Sam Soper	Eng. 2	Nicholasville
Gregory, George Hicks	A. & S. 2	Hardinsburg
Gregory, Martin Thomas	A. & S. 1	Hardinsburg
Gregory, Ruth Elizabeth	Agr. 3	Louisville
Grehan, Henry Enright	A. & S. 3	Lexington
Griffin, Gerald	Agr. 1	Louisville
Griffin, Marvin Frank	A. & S. 1	Henderson
Grimes, Jay Cook	Grad.	Clifton, Tenn.
Grimes, Roy Allen	Eng. 1	Sharpsburg
Grone, Fayne Wilburn	Eng. 1	Ashland
Guthrie, John Thomson	Eng. 3	Mt. Sterling
Guthrie, Rollie Moore	Eng. 1	West Middletown, Ohio
Hager, Charles Bingham	Eng. 1	Ashland
Haggan, Mary Esther	A. & S. 1	Lexington
Hagyard, Charles Edward	Agr. 1	Lexington
Halbert, Harlan Russell	Agr. 1	Vanceburg

Haley, Herbert Procter	Law 3	Grayson
Haley, Marcus Delafayette	A. & S. 1	R. R. 2, Brooksville
Hall, Alexander D.	Eng. 4	Lexington
Hall, Marshall Cull	Law 2	Mackville
Hamilton, Chester Bryant	Eng. 1	R. R. 2, Mayfield
Hamilton, Frank Bradley	Law 3	Verona
Hamm, William A.	A. & S. 1	London
Hammonds, Carsie	Agr. 4	Russell Springs
Hammonds, Lucien Madison	Grad.	Mayfield
Hampton, Ray Douglas	A. & S. 1	Maysville
Hanks, Lee Land	Agr. 1	Lexington
Hanly, George Anthony	Eng. 1	Lexington
Hanson, Raymond Wesley	Eng. 4	Germantown
Harbison, Margaret Dean	A. & S. 1	Shelbyville
Harbison, Sarah Caldwell	Agr. 4	Shelbyville
Harbold, Lucille Lee	A. & S. 3	Lexington
Hardesty, Ada Louise	A. & S. 4	Ft. Thomas
*Hardesty, Robert W.	Law 2	Ft. Thomas
Hare, Joseph Elwood	Eng. 2	Lexington
Hargraves, Clarence Milton	Eng. 3	Middlesboro
Hargrove, Brooks Lynn	A. & S. 1	R. R. 2, Mayfield
Harkins, Walter Scott	Law 2	Prestonsburg
Harkleroad, Jack Lawrence	A. & S. 1	London
Harmon, Virgil Allen	Eng. 1	Perryville
Harper, Robert Whayne	A. & S. 1	Paducah
Harpole, Homer Hess	Eng. 1	Clinton
Harris, Alfred Mark	A. & S. 1	Visalia
Harris, Esther Lynn	A. & S. 1	Taylorsville
Harris, Samuel Woodard	Eng. 1	R. R. 3, Taylorsville
Harrison, Paul	Agr. 1	Lexington
Hart, Nellie Kinniard	A. & S. 1	R. R. 11, Lexington
Hart, William Randall	A. & S. 1	Stithton
Haughaboo, Robert E.	Agr. 1	Maysville
Hayden, Basil Ewing	A. & S. 2	Paris
‡Haydon, Jr., George Lloyd	Agr. 1	Springfield
Haydon, Lillian	A. & S. 4	R. R. 3, Lexington
Haynes, Zelma Holloway	Dft. Eng.	R. R. 2, Lexington
Hayslett, Lamar Estal	Eng. 1	Typo
Head, John Paul	A. & S. 3	Greenville
Heady, Helen Emeline	Agr. 2	Ghent

*Killed in accident September 21, 1918.
‡Deceased Nov. 24, 1918.

Haevrin, Cecil Hubert	Law 4	Hawesville
Heber, John George	Eng. 2	Bowling Green
Hedger, Charles Raymond	Agr. 1	Newport
Heil, William Joseph	Law 2	Newport
Helburn, Isadore Benjamin	Eng. 1	Eminence
Heller, Fannie Geneva	Agr. 1	Paris
Hendricks, Paul Perfect	A. & S. 1	Falmouth
Henry, Katie Boyd	A. & S. 1	Carlisle
Henry, Richard Earl	A. & S. 4	Mortons Gap
Hergott, George Walter	Eng. 1	R. R. 1, Kenton
Herndon, Jr. Jacob Whitley	Law 2	Berea
Heron, Mary Dewitt	Agr. 2	Irvington
Herring, Katherine Cavitt	A. & S. 1	R. R. 7, Lexington
Herring, Lafayette Brown	A. & S. 1	Fulton
Heyward, Helen Hazel	Dft. Eng.	Savannah, Ga.
Hicks, Herbert Eugene	Law 3	Madisonville, Tenn.
Hieatt, Ben Allen	Agr. 1	Danville
Hill, Angie Mae	Agr. 1	R. R. 2, Paducah
Hill, Clyde Brooks	Eng. 2	Fulton
Hill, James Dewey	Eng. 1	Greenville
Hilliard, Luther Moss	Agr. 2	Clinton
Hines, Bishop Irving	Eng. 2	Wickliffe
Hinkle, Frank Clarence	Eng. 1	New Albany, Indiana
Hockensmith, South Trimble	Eng. 1	Switzer
Hoctor, George Arthur	A. & S. 1	Augusta
Hoffman, Joseph Louis	A. & S. 1	Paducah
Hogan, George	Law 3	St. Helens
Holbrook, Yancy Carman	Eng. 1	Hickory
Holloday, Arthur Anderson	Agr. 1	Columbia
Holton, Llewellyn Greenewick	Agr. 1	Forks of Elkhorn
Hopewell, William Milton	A. & S. 1	Paducah
Hopkins, Robert Key	Eng. 1	Henderson
Hopkins, Talton Bryce	Agr. 1	Demossville
Horlacher, Veneta Thomas	A. & S. 4	Lexington
Horton, Breckinridge Duff	Eng. 1	R. R. 4, Mt. Sterling
Houston-Shaw, Frederic	Eng. 2	Lexington
Howard, Dudley Charles	Eng. 2	Benton
Howell, William Brown	Agr. 1	Greensburg
Hubbard, Garland Reid	A. & S. 2	Bardstown
Huber, Elmer Lee	Eng. 1	R. R. 1, Maysville
Hudnall, James Sharon	A. & S. 3	Riverside
Hudson, Byron Gobell	A. & S. 1	Georgetown

Hughes, James B.	Eng. 1	Louisa
Hughes II, James Robert	A. & S. 2	Lexington
Hughson, John	A. & S. 1	Lexington
Hukle, Albert Eugene	Eng. 1	Lexington
Hurt, Max Breathitt	Agr. 1	R. R. 1, Kirksey
Ilhardt, Blanche Beatrice	A. & S. 2	Nicholasville
Ilhardt, Henrietta Marcella	Agr. 1	Nicholasville
Ingels, Allen Reese	A. & S. 1	Millersburg
Ingels, Mary Lou	Agr. 1	Carlisle
Inman, William Oliver	A. & S. 2	R. R. 2, Hardin
Jackson, Frederick Marion	A. & S. 4	Versailles
Jackson, Elizabeth Holloway	A. & S. 1	Lexington
Jackson, Hillard Baugh	A. & S. 1	Murray
Jackson, William Justus	A. & S. 1	Berea
Jacobs, Ray Harold	A. & S. 1	Paducah
James, Mary Elizabeth	A. & S. 1	Louisville
Jameson, Hattie Martin	Dft. Eng.	Cynthiana
Jameson, Minnie Rees	A. & S. 2	Cynthiana
Jenkins, Hagan	Eng. 1	Elizabethtown
Jenkins, Pusey	A. & S. 1	Elizabethtown
Jennings, Harry Edgar	A. & S. 1	Ashland
Johns, Francis Gerard	Agr. 3	Lexington
Johnson, Willard Carlisle	A. & S. 2	Boston
Johnson, Charles Franklin	Eng. 4	Mayfield
Johnson, Edwin Cyril	A. & S. 1	Morganfield
Johnson, Florence Elizabeth	A. & S. 2	Lancaster
Johnson, Lena	Agr. 3	R. R. 5, Henderson
Johnson, Olney	A. & S. 1	Hickman
Johnson, Thomas Enoch	A. & S. 1	Elkton
Johnson, Vinson Lair	A. & S. 2	Pineville
Johnson, Walter Hugo	Eng. 1	Henderson
Jones, Clarence Verner	A. & S. 1	California
Jones, Howard	Eng. 1	Stamping Ground
Jones, Joe E.	A. & S. 1	R. R. 5, Paris
Jones, Ora Lee	A. & S. 1	Monticello
Jones, Roscoe W.	A. & S. 1	Fort Smith, Ark.
Jones, William McKinley	Agr. 1	Somerset
Jordan, Joe Speed	Agr. 1	R. R. 2, Lexington
Juett, John Brooks	A. & S. 2	Eminence
Justice, Charles Wheeler	A. & S. 2	Fish Trap
Kalbreier, William Joseph	Law 4	Buckner
Kaplan, Hyman Robert	A. & S. 2	Lexington

