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UNIVERSITY OF CINCINNATI RECORD

SERIES I

JANUARY, 1914

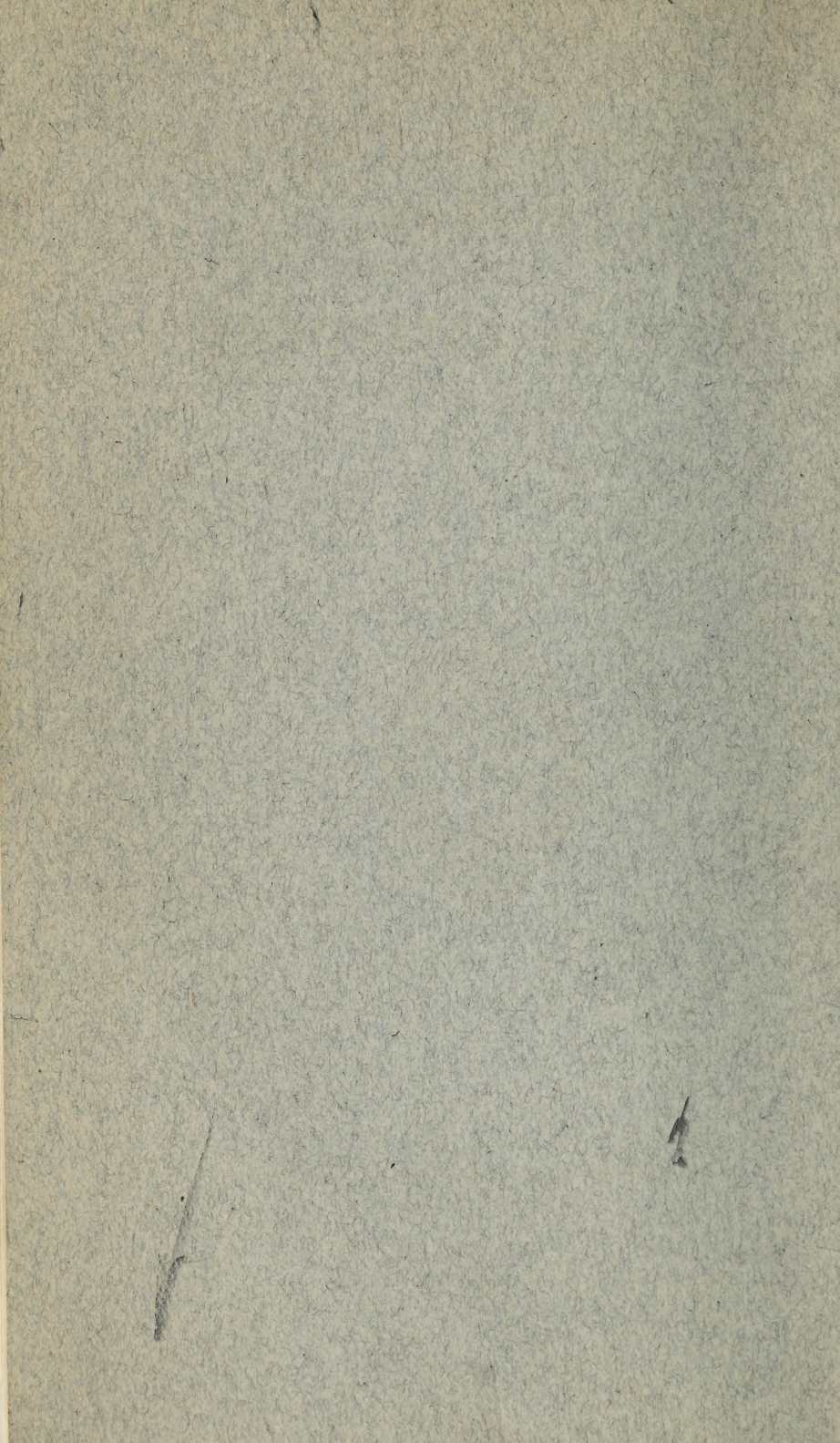
VOL. X, No. 1

ANNUAL CATALOGUE 1913-1914



PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO

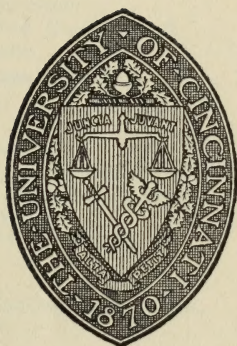
ENTERED AS SECOND-CLASS MATTER MAY 19, 1913, AT THE POST OFFICE
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UNIVERSITY OF CINCINNATI RECORD