Katterhenry, Ira Florenz	Eng. 1	Huntingburg, Ind.
Kay, Claribel	A. & S. 1	Springfield, Ohio
Kearby, Jennings Bryan	Law 2	Crutchfield
Keen, Harry Clay	Eng. 1	Covington
Kees, John Henry	A. & S. 1	Alexandria
Kefauver, William Goldsmith	Eng. 1	Leitchfield
Kelley, Brown Wilson	Agr. 1	Cleveland
Kelley, Edward Everett	A. & S. 4	Whitesville
Kelly, Galen Sullivan	A. & S. 1	Burlington
Kelly, James Redmond	Eng. 1	Williamstown
Kelly, William Griffin	Eng. 1	Maceo
Kennedy, James Frederick	Agr. 1	Uniontown
Kennedy, Sam Phillips	Law 2	R. R. 3, Cynthiana
Kenney, Charlie Alexander	A. & S. 1	Paris
Kenney, Pearl Craven	Agr. 3	Sumner, Ill.
Kenney, William Roy	Eng. 1	Walton
Kessler, Herman Milton	Eng. 1	Louisville
Kimbrough, Elizabeth Jameson	A. & S. 1	Cynthiana
Kimbrough, Martha Frances	A. & S. 3	Cynthiana
Kincheloe, Miriam	A. & S. 1	Hardinsburg
King, Effie	Sp. A. & S.	Midway
King, Fain W.	Sp. Eng.	Paducah
King, Harry Lee	Eng. 1	Mattson, Miss.
King, John Howard	A. & S. 2	Auburn
King, Keppel Wolf	Eng. 1	Owenton
Kingsland, Henry	A. & S. 1	Arlington, N. J.
Kirchdorfer, Raymond Herman	A. & S. 1	Louisville
Knight, Neal William	Eng. 3	Louisville
Kohn, Alvin	Eng. 4	Louisville
Kolb, Frank John	A. & S. 1	Paducah
Kraft, Mary Elizabeth	Agr. 2	Louisville
Kunkel, Oscar George	Eng. 1	Richmond
Lacey, Elmer Paul	A. & S. 1	Russell
Lady, Lena	A. & S. 2	Eddyville
Lambert, Samuel C.	Law 2	Henderson
Land, John March	Eng. 3	Nicholasville
Larkins, William Garnett	Eng. 1	Princeton
Lasley, Marion Grinter	A. & S. 2	Lewisburg
Lavin, Albert Joseph	Eng. 1	Paris
Lavin, Robert Edward	A. & S. 1	Paris
Lawson, Lloyd Dewey	A. & S. 1	Hot Springs, N. C.
Laxton, Lacey	Sp. Eng.	Harlan

Layson, Jeff Vimont	Agr. 1	R. R. 1, Millersburg
Leach, Hinton Taylor	Agr. 1	Hartford
Leland, Simeon Ellridge	Grad.	Madison, Ind.
Lemon, Cortez Jackson	Eng. 1	Providence
Leman, John Julian	Eng. 4	Pineville
Letton, Jr., Forrest	Eng. 1	R. R. 8, Paris
Lewis, Alex. D.	Eng. 1	Winchester
Lewis, Arthur Edwin	Eng. 1	Winchester
Lewis, Cliff F.	Eng. 1	Anderson, Ind.
Lewis, Fred Cornett	Agr. 1	Harlan
Lewis, George Campbell	Grad.	Allentown, Penn.
Lewis, Jesse K.	Agr. 1	Grayson
Lewis, Junius	Agr. 3	Owensboro
Lewis, Walter	Eng. 1	Hyden
Liebschultz, Jacob	A. & S. 4	Louisville
Lillard, Eugene Allen	Eng. 4	Versailles
Lillard, William Parlin	Eng. 1	Lawrenceburg
Lilly, Austin Page	Agr. 4	Lexington
Lisanby, Alvin	Law 3	Princeton
Litsey, Joe Allen	Law 2	Whitesville
Littell, Ottis Paul	Eng. 1	Williamstown
Little, Lucretia	A. & S. 1	R. R. 4, Lexington
Little, Mary Augusta	Agr. 1	Crutchfield
Lockett, Charles William	Agr. 1	Calhoun
Logan, James Franklin	Agr. 1	R. R. 7, Shelbyville
Logan, Victor Hubert	A. & S. 1	Louisville
Lowe, Jr., John D.	Agr. 1	Columbia
Loyd, Henry Brady	A. & S. 2	Fordsville
Lucas, Birdie Lewis	A. & S. 3	Lexington
Luker, Fred William	Eng. 2	Jeffersontown
Lytle, Beatrice Leola	A. & S. 1	El Dorado, Kans.
McAdams, Anne Elizabeth	Agr. 2	Lexington
McAllister, Mary Addie	A. & S. 1	Lexington
McArthur, Marian Margaret	A. & S. 1	Winchester
McBrayer, Jasper Johnson	Grad.	Lawrenceburg
McCann, Mamie	A. & S. 4	R. R. 1, Flemingsburg
McCartt, Lawrence Edison	Eng. 1	Walton
McCarty, Claude Bishop	A. & S. 1	Paducah
McClain, Lee	A. & S. 4	Bardstown
McClellan, James Ellyson	Eng. 4	Springfield
McClure, Howard Vandiver	Eng. 1	R. R. 3, Lawrenceburg
McClure, Margaret Elizabeth	A. & S. 3	Lexington

McClure, Martha Berkeley	A. & S. 1	Lexington
McCollum, Wendell Douglas	A. & S. 1	Green Hall
McConnell, Lillian Frances	A. & S. 4	Lexington
McCord, William Hugh	Grad.	Lewisburg, Tenn.
McCracken, Roy	A. & S. 2	Cynthiana
McEntee, Harold Paul	Eng. 1	Covington
McEwen, Henry Bishop	Eng. 1	Calhoun
McGowan, Elizabeth	A. & S. 4	Salvisa
McGregor, Harold Bowers	Agr. 2	Lexington
McGurk, Helen Frances	A. & S. 1	Lawrenceburg
McKenney, Garnett J.	Agr. 2	Winchester
McKenzie, John W.	Law 3	LaGrange
McKinley, James Calvin	Eng. 1	Covington
McLean, Joe Howard	A. & S. 2	Central City
McMahan, Mary Orena	A. & S. 1	Bedford
McMeekin, Robert Ward	A. & S. 2	Lexington
McMurtrey, Clifton Creed	Eng. 1	Bowling Green
McRee, Jr., Ambrose Virgil	A. & S. 1	Murray
McRoberts, George Allen	Eng. 3	LaGrange
McWhorter, Marshall Jeter	Eng 2	Yosemite
MacClintock, Edgar Thomas	A. & S. 1	Millersburg
MacCulley, Edgar Ernest	A. & S. 1	Uniontown
Maddox, Harry Edward	Eng. 4	Mt. Carmel, Ohio
Mahoney, Charles Hallam	Eng. 2	R. R. 3, Lexington
Malone, Howard Glenn	Eng. 1	Franklin
Maloney, William Bennett	Eng. 1	Lexington
Manion, Walter Francis	A. & S. 1	Mayslick
Mann, Adaline Clara	A. & S. 1	Covington
*Mansfield, Virgil Luther	Eng. 3	Glasgow
Marking, John Henry	Eng. 3	Louisville
Marsh, Ben Gordon	Agr. 4	Maysville
Marsh, Frances Maitland	A. & S. 1	Maysville
Marshall, Elizabeth	A. & S. 3	Lexington
Marshall, William Francis	Eng. 3	Greendale
Martin, Barnie L.	Eng. 1	Providence
Martin, Corbin S.	A. & S. 1	Clinton
Martin, Corinne Lucas	A. & S. 2	Midway
Martin, Glenn Francis	Law 3	Covington
Martin, Guy Emerson	Agr. 2	Princeton
Martin, Minnie Waller	Agr. 2	Greenville
Mason, Eliza Clay	Agr. 4	R. R. 1, Paris

*Killed in accident September 21, 1918.

Mason, Harold Lee	A. & S. 1	Bowling Green
Mathews, George Frederick	Eng. 2	Lexington
Matlick, William Austin	A. & S. 1	Sanders
Maxey, Jr., Clarence Curtis	Eng. 1	West Liberty
Maxwell, Grace	Agr. 2	Thomson
Mayer, Louise Carolyn	Agr. 3	Louisville
Mays, Bennie Arvin	A. & S. 1	Kidd's Store
Mayes, Verah	A. & S. 1	Hickman
Megibben, Katherine	A. & S. 2	Cynthiana
Melton, Forrest M.	Sp. Eng.	Paducah
Merigold, Viola L.	A. & S. 1	Paducah
Meyer, J. Harold	Eng. 1	Louisville
Middleton, Dorothy	Agr. 3	Lexington
Millard, Laura Elizabeth	A. & S. 1	Shelbyville
Miller, Allen Palmer	Agr. 1	R. R. 1, Cecilia
Miller, Jr., Clifford Neville	Eng. 3	Cincinnati, Ohio
Miller, Elmer Martin	Agr. 1	R. R. 1, Cecilia
Miller, Everett Evan	Sp. Eng.	Mystic, Iowa
Miller, Jean	Sp. Agr.	Lexington
Miller, Juliet A.	Agr. 1	Columbia
Miller, Preston Ancel	Eng. 1	Middleburg
Miller, Sam Carpenter	A. & S. 2	Glendale
Miller, William Glenn	Eng. 1	Lebanon
Milne, Thomas Creighton	A. & S. 1	Owensboro
Milner, Virginia Helm	A. & S. 3	Union Star
Milton, Hugh Meglone	Eng. 4	Lexington
Milward, Charles Spillman	A. & S. 1	Lexington
Misrach, Ben Saul	Sp. Eng.	Cincinnati, Ohio
Misrach, Joseph Stewart	Eng. 3	Cincinnati, Ohio
Mitchell, Jr., Robert	Agr. 2	Paducah
Mobley, Harve Weddington	A. & S. 1	Green
Mock, Clifton O'Neal	Eng. 1	Lexington
Monhollen, Clarence Everett	Agr. 1	Hazard
Montgomery, John Howard	Agr. 1	R. R. 1, Sanders
Montgomery, Ray	Eng. 1	Delaware
Moore, Charles Milton	Eng. 1	Mt. Vernon
Moore, Jr., John Douglas	Law 2	Big Bone
Moore, Neville	Law 3	Marion
Moore, Willie Ira	Eng. 1	Clay
Moore, William Rodgers	Eng. 1	Lexington
Moosnick, Bernard	A. & S. 4	Nicholasville
Morancy, Honore Perre	Eng. 1	Versailles
Morgan, Charles Thomas	A. & S. 1	Benton

Morgan, Lewis Haydn	Law 2	Soddy, Tenn.
Morgan, Pearl Briggs	Agr. 1	Portland, Tenn.
Morgan, Lewis William	Eng. ?	Soddy, Tenn.
Morgan, Willard Davidson	A & S. 2	R. R. 3, Hickory
Morris, Herbert Brown	Eng. 1	Murray
Morris, John Caleb	Eng. 3	Lexington
Morris, Walter W	Eng. 1	Lexington
Morrow, Clayton A.	A. & S. 1	Lancaster
Moseley, Ray Francis	Eng. 1	Owensboro
Moses, Maree Irene	A. & S. 1	Lexington
Moynahan, Edgar Purcell	Eng. 2	Nicholasville
Muenninghoff, Raymond Joseph	Eng. 1	Shively
Murphree, Eger Vaughn	A. & S. 3	Louisville
Murphy, Dorothya Gene	A. & S. 1	Lexington
Murphy, Frank Joseph	Eng. 1	Valley Station
Murphy, Joseph Eugene	Eng. 1	Lexington
Muth, Albert James	Eng. 2	Lexington
Myre, Walter James	Law 2	Benton
Nall, James O.	Law 2	Clay
Nave, Jr., William David	A. & S. 1	R. R. 1, Harrodsburg
Nelson, Anna Simone	A. & S. 1	Winchester
Nelson, Rebecca Clare	Dft. Eng.	Lexington
Nesbitt, Mary Hall	A. & S. 1	Mayslick
Netherton, William Jackson	Agr. 1	St. Matthews
Newhall, Elwood Lincoln	Eng. 1	Covington
Newman, Jr., George William	A & S. 1	Ft. Thomas
Nicholas, Ashley Johnson	A. & S. 1	R. R. 4, Hodgenville
Nicholson, George Kyle	Eng. 1	Walton
Nielander, Joe Richard	A. & S. 2	Ft. Thomas
Nierman, Gerald Theodore	Arts 1	Ashland
Nightingale, George Ainsworth	A. & S. 1	Louisville
Nisbet, William Alexander	Eng. 1	Providence
Noe, Frederick Booker	Agr. 1	Springfield
Noe, Robert Arthur	Agr. 1	Lebanon
Noland, Zerelda	A. & S. 3	Richmond
Nord, William Oscar	Eng. 1	Greenville
Norment, Alexander Gavin	A. & S. 2	Henderson
North, Gibson	Eng. 1	Hustonville
O'Brien, Anthony W.	Sp. A. & S.	Lexington
O'Brien, Harold Cornelius	A. & S. 1	Louisville
Oglesby, Kathleen Wight	Agr. 2	Shelbyville
O'Hara, Robert Newton	Eng. 2	Williamstown
Oldham, George	Eng. 1	Hopkinsville

Oldham, Samuel Leahman	Eng. 2	Hopkinsville
O'Neil, Chauncey Dolph	Agr. 1	Ashland
O'Neil, James Bryan	A. & S. 1	Minerva
Oppenheimer, William James	A. & S. 1	Pomeroy, Ohio
Orr, Hugh Ben	Eng. 2	Paris
Otten, Henry Howard	A. & S. 3	Bellevue
Overstreet, William Goebel	A. & S. 1	Paducah
Owen, Anna Brackett	Agr. 1	Paducah
Owen, Robert W.	Eng. 2	Louisville
Owens, Ralph Waldo	Grad.	Lexington
Owens, Stephen Gerard	Eng. 1	North Fork
Owen, William Bernice	A. & S. 1	R. R. 3, Harrodsburg
Owen, William Wall	Agr. 1	R. R. 7, Owensboro
Pannell, Evelyn	Agr. 2	Greenville
Pannell, Spencer Coleman	Eng. 1	Greenville
Paritz, Rebekah Maxine	Law 4	Lexington
Park, James	Law 3	R. R. 3, Richmond
Park, Russell Smith	Eng. 3	R. R. 3, Richmond
Parker, Jr., James Edward	Agr. 3	Maysville
Parker, James Stanley	A. & S. 1	Maysville
Parker, William Emitt	Eng. 1	Dover
Parks, Walter Amis	A. & S. 1	Paint Lick
Parks, William Earl	Eng. 1	R. R. 2, Nicholasville
Parrish, Jr., Isaac Newton	A. & S. 1	Lexington
Parrish, S. Katherine	Agr. 4	Lexington
Parrish, William Hiram	Agr. 1	Burkesville
Parrott, Olsen	A. & S. 1	Mackville
Patrick, Oscar Franklin	A. & S. 1	Bloomington
Patterson, Joseph Errett	A. & S. 1	R. R. 2, Hickman
Peal, William Hugh	A. & S. 1	LaCenter
Penn, Robert Stanley	Eng. 1	Hutchison
Pennington, Walter Givens	A. & S. 1	London
Pepper, James Roy	A. & S. 1	Morganfield
Perkinson, Perry Melbin	Eng. 2	R. R. 2, Milton
Perrelli, Louis Anthony	Eng. 1	Louisville
Perrin, Robert McDonald	Eng. 2	Falmouth
Peters, Ralph Fred	A. & S. 3	Winchester
Petrey, Arthur Walton	A. & S. 4	Pineville
Petrie, Henry Morton	Agr. 1	Fairyview
Petrie, James Wilbur	A. & S. 1	Maceo
Pettit, Harvey P.	Grad.	Lexington
Phipps, James Duke	Eng. 1	Hartford

Phipps, William Mason	Sp. Agr.	Salversville
Pickard, Voris Lorien	A. & S. 1	R. R. 3, Mayfield
Pickett, Elizabeth Danforth	Agr. 4.	R. R. 1, Finchville
Pierce, Sumner Joseph	A. & S. 1	Newport
Piggott, Eliza MacLean	A. & S. 4	Irvington
Pinson, William Jennings	Law 2	Pikeville
Piper, Lewis Allie	Eng. 2	Lexington
Piper, Walter Clay	A. & S. 4	R. R. 2, Lexington
Pirtle, John Peterman	Agr. 1	Elizabethtown
Pirtle, Luby Estle	Eng. 1	Water Valley
Pitman, Horace Grant	Eng. 1	Perryville
Pittman, Mallory	Eng. 1	Greenville
Pitman, Marion Middleton	Agr. 1	Perryville
Planck, Charles Evans	A. & S. 4	Detroit, Mich.
Poindexter, Floyd	A. & S. 2	Cynthiana
Pollitt, Martha Hutchison	A. & S. 3	Vanceburg
Porter, Dewey Moses	A. & S. 2	Williamstown
Porter, Goebel	Eng. 2	Dixon
Porter, Lewis Bryan	Agr. 1	Calhoun
Porter, Mildred Thomas	A. & S. 2	Lexington
Porter, Robert Lee	A. & S. 1	R. R., Louisville
Porter, Samuel Mann	Eng. 2	Clinton
*Porter, Stella Pauline	A. & S. 1	Lexington
Potter, Elsie Gertrude	Agr. 4	Somerset
Pottinger, Lancaster Vimont	Eng. 1	Owensboro
Pottinger, Lewis Talbott	Agr. 1	Auburn
Potts, Harrie Kelley	Agr. 1	Irvine
Powell, George Henry	Eng. 1	Sebree
Prewitt, John Burton	Eng. 1	Mt. Sterling
Prewitt, Thomas Grubbs	Agr. 1	Mt. Sterling
Price, Robert Lee	Eng. 1	Providence
Proctor, Homer G.	Eng. 4	Mt. Vernon
Propps, Thomas Bryan	Eng. 2	Broken Bow, Okla.
Pulliam, Lovell Yewell	Eng. 1	Louisville
Pursifull, James M.	Eng. 2	Whitesburg
Puryear, Grover Cleveland	Eng. 3	Waverly
Pushin, Nettie	A. & S. 2	Bowling Green
Putman, Robert LeRoy	Law 2	Ft. Thomas
Pyne, Henry William	Eng. 1	Southgate—Newport
Quarles, William Noel	Agr. 1	Frankfort
Racke, Oscar Charles	A. & S. 1	Newport

*Deceased, February 15 1919.