ANNUAL CATALOGUE

1913-1914



**PUBLISHED BY THE UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO**

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1913/14-1914/15

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UNIVERSITY CALENDAR

1913

SEPT. 15, MONDAY.	{ Examinations for entrance to the Colleges of Liberal Arts, Medicine, Engineering, and Commerce began.
SEPT. 18, THURSDAY.	{ Registration days for the Colleges of Liberal Arts, Engineering, Commerce, and the College for Teachers.
SEPT. 19, FRIDAY.	
SEPT. 20, SATURDAY.	
SEPT. 20, SATURDAY.	Entrance examinations end.
SEPT. 22, MONDAY.	{ First semester began for the Colleges of Liberal Arts, Engineering, Commerce, and the College for Teachers.
SEPT. 22, MONDAY.	{ First registration day for the Graduate School.
SEPT. 25, THURSDAY.	{ Registration days for the College of Medicine.
SEPT. 26, FRIDAY.	
SEPT. 27, SATURDAY.	
SEPT. 27, SATURDAY.	{ Last registration day for the Graduate School.
SEPT. 30, TUESDAY.	{ First semester began for the College of Medicine.
OCT. 6, MONDAY.	{ First registration day for the External Courses.
OCT. 18, SATURDAY.	{ Last registration day for the External Courses.
NOV. 27, THURSDAY.	{ Thanksgiving Day: a holiday. Recess of three days.

RECESS FROM DEC. 22, 1913, TO JAN. 3, 1914, INCLUSIVE.

1914

JAN. 5, MONDAY.	{	Classes resumed in all departments of the University, except the College of Commerce. Entrance examinations begin.
JAN. 10, SATURDAY.		Entrance examinations end.
JAN. 12, MONDAY.		Classes resumed in the College of Commerce.
JAN. 26, MONDAY.		First semester examinations begin.
JAN. 31, SATURDAY.	{	First semester ends for the College of Medicine.
FEB. 2, MONDAY.	{	Second semester begins for the College of Medicine.
FEB. 5, THURSDAY.		First semester examinations end.
FEB. 6, FRIDAY.	{	Registration day for the second semester of the Colleges of Liberal Arts and Engineering, and the College for Teachers.
FEB. 7, SATURDAY.		No classes.
FEB. 9, MONDAY.	}	Registration days for the second semester of the Graduate School.
FEB. 10, TUESDAY.		
FEB. 11, WEDNESDAY.		
FEB. 9, MONDAY.	{	Second semester of the Colleges of Liberal Arts, Engineering, Commerce, and the College for Teachers begins.

EASTER RECESS FOR THE COLLEGE OF MEDICINE FROM APRIL 6 TO APRIL 11, INCLUSIVE.

MAY 1, FRIDAY.	Oratorical contest for Jones Prizes.
MAY 30, SATURDAY.	Memorial Day: a holiday.
JUNE 1, MONDAY.	Second semester examinations begin.
JUNE 12, FRIDAY.	Second semester ends.
JUNE 13, SATURDAY.	University Commencement Day.
JUNE 15, MONDAY.	Entrance examinations begin.
JUNE 20, SATURDAY.	Entrance examinations end.

DEPARTMENTS OF THE UNIVERSITY

The University comprises the following departments:

GRADUATE SCHOOL,

McMICKEN COLLEGE OF LIBERAL ARTS,

COLLEGE FOR TEACHERS,

COLLEGE OF ENGINEERING: Departments of Chemical, Civil, Electrical, Mechanical, and Metallurgical Engineering,

COLLEGE OF MEDICINE (The Ohio-Miami Medical College and the Clinical and Pathological School of the Cincinnati Hospital),

COLLEGE OF COMMERCE.

For special announcements of the various departments, except the Medical College, and for further information, address:

THE SECRETARY OF THE UNIVERSITY
CINCINNATI, OHIO

For special announcement of the Medical College, address:

THE DEAN OF THE COLLEGE OF MEDICINE
CLIFTON AVE., CINCINNATI, OHIO

THE BOARD OF DIRECTORS

Appointed by the Mayor of Cincinnati

ARCH I. CARSON, M. D.,	January, 1914
ROBERT WILLIAM HOCHSTETTER,	" 1914
ROBERT W. STEWART, M. D.,	" 1914
WILLIAM HARVEY ANDERSON,	" 1916
SMITH HICKENLOOPER,	" 1916
EMIL POLLAK,	" 1916
ALFRED K. NIPPERT,	" 1918
RUFUS B. SMITH,	" 1918
DAVID I. WOLFSTEIN, M. D.,	" 1918

OFFICERS

For the Fiscal Year 1913

ROBERT W. STEWART, M. D.,	Chairman
DANIEL LAURENCE,	Clerk
CHRISTIE WILKE,	Assistant Clerk

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- COMMITTEE ON REAL ESTATE: Messrs. Hickenlooper, Nippert, and Wolfstein.
- COMMITTEE ON UNIVERSITY BUILDINGS AND GROUNDS: Messrs. Pollak, Wolfstein, Carson, and Hochstetter.
- COMMITTEE ON LAW: Messrs. Smith, Nippert, and Anderson.
- COMMITTEE ON ACADEMIC AFFAIRS: Messrs. Carson, Hickenlooper, and Smith.
- COMMITTEE ON OBSERVATORY: Messrs. Nippert, Hochstetter, and Stewart.
- COMMITTEE ON PROFESSIONAL SCHOOLS: Messrs. Wolfstein, Stewart, and Hickenlooper.
- COMMITTEE ON ENGINEERING COLLEGE: Messrs. Hochstetter, Carson, and Pollak.