Rachal, William Matson	Eng. 1	Union
Radford, Osborne K.	Agr. 1	Howell
Raible, Robert Jules	Law 2	Louisville
Ramsey, Charles Spurgeon	Law 4	Sebree
Ramsey, Sue Davis	A. & S. 1	Lexington
Ramsey, Dell Mack	A. & S. 1	R. R. 4, Lexington
Ramsey, Winifrey Stuart	A. & S. 1	Louisville
Randle, Joseph Earl	Eng. 2	Hopkinsville
Raney, Harry West	Eng. 1	Lancaster
Ratcliffe, Fan Donnell	A. & S. 3	Sharpsburg
Rauch, Fred Robert	Eng. 1	Covington
Rector, James Griffin	A. & S. 1	Lewisburg
Reddish, George Fultz	Agr. 4	Lexington
Reddish, Katherine Crawford	Agr. 3	Lexington
Redwine, Marcus Carlisle	Law 4	Sandy Hook
Reed, Katherine	A. & S. 1	Marion
Reed, Roscoe	Sp. Eng.	Paducah
Reid, Charles K.	Agr. 1	Kirksey
Reilly, John Francis	A. & S. 1	R. R. 8, Fond du Lac, Wis.
Reis, Harry Edward	Eng. 1	Mt. Sterling
Renick, Kathleen Virginia	A. & S. 1	Lexington
Reusch, George Victor	Law 2	Bellevue
Reusch, Jr., Louis	Agr. 4	Bellevue
Reynolds, Thomas Wilgus	Eng. 1	Lexington
Rhoads, Wilbur Preston	Agr. 4	Hartford
Rice, Addie Lucile	R. & S. 1	R. R. 3, Richmond
Rice, Edward Everitt	Sp. Law	Booneville
Rice, Geneva	A. & S. 1	Paducah
Rice, Nell	A. & S. 1	Smithfield
Rice, Stephen Hobert	A. & S. 1	Booneville
Rice, Than Givens	Sp. Eng.	Providence
Richardson, Frazure Berry	A. & S. 2	Somerset
Richardson, Luther Ray	Eng. 1	Kenton
Richardson, Olney Energy	Eng. 2	Hartford
Riddle, James Craig	Law 2	Lexington
Rider, James Clarence Brown	Law 2	Elizabethtown
Riedel, Louis Augustus	A. & S. 2	Lexington
Riefkin, Herbert Spencer	Eng. 1	Newport
Riggins, Alfred Patrick	Agr. 3	Middleburg
Riggins, Floyd Humphrey	A. & S. 1	Middleburg
Riggs, Orville Montgomery	A. & S. 1	Erlanger
Riggs, Robert C.	A. & S. 1	R. R. 6, Lexington

Riglander, Hazel Lenora	Grad.	Houston, Texas
Riley, Georgia Lee	A. & S. 1	Lexington
Riley, Mary Gray	A. & S. 4	Lexington
Riley, Thomas Milton	Eng. 1	R. R. 1, Burlington
Ringo, Philip McDaniel	Agr. 1	Clinton
Riordan, Roy John	A. & S. 1	Newport
Ritchie, Edd Lee	A. & S. 2	Wingo
Rivers, Richard Calvin	Sp. Eng.	Muscotah, Kansas
Rivers, Thomas Grundy	Eng. 2	Paducah
Robards, Hickman Lockett	Law 2	Henderson
RoBards, William Baird	Eng. 1	Louisville
Roberts, Cary Russell	Eng. 2	R. R. 1, Maceo
Roberts, Robert William	Agr. 1	Waverly
Robertson, Albert Scott	Sp. Eng.	Bethel
Robinson, Elizabeth Honeywood	A. & S. 1	R. R. 2, Frankfort
Robertson, Festus Garland	Agr. 1	R. R. 3, Calhoun
Robertson, Lora Lee	A. & S. 3	Paducah
Robertson, Richard W.	A. & S. 1	Cynthiana
Robinson, William Hadley	Eng. 1	Maceo
Rodgers, Raymond	A. & S. 2	Milton
Rogers, Duane Kimbrough	Agr. 1	Frankfort
Rogers, George Alf	Agr. 1	Smithland
Rogers, John Irvine	Eng. 1	Lexington
Rogers, Noyl Boone	Law 2	Wickliffe
Rogers, Tom Carter	A. & S. 1	Lexington
Rogers, Vene Coleman	Eng. 1	Frankfort
Roll, William Hayden	A. & S. 1	Clinton
Roper, William Lawson	A. & S. 1	R. R. 1, Fulton
Rorer, Hickman E.	Eng. 1	Cynthiana
Rosenthal, Joseph Jerrold	Eng. 1	Paducah
Ross, D. Carl	Sp. Law	Sacramento
Ross, Robert Oldham	A. & S. 1	Lancaster
Rouse, Carlos Raymond	Agr. 1.	Butler
Royster, Jr., Sam Bryan	Law 3	Lexington
Ruby, Dewey	Eng. 1	Mackville
Runyon, Roy Charles	Law 2	Stone
Rye, Joseph Fithian	Agr. 1	Paris
Ryley, Claude Reginald	Eng. 1	Versailles
Sale, Belle Peppin	A. & S. 2	Elizabethtown
Salmon, William Davis	Agr. 2	Cork
Salsburg, Melvin	A. & S. 1	Central City
Sams, Allen E.	A. & S. 1	Winchester

Sanders, Coleman	A. & S. 1	Lancaster
Sanders, Robert Leighton	Eng. 1	Covington
Sanders, Sara Shively	Sp. A. & S.	Bowling Green
Sanders, William Goebel	A. & S. 1	Louisville
Sandidge, Laura Embry	A. & S. 1	Moreland
Sane, Henry Wesley	Agr. 1	Crutchfield
Sauer, Raymond Weber	Eng. 1	Louisville
Schuhmann, Richard Leo	Eng. 1	Louisville
Scott, Frances S.	Dft. Eng.	Lexington
Scott, George Atwill	Grad.	Chicago, Ill.
Scrivner, Sarah Elizabeth	Agr. 1	Lexington
Seale, Dave Harper	Law 2	St. Helens
Searles, Arthur Edmund	Eng. 2	Lexington
Seaton, William Warren	A. & S. 1	Cloverport
See, Ila	A. & S. 4	Levee
Sellards, Henry Grady	Agr. 2	Prestonsburg
Sexton, Margaret	A. & S. 4	Lexington
Shanklin, Arthur Price	Eng. 1	Lexington
Shanklin, Virginia P.	Agr. 2	Nepton
Shannon, Donald Edward	A. & S. 1	Lexington
Shepherd, William Reno	Eng. 1	Bardstown
Sherwood, William Sigsbee	A. & S. 2	Bellevue
Shipp, Marian Russell	A. & S. 1	Lexington
Shivel, Harry Strother	Agr. 1	Grayson
Shofner, William Frank	A. & S. 1	Buffalo
Short, Courtland Lee	Agr. 1	Owensboro
Shouse, John Felix	Eng. 4	Lexington
Shouse, Samuel Headley	Agr. 4	R. R. 2, Lexington
Shullman, Henry Howard	Eng. 1	Newport
Shultz, Emmett Otis	Eng. 2	Henderson
Siegel, Jacob Berte	Eng. 3	Newport
Sikking, Era Brunelle	A. & S. 1	Louisville
Siler, James McCarley	Eng. 1	Lexington
Simmons, Jennie Pettit	A. & S. 1	Lexington
Simpson, Henry Clay	Agr. 3	Lexington
*Simrall, William Haynes	Eng. 1	R. R. 7, Shelbyville
Sims, Harry Bruce	Agr. 1	Worthington
Slack, John Robert	Agr. 1	Maysville
Slade, Mary Adele	A. & S. 2	Ludlow
Slagle, Dean	Law 3	Bakersville, N. C.
Slagle, James Edgar	Eng. 1	Huntington, W. Va.
Slomer, Joseph Jefferson	Sp. Eng.	Covington

*Died from influenza, November, 1918.

Smiser, Louise	Agr. 3	Cynthiana
Smith, Bertha	Agr. 1	Lexington
Smith, Charles	A. & S. 1	Dixon
Smith, Drury Scott	Eng. 2	Pembroke
Smith, Edna Withers	A. & S. 3	Corbin
Smith, Granvil William	Eng. 2	Campbellsville
*Smith, Harry Kirke	Eng. 2	Louisville
Smith, James Beckham	Eng. 1	Livermore
Smith, Jessie Mae	A. & S. 1	Ghent
Smith, Laurence	Agr. 1	Glenarm
Smith, Margaret Alexander	A. & S. 1	Maysville
Smith, Mary Elizabeth	Agr. 2	Lexington
Smith, Mose	Eng. 4	Ruston, La.
Smith, Robert Emerson	Agr. 1	Union
Smith, Samuel Wright	Law 2	LaGrange
Smith, Taylor Goodin	Law 2	Larue
Smith, William Henry	Eng. 1	Larue
Smock, Nancy Bowman	A. & S. 3	Harrodsburg
Snapp, Edna Dee	A. & S. 1	Paris
Snider, Estes Robertson	Eng. 1	Lexington
Snoddy, Hall Terry	A. & S. 1	Owensboro
Snyder, Augustus Henry	A. & S. 1	Louisa
Soper, Jr., Lawrence A.	Eng. 1	Paris
Soward, William Carlyle	A. & S. 3	R. R. 5, Maysville
Spalding, John Lyddane	Agr. 1	Lebanon
Sparks, Estill E.	Eng. 1	Sandy Hook
Sparks, George Oliver	Agr. 1	R. R. 7, Paris
Sparks, Samuel Marion	A. & S. 1	Morganfield
Sparks, William Carl	A. & S. 1	Morganfield
Sparrow, Otha Thomas	Sp. A. & S.	Lexington
Spears, Sholto Marion	Eng. 1	Auburn
Spencer, Richard Hempstone	Law 2	Winchester
Sprague, Anna Bentley	Agr. 2	Lexington
Spurrier, Eliza Kaye	A. & S. 4	Louisville
Stalling, Lucy Kurtz	Agr. 1	Morrilton, Ark.
Stanley, Lewis Goebel	Eng. 1	Bedford
Stapp, Burton	A. & S. 1	Lancaster
Stapp, Irvine Phelps	A. & S. 1	Lancaster
Stears, Van Cleve	A. & S. 1	Nicholasville
Stedman, Harvey Worley	Agr. 4	Versailles
Steinhauser, Leo Ellis	Agr. 3	R. R. 1, DeMossville

*Died from influenza November, 1918.

Steele, Clarence Greene	A. & S. 2	London
Stephens, Albert Cornelius	Eng 3	Burlington
Stephens, John Taylor	Eng 2	Kevil
Stephens, Noble Henderson	A. & S. 1	Stearns
Stevens, Philip	A. & S. 1	Princeton
Stevenson, Louisa Singer	A. & S. 4	Lexington
Sthulbarg, Charles	Eng. 2	Newport
Stiles, Robert Hugh	Agr. 1	Bardstown
Stoa, Harold Clinton	Law 2	Albert Lea, Minn.
Stokes, William Kenneth	Eng. 1	R. R. 7, Fulton
Straus, Herman Louis	Eng. 1	Louisville
Strong, Charles Warren	Law 2	Athol
Strother, Ben Morris	A. & S. 1	Milton
Stroud, Adron D.	Agr. 1	Clinton
Strube, Herbert Lewis	Eng. 1	Ludlow
Sullivan, Neal Grace	Law 3	Elkton
Sullivan, Owen Terrence	A. & S. 1	Louisville
Summerville, Mildred	A. & S. 2	Marion
Summerville, Milton Joseph	A. & S. 1	R. R. 5, Mayfield
Sumner, Lacey	Eng. 1	Gracey
Sun, George Edward	A. & S. 1	Lexington
Suppinger, Lambert Urban	Eng. 1	Frankfort
Swearingen, Vola Clarence	A. & S. 1	Science Hill
Swinney, Mary Floyd	A. & S 2	Shiveley
Switow, Harry Roy	A. & S. 1	Louisville
Talbott, Mary Adams	Law 3	Paris
Tandy, Jr., Cyrus Spicer	Agr. 1	Carrollton
Tapp, Jesse Washington	Agr. 3	R. R. 3, Corydon
Tapscott, Edward Terrill	Agr. 4	Owensboro
Tapscott, Georgia May	Agr. 1	Owensboro
Taylor, Henry Flournoy	Sp. Eng.	Fulton
Taylor, Helen South	Agr. 2	Bowling Green
Taylor, Jennings B.	A. & S. 2	Lexington
Taylor, Redmond George	Eng. 1	Lewisport
Taylor, Thomas Jefferson	A. & S. 1	Stone
Templin, Charles Landon	Eng. 4	Paris
Theobald, Alfred Curtis	Eng. 1	Paducah
Thomas, Evelyn Fair	A. & S. 2	Hartford
Thomas, Henry Castleman	Law 2	LaGrange
Thomas, Perry Elmo	A. & S. 4	Murray
Thomas, Ruth Cummings	Sp. A. & S.	Maysville
Thomas, Ruth Mathews	A. & S. 1	Lexington

Thompson, Elmer Andrew	Eng. 1	Greenville, Tenn.
Thompson, Ernest	Agr. 1	Edmonton
Thompson, Francis Abe Carr	Eng. 1	R. R. 6, Fulton
Thompson, Jr., Henry Clay	Eng. 2	Ft. Thomas
Thomson, Henry Lawrence	Eng. 2	Providence
Thompson, Milton Keene	Eng. 1	Middlesboro
Thompson, Sterling Garvin	Agr. 1	Louisville
Thompson, Willis Duncan	Eng. 2	Liberty
Thornton, David Laws	Sp. Eng.	Versailles
Thornton, Jr., Richard Latham	A. & S. 1	Morganfield
Thornton, Roberta Hamilton	A. & S. 1	Newport
Thornton, William Barry	Eng. 2	R. R. 1, Lexington
Thorpe, Ilma Anitra	Agr. 1	Owensboro
Threlkeld, Elizabeth Scott	Agr. 2	Lexington
Threlkeld, Orville Foster	Eng. 1	R. R. 5, Marion
Throckmorton, Virginia Frances	A. & S. 2	Lexington
Thurman, Edgar Neal	A. & S. 2	Somerset
Timmer, Carl Albert	Eng. 4	Louisville
Tinsley, Glenn Bennett	A. & S. 1	Hartford
Todd, Marian Lou	A. & S. 1	Winchester
Told, Anna Kathryn	Agr. 3	Carrollton
Towery, Fred H.	Agr. 1	Calhoun
Trapp, Francis Joseph	Eng. 2	Lexington
Triplett, Cardwell Douglas	A. & S. 4	Beech Grove
Tucker, Catherine Olivia	A. & S. 3	Lexington
Turner, Carolyn	Agr. 1	Lexington
Turner, Dillard Hazelrigg	A. & S. 4	Frankfort
Turner, Ervine	Law 2	Crockettville
Turner, Frank Lotham	A. & S. 1	Maysville
Turner, Laura Elizabeth	Dft. Eng.	Louisville
Turner, Louisa	Agr. 4	Lexington
Turner, Mary Frances	Agr. 3	Louisville
Tuttle, Frank Waldo	A. & S. 3	Lexington
Tuttle, Margaret Helmsing	A. & S. 4	Lexington
Uhling, Frank Lyon	A. & S. 1	Cincinnati, Ohio
Underwood, Thomas Rust	A. & S. 2	Hopkinsville
VanCleve, Jack Chandler	Agr. 1	Cave City
Van Deren, Anna Thompson	A. & S. 3	Cynthiana
Van Deren, Edward Yancey	Agr. 3	R. R. 5, Cynthiana
Van Deren, Elisabeth	Dft. Eng.	Lexington
Van Meter, Mary Scott	A. & S. 3	Lexington
Van Meter, Martha Pettit	A. & S. 1	Lexington
Vaughn, Jr., Edgar	Eng. 1	Shelbyville

Vilcofsky, Morris	A. & S. 3	Norwood, Ohio
Vimont, Louis Franklin	A. & S. 1	Millersburg
Vimont, Richard Thompson	Agr. 1	Millersburg
Voelcker, Alfred Henry	Eng. 2	Louisville
Voiers, Amelia Marie	A. & S. 2	Butler
Wade, Russell Woodford	Eng. 1	LaGrange
Wade, Terry Edwin	Eng. 1	Hatcher
Waits, Harold F.	Eng. 1	R. R. 4, Cynthiana
Walker, Dorothy Caldwell	A. & S. 4	Pineville
Walker, Orin Coomes	Law 3	Ekron
Walker, William Green	A. & S. 3	Lexington
Wallace, Earle	Eng. 2	Wilton
Wallace, Jr., William Mason	Eng. 3	Lexington
Waller, Jr., Rives	A. & S. 1	Morganfield
Walling, Harry Wood	Eng. 2	Campbellsville
Wallingford, Gertrude	Agr. 2	Cynthiana
Wallingford, James Stuart	Eng. 4	Paris
Wallingford, Joseph Kevil	Eng. 2	Cynthiana
Wallingford, Robert Glenn	Eng. 1	R. R. 4, Maysville
Ward, Urey Gorman	Law 3	Inez
Ware, Arthur Eugene	A. & S. 1	Covington
Warth, Henry K.	Agr. 2	Georgetown
Warth, Lindsay Holding	A. & S. 1	Georgetown
Warth, Robert Douglas	A. & S. 3	Georgetown
Watkins, James Rufus	Grad.	Madison, Wis.
Watkins, Mark A.	Eng. 1	London
Watlington, Phillip Reed	Agr. 2	Hardinsburg
Watson, Cova V.	A. & S. 1	Brooksville
Watson, Whitfield B.	Agr. 1	Ashland
Weakley, Hannah S.	Agr. 3	Louisville
Weakley, Katherine Thomas	A. & S. 3	Louisville
Weatherholt, Forrest Dryden	Eng. 2	Cloverport
Wedekemper, Frank Josef	Agr. 1	Louisville
Weeks, Marjorie	A, & S. 1	R. R. 2, Lexington
Weil, Herschel Jonas	Agr. 1	Lexington
Weller, Leslie Ward	A. & S. 1	Louisville
Wells, Mary Marguerite	Agr. 1	Lexington
Wentzell, Irma Frances	A. & S. 3	Louisville
West, Helen Lorraine	Agr. 1	Mayfield
West, Logan	Agr. 1	Paint Lick
Whaley, James Saunders	A. & S. 2	Cynthiana
Wheat, Vertrice William	A. & S. 1	Middleburg
Wheeler, Hattie Ell	Agr. 3	Lexington