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UNIVERSITY OF CINCINNATI

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
Office, 10 McMicken Hall.
- FRANK W. CHANDLER, Ph. D., Dean of the College of Liberal Arts.
Office, 8 McMicken Hall.
- JOSEPH E. HARRY, Ph. D., Dean of the Graduate School.
Office, 4 McMicken Hall.
- HERMAN SCHNEIDER, Sc. D., Dean of the College of Engineering.
College of Engineering Building.
- WILLIAM P. BURRIS, A. M., L. H. D., Dean of the College for Teachers.
Office, 2 McMicken Hall.
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Medical College Building, Clifton Ave.
- FREDERICK C. HICKS, Ph. D., Dean of the College of Commerce and
Supervisor of the Evening Academic Courses.
Office, 32 McMicken Hall.
- EMILIE WATTS McVEA, A. M., Dean of Women.
Office, 12 McMicken Hall.
- FRANK B. CROSS, M. D., Secretary of the Faculty, College of Medicine.
Medical College Building, Clifton Ave.
- JERMAIN G. PORTER, Ph. D., Director of the Observatory.
The Observatory, Mt. Lookout.
- HENRY S. WEST, Ph. D., Director of School Affiliation.
Office, 2 McMicken Hall.
- ALFRED BRODBECK, Director of Physical Education.
Gymnasium Building.
- SELDEN GALE LOWRIE, Ph. D., Director of the Municipal Reference
City Hall. Bureau.
- DANIEL LAURENCE, B. S., Secretary of the University.
Office, 5 McMicken Hall.
- CHARLES ALBERT READ, A. B., Librarian of the University Library.
Van Wormer Library Building.
- LELIA GARVIN HARTMANN, B. L., Registrar.
Office, 7 McMicken Hall.

UNIVERSITY SENATE, 1913-14

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
 CHRISTIAN R. HOLMES, M. D., Dean of the College of Medicine.
 JOSEPH E. HARRY, Ph. D., Dean of the Graduate School.
 FRANK W. CHANDLER, Ph. D., Dean of the McMicken College of
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 WILLIAM P. BURRIS, A. M., L. H. D., Dean of the College for Teachers.
 HERMAN SCHNEIDER, Sc. D., Dean of the College of Engineering.
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 Supervisor of the Evening Academic Courses.
 EMILIE WATTS McVEA, A. M., Dean of Women.
 JERMAIN G. PORTER, Ph. D., Director of the Observatory.
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 McMicken College of Liberal Arts.
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 COMMITTEE ON RULES: Herman Schneider, Frederick C. Hicks,
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OF
THE GRADUATE SCHOOL, THE COLLEGES OF LIBERAL
ARTS AND ENGINEERING, AND THE
COLLEGE FOR TEACHERS
1913—14

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For Liberal Arts: Frederick C. Hicks, Max Poll, Louis T. More, William P. Burris, Frank W. Chandler, Guy A. Tawney.

For Engineering: Herman Schneider, Stephen E. Slocum, John T. Faig. Dr. West, Secretary.

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COMMITTEE ON RULES: Louis T. More, Emilie W. McVea, Burtis B. Breese.

***FACULTY COMMITTEES**
COLLEGE OF MEDICINE
1913—14

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COMMITTEE ON ADVANCED STANDING: Drs. Greiwe, Thompson,
Freiberg.

COMMITTEE ON BUILDINGS: Drs. Knower, Fischer, Hoppe.

COMMITTEE ON COURSE OF STUDY: Drs. Oliver, Withrow, Fried-
lander.

COMMITTEE ON CLINICS: Drs. Rachford, Bonifield, Eichberg, Oliver.

COMMITTEE ON PUBLICITY: Drs. Reed, Carothers, Brown.

* The Dean is a member *ex officio* of all Committees

OFFICERS OF INSTRUCTION AND ADMINISTRATION OF THE UNIVERSITY OF CINCINNATI

CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
The Romaine, Clifton.

COLLEGES OF LIBERAL ARTS, ENGINEERING, AND COMMERCE, COLLEGE FOR TEACHERS, AND THE GRADUATE SCHOOL

WAYLAND RICHARDSON BENEDICT, A. B., Professor of Philosophy,
Cincinnati. Emeritus.

JERMAIN GILDERSLEEVE PORTER, Ph. D., Director of the Observatory
3314 Avery Lane, Mt. Lookout. and Professor of Astronomy.

FREDERICK CHARLES HICKS, Ph. D., Sinton Professor of Economics
and Commerce, Dean of the College of Commerce, and
Supervisor of the Evening Academic Courses.

The Alexandra, Walnut Hills.

HARRIS HANCOCK, Ph. D., D. Sc., . . . Professor of Mathematics.
2415 Auburn Ave.

JOHN MILLER BURNAM, Ph. D., Professor of Latin.
Sterling Hotel.

MAX POLL, Ph. D., . . . Professor of the Germanic Languages.
The Romaine, Clifton.

JOSEPH EDWARD HARRY, Ph. D., Professor of Greek and Dean of the
840 Lincoln Ave., Walnut Hills. Graduate School.

* MERRICK WHITCOMB, Ph. D., Professor of History.
3411 Clifton Ave., Clifton.

LOUIS TRENCHARD MORE, Ph. D., Professor of Physics.
317 Pike St.