White, Mina Frances	A. & S. 3	Blackford
White, William Preston	Eng. 2	Paris
Whitford, William Roy	A. & S. 2	Earlington
Whitlow, Inez Durrett	A. & S. 1	Pembroke
Whitnell, Edwin A.	Eng. 1	Fulton
Whittinghill, Sudie Floris	A. & S. 4	Glen Dean
Whitworth, Mary Helen	A. & S. 2	Hardinsburg
Wiggins, James	Eng. 1	Lexington
Wilhelm, James E.	A. & S. 1	Paducah
Wilkerson, Neil Mitchell	Eng. 1	St. Petersburg, Fla.
Wilkey, Marvin Edward	Eng. 1	Dixon
Will, Louise	A. & S. 3	Louisville
Willenbrink, Joseph Lawrence	A. & S. 1	Louisville
Willenbrink, Paul Joseph	A. & S. 1	Louisville
Willham, Harold Oliver	A. & S. 1	Mackville
Williams, Ann	A. & S. 1	Lexington
Williams, Edith	Agr. 3	Bowling Green
Williams, Emma	A. & S. 1	Lexington
Williams, Jane Lanier	A. & S. 1	Frankfort
Williams, Louis D.	Eng. 1	Cynthiana
Williams, Samuel Earl	A. & S. 1	Lexington
Williamson, Rual Roy	Eng. 1	Lecta
Willis, George Luther	Law 4	Shelbyville
Wilson, Albert Edward	Eng. 1	Donerail
Wilson, Alberta	A & S. 2	Somerset
Wilson, Floyd A.	A. & S. 1	Smithland
Wilson, Gaines Pirtle	Agr. 1	Buffalo
Wilson, George Lambert	Law 2	Madisonville
Wilson, Ira Gaulbert	Eng 2	Louisville
Wilson, James Freeman	Eng. 2	Lexington
Wilson, Ralph Owen	Agr. 1	R. R. 3, Robinson, Ill.
Wilson, Randolph Chamberlain	Eng. 1	Burkesville
Wilson, Silas T.	Eng. 1	Frankfort
Wilson, William Rives	A. & S. 3	Evansville, Ind.
Wiltshire, Haze	Agr. 1	Johns, Miss.
Wimp, John Emmet	Eng. 1	Louisville
Winfield, Ella Dee L.	Dft. Eng.	Lexington
Winkler, Eugene Newton	Eng. 2	Harlan
Winstead, Thomas Durham	Eng. 1	R. R. 1, Cecilia
Winters, Alvin Barnett	Eng. 1	Paris
Winter, Earl Schmuck	Law 2	Owensboro
Wise, Leon	A. & S. 3	Eminence
Witt, Norman Douglass	Eng. 2	Bowling Green

Wolfford, Virgil Homer	A & S. 1	Grayson
Wolff, Erma	Agr. 2	Louisville
Woll, Jean	A. & S. 2	Hawesville
Woll, Margaret	A. & S. 3	Hawesville
Wood, Alfred McCreary	Eng. 3	Weedie
Woods, Chester Bryant	Eng. 1	R. R. 2, Lexington
Wood, Jr., Clarence Leland	Law 2	Maysville
Wood, John Douglass	Eng. 3	Elkton
Wood, Marshall Baird	Law 3	R. R. 2, Maysville
Woodward, Rothwell	Eng. 1	London
Wright, Marshall Elbert	Eng. 1	Corinth
Wright, Thelma	Agr. 2	R. R. 9, Cynthiana
Wyatt, Leonard	A. & S. 1	Elkatawa
Wynn, Harold Asbury	Eng. 2	Providence
Yankey, Jr., John Sweeney	Agr. 1	Bloomfield
Yarbro, Marguerite Ann	A. & S. 2	Paducah
Young, Chester Clay	Eng. 1	Paris
Young, Clarence Caldwell	Eng. 2	Nelson
Young, Lucy Aloysia	A. & S. 4	Lexington
Young, Tom Brown	A. & S. 1	Lexington
Yourish, William	A. & S. 3	Newport
Zanone, Jr., Charles Franklin	Eng. 1	Rosiclare, Ill.
Zerfoss, George Ernest	Eng. 2	Ashland
Zuckerman, Eli	Eng. 2	Russia

SUMMER SESSION STUDENTS, 1918

Adams, James Blain	Hickory
Allington, Ralph Bamford	Newport
Allison, Everitt Elmer	Mt. Olivet
Ammerman, Augusta R.	R. R. 1, Cynthiana
Anderson, Jr., F. Paul	Lexington
Armistead, Gladys L.	Lexington
Armstrong, Evamonde	Lexington
Arnett, Allene Byrd	Lexington
Arnett, Elizabeth Cassell	Lexington
Augsburg, Fred King	Lexington
Baird, Obed E.	Owensboro
Baker, Etna Janes	Murray
Bamforth, Ellen	Dayton
Baulch, Ernest Langley	Fulton
Bell, Trice Morton	Madisonville
Belt, Rupert A.	Sheridan

Bertram, Elizabeth L.	Vanceburg
Bingham, Katharine Colson	Pineville
Blakey, Lula Beatty	Beattyville
Boggess, William Wallace	Lawrenceburg
Boling, James Pleasant	Campbellsville
Bolser, Alma Louise	Dayton
Boone, Hervey Parks	Lexington
Botts, Fanny	Lawrenceburg
Botts, Katherine Payne	Lawrenceburg
Bowlds, Fleming J.	Owensboro
Brooker, James Withers	Lexington
Burrier, Mary King	Nicholasville
Cain, William Noel	Carlisle
Canon, Charles Thomas	Mayfield
Carter, Mary Jo	Lexington
Cassady, Ruth L.	Versailles
Cassity, Alice A.	Mt. Sterling
Catlett, Nannie R.	Princeton
Clare, Elizabeth Wilson	Lexington
Coleman, John Winston	R. R. 7, Lexington
Cramer, Minnie Toler	Lexington
Creech, Grover Howard	Pineville
Cromwell, Lillie Victor	Cynthiana
David, William Russell	Lexington
DeBoe, Era Pickens	Marion
Denton, Mary L.	Lexington
de Waegenaere, Hubert	Lexington
Dorsey, Mabel Frances	Elizaville
Edmonds, William John	Lexington
Elliott, Lavina May	Lexington
Engle, Fred Allen	Gray
Eubank, Cleo	Lexington
Evans, Julia	Otisco, Indiana
Eyl, Joseph M.	R. R. 3, Lexington
Falls, Mrs. James David	Bowling Green
Falls, James David	Bowling Green
Foley, Elizabeth Moss	Williamsburg
Ford, Lawrence Carroll	Harrogate, Tenn.
Franklin, Anne	Lexington
Frey, George Conrad	Buechel
Fuller, Katherine Louise	Lexington
Garnett, M. Alline	Cynthiana

Gentry, Effie Lee	Prentiss
Gentry, Peter Tribble	Lexington
Glass, Rhoda	Lexington
Glickman, Max	Pineville
Good, Edwin Stanton	Lexington
Gordon, Frances Jean	Lexington
Gorman. Thomas L.	Lexington
Gotherman, Edward Earl	Lexington
Gregory, Jane Marie	Lexington
Grehan, Henry G.	Lexington
Hagan, Wilhelmina Mary	Lexington
Hager, Ann Elizabeth	Lexington
Hamilton, Virginia C.	Lexington
Hammonds, Carsie	Russell Springs
Hardesty, Ada Louise	Ft. Thomas
Head, John Paul	Greenville
Herring, Josephine B.	R. R., Lexington
Herriott, Christine	Oklahoma City, Okla.
Herriott, Florice	Oklahoma City, Okla.
Herriott, Mrs. Lida	Holdenville, Okla.
Herring, Katharine C.	R. R., Lexington
Holloway, Roberta	R. R., Lexington
Hopkins, Elizabeth	Lexington
Irvin, Oscar W.	Greenville
Johnson, Frances I.	Columbus, Miss.
Judy, Sibbia Florence	Lexington
Keller, Harold E.	Lexington
King, Effie	Lexington
Kisky, Frederick Samuel	Franklin, Indiana
Leman, John Julian	Pineville
Lewis, Margaret Abbett	Versailles
Longest, Amy May	Greenville
Lucy, Charles V.	Independence
McCarty, Anne South	Lexington
McCready, Emily I.	Winchester
McDowell, Martha M.	Danville
McEntee, Harold Paul	Covington
McFarland, Ray Leighton	Utica
McVey, Virginia	Lexington
Marimon, Henrietta Ray	Nicholasville
Marshall, William Francis	Greendale
Martin, Joseph Holmes	Lexington
Mathews, George F.	Lexington