HERMAN SCHNEIDER, Sc. D., William Thoms Professor of Civil
Engineering and Dean of the College of Engineering.
3343 Whitfield Ave., Clifton.

BURTIS BURR BREESE, Ph. D., Professor of Psychology.
560 Evanswood Pl., Clifton.

WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History
and Principles of Education and Dean of the College for
Teachers.

3523 Biddle St., Clifton.

JOHN WILLIAM HALL, A. M., Professor of Elementary Education.
The Romaine, Clifton.

* Absent on leave, 1913-14.

- STEPHEN ELMER SLOCUM, B. E., Ph. D., Professor of Applied
565 Evanswood Pl., Clifton. Mathematics.
- JOHN THEODORE FAIG, M. E., Professor of Mechanical Engineering.
3342 Whitfield Ave., Clifton.
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348 Shiloh St., Clifton.
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3457 Whitfield Ave., Clifton.
- GUY ALLAN TAWNEY, Ph. D., . . . Professor of Philosophy.
345 Thrall Ave., Clifton.
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* Absent on leave, first semester, 1913-14.

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- NATHAN ISAACS, Ph. D., LL. B., . . . Lecturer on Commercial Law.
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- CHARLES W. DUPUIS, Lecturer on Investments.
S. E. Cor. Ninth and Main Sts.
- HARVEY M. MANSS, A. B., Lecturer on Advertising.
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Third and Front Sts.
- ERNEST A. RODEN, Lecturer on Principles of Accounting.
612 Mercantile Library Bldg.
- EDWARD A. SISSON, A. B., Lecturer on Banking.
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Other Appointments for 1913-14

- SCHACHNE ISAACS, A. M., Assistant in Psychology.
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113 Garfield Pl.
- HAROLD F. RICHARDS, Student Assistant in Physics.
413 Fifth Ave., Dayton, Ky.
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3803 Glenway Ave.
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- OSCAR SEE, Student Assistant in Economics.
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ASSISTANTS IN THE OBSERVATORY

- EVERETT IRVING YOWELL, Ph. D., First Astronomer and Instructor in
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- ELLIOTT SMITH, Ph. D., Second Astronomer and Instructor in the
3441 Observatory Pl. Observatory.
- FANNIE R. GASTON, Assistant in the Observatory.
3441 Observatory Pl.

UNIVERSITY LIBRARY STAFF

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- MARGUERITE BURNET RESOR, A. B., Cataloguer.
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- FLORENCE STIMSON, In Charge of Circulation.
190 E. McMillan St.
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COLLEGE OF MEDICINE

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph. D., LL. D.,** President of the University.
- CHRISTIAN R. HOLMES, M. D.,** Professor of Otolaryngology and Dean of the College of Medicine.
8 E. Eighth St.
- FRANK B. CROSS, M. D.,** Assistant Clinical Instructor in Ophthalmology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
- J. C. MACKENZIE, M. D.,** Clinical Professor of Medicine, Emeritus.
624 W. Eighth St.
- CHAUNCEY D. PALMER, M. D.,** Professor of Obstetrics and Gynecology, Emeritus.
Reading Rd. and Forest Ave., Avondale.
- BYRON STANTON, M. D.,** Professor of Diseases of Women and Children, Emeritus.
Savannah Ave., College Hill.
- ALEXANDER GREER DRURY, A. M., M. D.,** Professor of Hygiene, Emeritus.
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- PHILIP ZENNER, A. M., M. D.,** Professor of Neurology, Emeritus.
14 Glenn Building.
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The names of the teaching staff are arranged by departments :

- HENRY McELDERRY KNOWER, Ph. D.,** . . . Professor of Anatomy.
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- MARTIN H. FISCHER, M. D.,** Joseph Eichberg Professor of Physiology.
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55 Groton Building. Medica, Pharmacology, and Therapeutics.

—————, Associate Professor of Pharmacology.
C. C. FIFE, M. D., Lecturer in Dietetics and Instructor in Thera-
19 W. Seventh St. (32) peutics.

RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Thera-
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McMillan St. and Auburn Ave., Mt. Auburn. trotherapeutics.

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- WYLIE MCLEAN AYRES, A. B., M. D., Assistant Clinical Professor of
4 W. Seventh St. Ophthalmology.
- JOHN RANLY, M. D., . . . Clinical Instructor in Ophthalmology.
936 Clark St.
- FRANK B. CROSS, M. D., Assistant Clinical Instructor in Ophthalmology, and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
- CLARENCE J. KING, M. D., Assistant Clinical Instructor in Ophthalmology.
Groton Building.
- K. L. STOLL, M. D., Assistant Clinical Instructor in Ophthalmology.
19 W. Seventh St.
- HORACE F. TANGEMAN, M. D., Assistant Clinical Instructor in
20 W. Ninth St. Ophthalmology.
- FRANK U. SWING, M. D., Assistant Clinical Instructor in Ophthalmology.
705-06 Livingston Building.

- CHRISTIAN R. HOLMES, M. D., Professor of Otology and Dean of the
8 E. Eighth St. College of Medicine.
- JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryngology.
Berkshire Building, 628 Elm St.
- JOHN WESLEY MURPHY, A. M., M. D., Clinical Professor of Laryngology and Otology.
4 W. Seventh St.
- SAMUEL IGLAUER, B. S., M. D., . Associate Professor of Otology.
22 W. Seventh St.
- WALTER E. MURPHY, M. D., Associate Professor of Laryngology and
Clinical Instructor in Rhinology, Laryngology, and Otology.
Berkshire Building.
- WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- W. J. THOMASSON, M. D., Clinical Instructor in Rhinology,
942 York St., Newport, Ky. Laryngology, and Otology.
- ROBERT W. BLEDSOE, M. D., Clinical Instructor in Laryngology and
1005 Madison Ave., Covington, Ky. Otology.
- S. BERTHA DAUCH, M. D., Assistant Clinical Instructor in Rhinology,
2924 Vaughn St., Mt. Auburn. Laryngology, and Otology.
- CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.

GEORGE L. KRIEGER, M. D., Assistant Clinical Instructor in Laryngology
4804 Central Ave., Madisonville. and Otology.

ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryngology
22 W. Seventh St. and Otology.

JOHN HOWARD LANDIS, M. D., Professor of Hygiene.
City Hall.

LECTURER ON SPECIAL TOPICS

HON. JAMES B. SWING, Medical Jurisprudence.
Union Trust Building.

OTHER OFFICERS

J. DEWITT SCHONWALD, M. D., Director of Dispensary.
5654 Hamilton Ave., College Hill.

L. M. PRINCE, Optician.
108 W. Fourth St.

FRANK B. CROSS, M. D., Secretary of the Medical Faculty.
4 W. Seventh St.

DANIEL LAURENCE, B. S., Secretary of the University.
Office, 6 McMicken Hall, Burnet Woods.

FRANCES CURRIE, Secretary and Librarian of the Medical College.
111 E. Auburn Ave.

ANNA L. HOOK, Secretary to the Dean of the Medical College.
2123 Sinton Ave.

TECHNICAL ASSISTANTS

HENRY LOUHIER, Anatomy.
McMicken Cottage.

DAISY CLARK, Pathology.
40 E. McMillan St.

JOSEPH KUPKA, Physiology.
221 Victor St.

ADDRESSES AND LECTURES, 1912-13

The speakers at Convocation during the year 1912-13 were as follows: Dr. Charles W. Dabney, president of the University; Alfred K. Nippert, member of the Board of Directors; Robert Chambers, Jr., Ph. D., assistant professor of Histology and Comparative Anatomy; Josephine Simrall, A. B., instructor in the Cincinnati Kindergarten Training School; Charles R. Towson, executive secretary of the Industrial Committee of the International Department of the Y. M. C. A.; Emilie W. McVea, A. M., assistant professor of English and dean of women; Benjamin C. Van Wye, A. M., assistant professor of Public Speaking and English; Rev. W. M. Hayes, Tsingchowfu, Shantung, China; Charles Sawyer, member of the City Council; Robert Marx; John D. Ellis, of the Class of '07; Mrs. Anna Gilchrist Strong, head of the Department of Home Economics in the Cincinnati Kindergarten Training School; Mr. Charles Hampden, stage manager of *The Blue Bird*; Miss Rachel Butler, reader, accompanied by Mr. Paul Bliss, composer; Miss Zona Gale, the authoress; Mr. L. H. Meakin, curator of the Art Museum and member of the American Academy of Design; Mr. Fred H. Rindge, member of the International Committee of the Y. M. C. A.

Mr. Frederick Hoffman, of the College of Music, gave a piano recital.

A series of public lectures was given at the University during the year 1912-13, and the speakers were as follows:

Merrick Whitcomb, Ph. D., professor of History, a public course of lectures during the first semester on "Select Topics in Medieval and Renaissance History."

Isaac Joslin Cox, Ph. D., associate professor of History, four illustrated lectures on "The Cities of Old and New Spain:" (1) "Moorish Spain in a Modern Setting;" (2) "The Capitals of Old and New Castile;" (3) "Spain and the Great Discoverer;" (4) "Modern Mexico, Its People and Problems." December 9, 12, 16, 19, 1912.

Dr. Woods Hutchinson, of New York City: "Foods." December 6, 1912.

Benjamin Carlton Van Wye, A. M., assistant professor of Public Speaking and English, a reading of Dickens' "A Christmas Carol." December 21, 1912.

Prof. John A. Lomax, president of the American Folk-lore Society: "Cowboy Songs." January 13, 1913.

Dr. Paul G. Woolley, professor of Pathology: "The Life and Work of Dr. Jesse Lazear." (Blue Hydra Commemorative Tree Planting and Open House.) April 11, 1913.

Prof. Hugo Münsterberg, of Harvard University: "Mind Reading." April 14, 1913.

Rev. F. L. Flinchbaugh, rector of Calvary Church: "The Art of Life." (Under the auspices of the Delta Chapter of Ohio Phi Beta Kappa.) May 29, 1913.

Other public addresses were given as follows:

Dr. Charles Hughes Johnston, dean of the School of Education, University of Kansas: "The Dirigible High School." (Delivered at the Ninth Annual Conference of the Secondary School Principals and Teachers of the Accredited Schools Affiliated with the University of Cincinnati.) March 1, 1913.