Merigold, Viola L.	Paducah
Merrill, Alice Josephine	Lexington
Messman, Margaret Clara	Bellevue
Miller, Ernest Carl	Lexington
Morris, J. C.	Lexington
Mullikin, Otis Luther	Benton
Myre, Walter J.	Benton
Nickell, Milton C.	Hazel Green
Oldham, Samuel Lee	Hopkinsville
O'Neil, Agnes Celestine	Lexington
Parker, Jr., James Edward	Maysville
Parrish, Sarah Katherine	Lexington
Payton, Warren	Fordsville
Petrey, Arthur W.	Pineville
Petty, Oscar V.	Lexington
Pittman, Mrs. Ernest Edgar	Elizabethtown
Pittman, Ernest Edgar	Elizabethtown
Powell, Ernest Blair	Ewing
Pritchard, Elias	Cincinnati, Ohio
Randall, Martha Agnes	Louisville
Rhodes, Mabelle	Elizabethtown
Richardson, Olney E.	Hartford
Riley, Mary Gray	Lexington
Rogers, Bettie Milward	Pittsburgh, Pa.
Rogers, Naomi Thompson	Springfield
Rout, Katherine D.	Versailles
Royden, Halsey L.	Lexington
Ryan, Charles O.	Monticello
Sadtler, Charlotte	LaGrange
Schnaufer, Virginia	R. R., Lexington
Shouse, John Felix	Lexington
Simrall, Ida Bright	Shelbyville
Sims, Verner	Mt. Olivet
Smith, Mose	Ruston, La.
Smith, Rusha	Elizaville
Sparrow, Otha Thomas	Lexington
Spengler, Camille A. G.	Lexington
Spencer, Richard H.	Winchester
Stanley, Mamie S.	Bedford
Starr, Mrs. Grace	Lexington
Sutcliffe, Ethel	Evanston, Ill.
Tarlton, Fannie Summers	R. R., Lexington
Tartar, Elmer E.	Beaver Dam

Taylor, Jennings	Lexington
Thompson, Irene M.	Hickman
Thornton, Marion Matthews	Versailles
Timmer, Carl Albert	Louisville
Tomlinson, Orlin D.	Winchester
Triplett, Mary Winifred	Lexington
VanMeter, Margaret W.	Lexington
VanMeter, Martha P.	Lexington
Vaughn, Esther	Bagdad
Vogelbach, Alice G.	Dayton
Walker, Mrs. Belle	Lawrenceburg
Walker, Dorothy C.	Pineville
Walker, Orin C.	Ekron
Walker, William G.	Lexington
Wallis, Elizabeth W.	Lexington
Walls, Mary Duke	Lexington
Wasson, Jeanette	Versailles
Webb, Louise G.	Lexington
Welsh, Elizabeth Marie	Lexington
Whittinghill, Sudie Floris	Glen Dean
Whitworth, Mary Helen	Hardinsburg
Wills, Nancy L.	Eminence
Wilson, Henry Clay	Lexington
Wimmer, Peggy	Louisville
Witt, Norman D.	Bowling Green
Wooldridge, Christopher M.	Lexington
Woodruff, Nata Lee	Eminence
Young, Joseph Bryant	Lexington

SUMMARY BY COUNTIES IN KENTUCKY

Adair County	8	Caldwell County	6
Anderson County	6	Calloway County	13
Ballard County	6	Campbell County	28
Barren County	3	Carlisle County	3
Bath County	4	Carroll County	10
Bell County	8	Carter County	4
Boone County	18	Casey County	7
Bourbon County	40	Christian County	9
Boyd County	9	Clark County	21
Boyle County	6	Clay County	2
Bracken County	5	Crittenden County	7
Breathitt County	3	Cumberland County	4
Breckinridge County	12	Daviess County	27

Elliott County	5	Mason County	29
Estill County	1	Marshall County	7
Fayette County	201	McCracken County	31
Fleming County	7	McCreary County	1
Floyd County	2	McLean County	11
Franklin County	16	Meade County	3
Fulton County	19	Mercer County	4
Gallatin County	2	Metcalf County	2
Garrard County	16	Monroe County	1
Grant County	11	Montgomery County	11
Graves County	18	Morgan County	1
Grayson County	2	Muhlenberg County	14
Green County	1	Nelson County	9
Greenup County	1	Nicholas County	3
Hancock County	4	Ohio County	14
Hardin County	15	Oldham County	10
Harlan County	5	Owen County	1
Harrison County	25	Owsley County	3
Henderson County	15	Pendleton County	9
Henry County	10	Perry County	3
Hickman County	10	Pike County	4
Hopkins County	9	Pulaski County	12
Jackson County	1	Robertson County	1
Jefferson County	95	Rockcastle County	4
Jessamine County	13	Russell County	1
Kenton County	21	Scott County	6
Knox County	2	Simpson County	3
Larue County	4	Shelby County	17
Laurel County	8	Spencer County	3
Laurence County	4	Taylor County	3
Lee County	6	Todd County	2
Leslie County	2	Trigg County	4
Letcher County	3	Trimble County	6
Lewis County	2	Union County	15
Lincoln County	5	Warren County	11
Livingston County	3	Washington County	12
Logan County	6	Wayne County	2
Lyon County	1	Webster County	20
Madison County	9	Whitley County	2
Magoffin County	2	Woodford County	10
Marion County	5		
Martin County	1	Total	1164

SUMMARY BY OTHER STATES AND COUNTRIES

Alabama	1	Mississippi	2
Arkansas	2	New Jersey	3
Florida	1	New York	1
Georgia	1	North Carolina	2
Illinois	2	Ohio	18
Indiana	5	Oklahoma	1
Iowa	2	Tennessee	4
Kansas	2	Russia	1
Louisiana	1	West Virginia	2
Michigan	1	Wisconsin	1
Minnesota	1		
Missouri	1	Total	55

SUMMARY OF OFFICERS OF ADMINISTRATION AND INSTRUCTION

General Administrative Officers	7
Officers of Instruction	110
Experiment Station and Agricultural Extension Staff	73
Home Demonstration Agents	39
County Agricultural Agents	64
Total	300
Clerical Staff—Colleges, Experiment Station, and Agr. Extension	48
	348
Less names counted twice	6
Total	342

STUDENTS

Candidates for Degrees	Arts and Science	Agriculture	Engineering	Law	Totals
Graduates	8	1	2	1	12
Seniors	48	27	26	9	110
Juniors	45	37	28	29	139
Sophomores	76	38	84	51	249
Freshmen	277	149	243	.....	669
	454	252	383	90	1179
Not Candidates for Degrees					
Special Students	13	3	19	2	37
Short Course in Agriculture	.....	28	.....	.....	28
Drafting—Engineering	.....	.....	13	.....	13
Eight Weeks Course in Min. Eng.	.....	.....	58	.....	58
U. S. Army—S. A. T. C.	.....	.....	.....	.....	.....
*Section B—2d. Detachm't (8 wks.)	.....	.....	429	.....	429
Third Detachm't (8 wks.)	.....	.....	419	.....	419
Summer School	.....	.....	.....	.....	172
	13	31	938	2	1156
Totals	467	283	1321	92	2335
Less names counted twice	.....	.....	.....	.....	51
Grand Total					2284

*The 1st Detachment, 396 men, was reported in the Catalog for 1917-18.

INDEX

	Page
Accredited Schools	72
Accredited Schools, Growth of	80
Administrative Officers	9
Admission and Classification	60
Admission by Certificate	72
Admission by Examination	61
Admission to Freshman Class	60
Admission to Advanced Standing	81
Admission to Special Students	81
Admission as Graduate Students	81
Entrance Subjects	60
Entrance Units	61
High Schools	72
Private Institutions	79
Agriculture, College of	186
Agricultural Experiment Station	40, 227
Agricultural Extension	229, 323
Agriculture, Graduate School	304
Agriculture, Summer Session	311
Agricultural Education	148
Agricultural Society	101
Agronomy	200
Alpha Zeta	103
Alumni Association	343
Alumni Clubs	344
Alumni Loan Fund	94
Alumni Representation on Board of Trustees	343
Officers of, 1917-18	343
Anatomy and Physiology	123
Anderson Company Prize	96
Animal Industry	203
Apple Judging Prize	96
Art and Design, Arts and Science	127
Extension	323
Summer Session	311
Art, Training for Teachers	122, 127
Arts and Science, College of	113
Group Requirements	118
Combined Courses	119
Arts—Law Course	289
A. S. H. B. Association Trophy	97
Assistant Professors	16
Associate Professors	15
Astronomy	166, 282
Graduate	169
Athletics	103
Summer Session	317
Athletic Field	59
Athletic Teams, Rules Governing	85
Bacteriology	130
Barker Trophy	95
Basic Units	61
Bennett Prize	94
Biology Club	106
Blackstone Institute Prize	96
Board of Control Patterson Hall	37
Board of Trustees	11
Bookkeeping, Entrance	71
Botany	130
Entrance	71
Extension	324
Summer Session	311
Bowles Prize	97
British Educational Mission	90
Brooks Civil Engineering Society	102
Buildings	44
Bureau of Correspondence	321
Bureau of Debating	328
Bureau of Information	329
Bureau of Lectures	328
Business Administration	121, 140
Calendar	6
Callaghan & Co. Prize	96
Certificate of Admission	72
Certificates of Teachers	120
Changes in Registration	82
Chemistry, Arts and Science	133, 280
Entrance	70
Graduate	137
Summer Session	312
Churches in Lexington	88
Civil Engineering	227, 229, 237, 242
Graduate School	247
Classification, Senior	91
Clubs	104, 105, 106