Dr. Charles W. Dabney, president of the University: "The Scholar's Commission." (Baccalaureate address, June 8, 1913.)

Dr. Albert Shaw, editor of *The Review of Reviews*: "Knowledge in its Relation to the Community." (Commencement address, June 14, 1913.)

The following speakers, under the auspices of the Student Branch of the A. I. E. E., addressed the students in the College of Engineering:

Mr. F. R. Fishback, sales manager of the Electric Controller and Manufacturing Company, Cleveland, Ohio, an illustrated lecture on "Motors, Controllers, and Starters." (Before a joint session of the Student Branches of the A. I. E. E. and the A. S. M. E.) November 1, 1912.

Mr. Bourman, of the Carborundum Company, Niagara, N. Y.: "The Manufacture and Uses of Carborundum." (Before a joint session of the Student Branches of the A. I. E. E. and the A. S. M. E.) February 4, 1913.

Mr. James S. Bishop, of the Cincinnati and Suburban Bell Telephone Company: "Telephony." February 25, 1913.

Mr. Willey, of the Triumph Electric Company: "Some Features of Direct Current Machinery." May 6, 1913.

The following lectures were delivered under the auspices of the Student Branch of the A. S. M. E.:

Mr. Rosenzweig, of the Erie City Iron Works, an illustrated lecture on "Superheated Steam and Poppet Valve Engines." December 3, 1912.

Mr. A. J. Baker, of the Cincinnati Milling Machine Company: "The Engineer's Relation to the Sales Department in a Modern Industry." February 19, 1913.

Dr. William Kent, of New York, author and lecturer: "The Engineer in His Relation to Society." March 20, 1913.

Mr. H. M. Prentis, Jr., of the Armstrong Cork Company, an illustrated lecture on "The Cork Industry." March 21, 1913.

Besides the above, a series of lectures on the comparative study of literature, which were open to the public, was given on the Ropes Foundation by the following eminent scholars:

Kuno Francke, Ph. D., LL. D., professor of German Culture and curator of the Germanic Museum, Harvard University, three lectures on "German Literature and Art at the Beginning of the Sixteenth Century:" (1) "German Humanism and Erasmus of Rotterdam;" (2) "The Erasmians. The Letters of the Obscure Men. Ulrich von Hutten;" (3) "Dürer's Biblical Illustrations and Holbein's Dance of Death." January 22, 23, 24, 1913.

Christian Gauss, M. A., professor of Modern Languages, Princeton University, four lectures on "French Literary Ideals:" (1) "The Renaissance in France;" (2) "The Development of the French Classical Ideal;" (3) "The Spirit of the Eighteenth Century;" (4) "Romanticism and Realism." April 1, 2, 3, 4, 1913.

Frank Wadleigh Chandler, Ph. D., professor of English and Ropes professor of Comparative Literature, seven lectures on "Aspects of the Recent Drama:" (1) "Irish Plays of Mysticism and History;" (2) "Irish Plays of the Peasantry;" (3) "Scenes from Married Life;" (4) "The Problem of Divorce;" (5) "Family Studies;" (6) "Plays of Social Criticism;" (7) "The Poetic Drama." May 1, 6, 8, 13, 15, 20, 22, 1913.

The following lecturers appeared at the University under the auspices of the Alliance Française:

M. Louis Hourticq, inspecteur des beaux arts de la ville de Paris: "La sculpture romane; l'art des pèlerinages et des monastères." November 11, 1912.

M. Firmin Roz, écrivain, lauréat de l'Académie Française: "La crise de la sensibilité française au 18^{me} siècle; Jean Jacques Rousseau et les origines du Romantisme." February 17, 1913.

The following addresses were delivered before the students in the different departments:

"David Lloyd George and Social Legislation in England." Prof. Israel Abrahams, Cambridge University, England. (Delivered be-

fore the students in the Departments of Economics and History.) November 6, 1912.

"School Luncheons." Miss Alice C. Boughton, chairman of the Committee on Luncheons in the Elementary Schools of the American Home Economics Association. (Delivered before the students in the Department of Education.) December 2, 1912.

"The Drama as a Communal Art." Miss Isabel Colbron, lecturer. (Delivered before the students in the Department of English.) April 21, 1913.

Lectures on "Social Hygiene" were delivered before the women students of the University by Dr. Frances Hollingshead.

The following lectures were delivered before the men of the University:

Three lectures on "Sex Hygiene." Dr. M. L. Heidingsfeld.

One lecture on "Narcotics." Dr. Martin Fischer.

One lecture on "Hygiene of the Brain and Nervous System." Prof. B. B. Breese.

GENERAL INFORMATION

FOUNDATION

On his death, in 1858, Charles McMicken gave to the city of Cincinnati by will almost the whole of his estate, valued at about \$1,000,000, for the purpose of establishing and maintaining "two colleges for the education of white boys and girls."

He had "long cherished the desire to found an institution where white boys and girls might be taught not only a knowledge of their duties to their Creator and their fellow men, but also receive the benefit of a sound, thorough and practical English education, and such as might fit them for the active duties of life, as well as instruction in the higher branches of knowledge, except denominational theology, to the extent that the same are now or may hereafter be taught in any of the secular colleges or universities of the highest grade in the country."

Nearly half of the property devised by Mr. McMicken was situated in the state of Louisiana. This was entirely lost, in 1860, by a decision of the Supreme Court of that state, annulling that part of the devise. The court refused to recognize the validity of bequests of real estate to institutions controlled by non-resident trustees upon perpetual trusts. The remainder of the property, lying in Cincinnati and its vicinity, did not yield a sufficient income to warrant the establishment of the proposed colleges. For ten years, therefore, the revenue derived from the estate was applied to its improvement.

In 1869, the trustees provided for a School of Design, which they maintained, with aid from Joseph Longworth, until 1884, when they transferred it to the Cincinnati Museum Association. Meanwhile, an attempt was made to unite the various educational trusts in Cincinnati. To this end, in 1870, the General Assembly of Ohio passed an act "to aid and promote education," under which, almost a year later, the University of Cincinnati was established. Bonds were soon issued by the city to provide funds for the erection of a suitable building, which was ready for use in the fall of 1875. But students were received in 1873, and instruction was given temporarily by the teachers of Woodward High School. In 1874, the Academic Department, now known as the McMicken College of Liberal Arts, was organized by the appointment of three professors and two instructors, who met classes during that year in a school building on Franklin street.

The effort to unite other trust funds with those given by Charles McMicken having failed, the income remained long inadequate to the needs of such an institution as he had intended to found. At

length the city undertook to support the University in part by public taxation, the tax for this purpose being limited at first to three-tenths of one mill. In 1906 the General Assembly of Ohio authorized the levying of an increased municipal tax for the University—five-tenths of a mill, instead of three-tenths as heretofore.

In 1913 a law was passed providing that the levy for University and Observatory purposes shall not be "subject to any limitations of rates of taxation or maximum rates provided by law" except the maximum of five-tenths of a mill for the University and three-tenths of a mill for the Observatory, and the "further exception that the combined maximum rate for all taxes levied in a year in any city or taxing district shall not exceed fifteen mills." This law further provides that the levy shall include the amount necessary to pay interest on and sinking fund for all bonds issued for the University subsequent to June 1, 1910. The situation produced by the Smith one per cent tax law, under the provisions of which the income of the University was limited to the amount received in the year 1910, made this law necessary.

In the course of time additional funds for the maintenance of the institution were provided by individual citizens, the most important being the bequest of property, valued at \$130,000, by Matthew Thoms in 1890, the gift of \$100,000 by David Sinton in 1899, and the recent bequest of Mary P. and Eliza O. Ropes, of Salem, Massachusetts, amounting to \$100,000, for the endowment of a chair of Comparative Literature, as a memorial to their father, Nathaniel Ropes, for many years a citizen of Cincinnati. Then, in 1910, the friends of Dr. Joseph Eichberg, for many years an eminent Professor of Physiology in the Miami Medical College, who lost his life through a lamentable accident in the summer of 1908, presented the University with the sum of \$45,000, to establish in the University the Joseph Eichberg Chair of Physiology. In 1911, Dr. Francis Brunning bequeathed his entire estate, with the exception of a few minor bequests, to the Endowment Fund Association of the University of Cincinnati, for the College of Medicine. This estate has yielded about \$80,000. In 1912, Mrs. Floris A. Sackett and Mrs. Frances W. Gibson made bequests to the University, the exact value of which has not yet been determined.

In 1912, Mr. Harry Levy presented to the Board of Directors of the University of Cincinnati for the Endowment Fund of the College of Medicine, the sum of \$50,000, to be known as "The Julie Fries Levy Endowment." Mr. Levy made this gift in honor of his mother and wishes the income used in furthering and disseminating medical knowledge.

In 1913, Mrs. Mary M. Emery presented to the Endowment Fund Association of the University of Cincinnati, the sum of

\$125,000, to be used to endow the Chair of Pathology in the College of Medicine.

In 1913, Mrs. Henrietta Moos bequeathed \$25,000 to the Endowment Fund of the University of Cincinnati for the College of Medicine, as a memorial to her husband, Herman M. Moos.

New departments were also added. In 1872, the Cincinnati Astronomical Society (founded in 1842) transferred its property on Mt. Adams to the city, which agreed, as a condition of the gift, to sustain, in connection with the University, on a new site provided by John Kilgour, an Observatory,* to be built with funds given by him. In 1896, the Medical College of Ohio (founded in 1819) became the College of Medicine of the University, though still retaining its original title conjointly with its new one. In 1908, an invitation was extended to the Miami Medical College to become a department of the University. In accordance with this invitation the Miami Medical College and the Medical College of Ohio (the College of Medicine of the University) have recently been united into a single medical department, known as "The Ohio-Miami Medical College of the University of Cincinnati."

Out of a professorship of Civil Engineering in the College of Liberal Arts has developed the College of Engineering. It was organized under that name in 1900, and became a distinct department in 1904.