	Page
Collateral Activities	248
Colleges and Schools	109
Agriculture	186
Arts and Science	113
Engineering	230
Law	287
Graduate School	301
Summer School	306
Commencement Honors	92
Commissioner of Agriculture Prize	97
Committees of the Senate	36
Construction	242
Contents	3
Contracts, Civil Engineering	242
Convocation	88
Cook Prize	97
Correspondence Study	321
Council, University	37
County Agricultural Agents	32, 194
Courses Combined	119
Court Practice	290
Credits Permitted, Arts	118
Crum Prize	95
Debate, High School Contests in	104
Debating Teams	104
Declamation Prize	95
Degrees, Agriculture	92, 334
Arts and Science	92 117, 119
Engineering	92, 234, 335
Commencement, 1918	333, 337
Graduate School	92, 337
Law	92, 293
List of	92
Mechanical and Electrical Engineering	92, 225, 335
Mines and Metallurgy	92, 261, 335
Residence Req. for Bach. Degree	91
Degrees and Honors, 1917-18	331
Delinquent Students	83
Dormitories	86
Dormitory for Women	87
Drawing, Entrance	71
Mechanical	250
Drafting Rooms	58
Dropping of Delinquent Students	83
Economics and Sociology	140
Agricultural	212
Summer Session	312
Education, Arts and Science	144
Agriculture	148
Extension	324
Graduate	147
Summer School	312
Vocational	214
Electrical Engineering	251, 256
Graduate	258
Electrical Laboratory	251
Employment Bureau	87
Engineering, Farm	202
Engineering, Summer work	237, 313
English, Arts and Science	149
Entrance	62
Extension	324
Graduate	153
Summer Session	314
Rule Relating to Deficiencies in	84
English Club	106
Entomology	207
Entrance, Basic Units for	61
Entrance Examinations, Schedule of	7
Entrance Subjects	60
Entrance Units	60, 59
Description of Entrance Units	62
Executive Officers	12
Ewing Prize	97
Examinations, Entrance	82
Schedule of	7
Expenses	86
Experiment Station	40, 227
Bulletins	43, 107
Staff	24
Extension, Mines and Metallurgy	274
Extension Division Staff	24
Extension - See Univ. Ext. p. 321	
Farmers' Short Course	227
Farmers' Week	227
Farm Engineering	202
Farm Management	208
Extension	325
Fees	82, 310
Fellowships	93, 303
French, Arts and Science	182
Entrance	69
Extension	325
Graduate	182
Summer Session	315
General Administrative Officers	9
General Conduct	85
General Information	39
Geodesy	244
Geology, Arts and Science	121, 155
Entrance	71
German, Arts and Science	158

	Page
Entrance	68
Extension	325
Summer Session	315
Graduate School	301
Graduate Students	349
Greek, Arts and Science	127
Entrance	67
Extension	326
Grounds	44
Gymnasium	59
Hazing	86
Henry Clay Law Society	101, 291
High School Contests in Debate	104
History and Equipment	41
History, Arts and Science	159
Entrance	70
Extension	326
Graduate	161
Summer Session	315
Club	105
Highway Engineering	243
Home Economics, Department of	217
Summer Session	315
Home Demonstration Agents	34, 196
Honors, Commencement	92
1918-19	336
Horace Mann Literary Society	101
Horticulture	210
Horticultural Society Prize	96
Hydraulics, Civil Engineering	242
Industrial Chemistry	137, 130
Infirmary and Nurse	87
Instructors and Assistants	16
Intercollegiate Contests in Speaking	102
Interscholastic Tournament	104
Interscholastic Tournament Prizes	98
International Live Stock Exp. Prize	98
Irregular Class Attendance	84
Italian, Arts and Science	182
Journalism, Arts and Science	162
Journalism Prizes	95
Kentuckian	107
Kentucky High School Quarterly	107
Kentucky Kernel	107
Kentucky Law Journal	107, 294
Laboratories	48, 265
Late Registration	82
Latin, Arts and Science	125
Entrance	67
Extension	326
Summer Session	316
Law, College of	287
Lecturers	88
Location	43
Library	48, 91
Library Club	106
Library Training	122, 155
Loan Funds	94, 100
Marketing	213, 326
Marking System	83
Mathematics, Arts and Science	166
Entrance	66
Extension	326
Graduate	168
Summer Session	316
Club	105
Mechanical Drawing	250, 326
Mechanical and Elec. Eng. Societies	102
Mechanical Engineering	258, 263
Graduate	264, 304
Summer Session	313
Mechanics of Engineering	265
Graduate	267
Mechanics, Practical	278, 279
Metallurgy	267, 276
Military Prizes	96
Military Science	84, 169
Mines and Metallurgy	267, 275
Graduate	304
Two Years' Course	274
Mining	275
Mining Prize	96
Mining Society	103
Museums	58
Music	122, 173
Musical Clubs	105
National Dairy Show Prizes	97
Nurses, Course for	121, 123
Officers of Administration and Instruction	15, 17
Officers of Instruction	15
Oratorical Prize	95

	Page
Organization, University	111
Organizations	99
Outline of Courses, Civil Engin.	235, 238
Four Year Agriculture	198
Home Economics	219
Home Economics, Vocational	222
Industrial Chemistry	138
Journalism	164
Mechanical and Electrical Engineering	252, 259
Vocational, Smith-Hughes	215
Metallurgical Engineering	273
Patterson Hall	47, 310
Patterson Hall Board of Control	37
Patterson Literary Society	100
Patterson Prize	95
Philosophian Literary Society	101
Philosophy, Arts and Science	174
Physical Education	84, 175
Summer Session	317
Physical Geography, Entrance	70
Physics, Arts and Science	178
Entrance	70
Graduate	179
Summer Session	317
Physiology, Arts and Science	123
Entrance	70
Political Economy Club	106
Political Science, Arts and Science	161
Extension	327
Graduate	161
Practical Mechanics	278, 279
Practical Miners' Course	274
Pre-Medical Courses	120
Press Association	106
Practice Court	290
Press Bulletin	107
Private Schools, Accredited	79
Prizes	94, 95, 97, 98
Professors	15
Psychology, Arts and Science	180
Extension	327
Summer Session	318
Publications	107
Public Service Laboratories	53
Public Speaking	154, 327
Railway Engineering	243
Recommendation of Teachers	90
Red Cross Institute	319
Register of Students	349
Registration	82
Changes in	82
Late	82
Reports of Parents	83
Reserve Officers' Training Corps	169
Residence and Graduation	82
Residence in Sorority Building	86
Rhodes Scholarships	93
Road Building, Extension	327
Romance Languages, Arts and Science	182
Rural Highway Engineering	243
Rural Kentuckian	107
Sanitary Engineering	244
Scholarships and Prizes	93, 303
Scholarships, Prizes and Honors, 1917-1918	338
Scope of Studies	42
Secretarial Work	121, 140
Senate Committees	36
Senate, University	37
Semi-monthly Farm Bulletin	107
Senior Classification	91
Short Course, Agriculture	227
Smith-Hughes Act	148, 214
Courses in Agr. and Vocational Subjects	214
Courses in Home Economics	214
Smoking in University Buildings	86
Social Service, Preparation for	121, 140
Societies	100
Sociology	142
Extension	327
Southern Railway Loan Fund	94
Spanish, Arts and Science	182
Entrance	69
Extension	328
Summer Session	315
Specifications, Civil Engineering	242
Speech	154
Strollers	105
Structural Engineering	246
Student Activities	99
Student Government	100
Students, Graduate	349
Register of	349
Summer Session, 1918	378
Summary	384
By Counties in Kentucky	382
By other States and Counties	384
Officers of Instruction	384

	Page
Students	385
Summer Session	306
Summer Session Students	378
Surveying and Geodesy	244
Suspension of Irregular Students	84
Tau Beta Pi	103
Tau Beta Pi Scholarship	94
Tau Kappa Alpha	101
Teachers, Preparation of	120, 144
Certificates of	120
Recommendation of	90, 120
Tennis Club	104
Thesis, Graduate School	302
Trustees	11
Two Years' Course, Mining	274
Undergraduates	349
Union Literary Society	100
University Bulletin	107
University Council	107
University Extension	321
University Index	107
University Organization	111
University Publications	107
University Senate	37
University Sessions	82
University Woman's Club	90
Veterinary Science	206
Vocational Education	214
Vocational Subjects, Entrance	71
Weekly Announcement	107
Winter Course, Agriculture	227
Woman's Student Government Association	100
Y. M. C. A.	99
Secretary	99
Y. W. C. A.	99
Zoology, Arts and Science	183
Entrance	71, 183
Summer Session	318