Since its organization, in 1887, the Clinical and Pathological School of the Cincinnati Hospital has been affiliated with the University, being designated as the Medical Department, until 1896, and afterwards as the Department of Clinical Medicine.

The College for Teachers was organized in 1905, in co-operation with the Board of Education of the City of Cincinnati.

In 1906 the Graduate School was separated from the McMicken College of Liberal Arts and a distinct organization with a dean at its head effected.

In 1912 the College of Commerce was organized for the purpose of providing opportunity for higher commercial education.

Evening Classes in the College of Liberal Arts were opened in 1912 in order that those persons whose occupations prevented them attending the day classes might have an opportunity to take college courses at night.

In 1912 a Bureau of City Tests was established in the Engineering College in connection with the Engineer's office of the Department of Public Service of the City. It will make all the tests of materials and supplies required by this and other city departments. A technical chemist has been employed to take direction of this

* For this purpose the city levies annually a special tax of one-twentieth of one mill.

work, and, as far as possible, it will be utilized to train students in the methods of such tests. It is hoped in this way to develop a course in municipal engineering.

BUILDINGS AND SITE

From 1875 to 1895, the Academic Department occupied the building erected on the grounds of the McMicken homestead, as required by the will of the founder. This site proving altogether unsatisfactory, application was made to the courts for permission to remove to a more suitable location in Burnet Woods Park. The desired permission having been granted by the court of last resort in March, 1893, steps were immediately taken for the construction of a main building, called McMicken Hall, which was completed in two years. This building stands on high ground at the southern end of the park, forty-three acres having been set apart as a site for the University. During 1895-96, the north wing, known as Hanna Hall, was built for the Departments of Chemistry and Engineering, with funds amounting to about \$70,000, provided by Henry Hanna. The south wing, called Cunningham Hall, was built in 1898-99 by Briggs S. Cunningham, at a cost of \$60,000. This wing is occupied by the Departments of Physics and Biology. The Van Wormer Library, costing about \$60,000, the gift of Asa Van Wormer, was built during 1898-1900. The Observatory, built in 1873 with \$10,000 given by John Kilgour, stands on Mt. Lookout, at a distance of several miles from the other University buildings. A smaller structure, the O. M. Mitchel Building, was added in 1904 to house the old telescope. In 1912 this building was enlarged by the addition of a lecture room, a library, and another small dome. Since 1896, the building on the McMicken homestead site has been used by the College of Medicine. A Dispensary, erected in that year, is situated on the lower part of the grounds. A gymnasium, power plant, and engineering building, provided by the city, at a cost of \$550,000, were completed in December, 1911.

A bond issue of \$550,000 has been authorized to provide for the construction of a chemical laboratory, a woman's building, a stadium, and for making extensive repairs in McMicken Hall. Of this issue, \$100,000 of bonds has already been sold and the proceeds partly used in improving McMicken Hall.

BENEFACTORS OF THE UNIVERSITY

Besides those whose names have already been mentioned, the following persons have contributed to the endowment or to the equipment of the University: William A. Proctor, Samuel J. Browne, William J. Odell, Julius Dexter, Frank J. Jones, Moses F.

Wilson, Eugene F. Bliss, James T. Whittaker, Mrs. William E. Merrill, Theodore A. Bruehl, Andrew Hickenlooper, Christian Moerlein, Laura Seasongood, Lewis Seasongood, S. Lilienthal, Mrs. Nannie Fechheimer, A. G. Wetherby, Charles F. Windisch, C. T. Webber, P. Robertson, the Lane & Bodley Company, James E. Mooney, John Kilgour, Chas. Kilgour, C. H. Krippendorf, Julius Fleischmann, Lucien Wulsin, Samuel Pogue, Edward Miles Brown, Nathaniel Pendleton Dandridge, Mrs. Howard Breen, Robert William Hochstetter, Mrs. R. N. Hollingshed, Davis L. James, Catherine M. James, Ellen W. James, Annie A. James, Mr. and Mrs. O. J. Renner, Mrs. Antonia Wendte, Mary E. Dandridge, Mrs. Joseph Eichberg, the alumni of the University, Harry M. Levy, J. G. Schmidlapp, the Class of 1907, the estate of John B. Peaslee, and Alice L. Kuhn.

ENDOWMENT FUND ASSOCIATION

The Endowment Fund Association of the University of Cincinnati was incorporated on April 21, 1905, by a number of prominent citizens of the municipality. The purpose of the corporation, as stated in its Code of Regulations, is "to secure property, including money, or the income from the same, for the use of the University of Cincinnati, and for that purpose to solicit, collect, accept, hold, manage, invest, or pay over such property, money, or income, whether such property, money, or income arises by way of gift, devise, or purchase, for the benefit of said University." Its affairs are managed by a Board of Trustees consisting of nine members. The officers of the Endowment Fund Association are:

Rufus B. Smith, President.
 Jacob G. Schmidlapp, Vice-President.
 Charles F. Windisch, Treasurer.
 Howard C. Hollister, Secretary.

BENEFACTIONS

For the guidance of those who may wish, during life or by bequest, to make benefactions to the University, the following information is given:

FORM OF BEQUEST TO THE UNIVERSITY OF CINCINNATI:—

I bequeath and devise to the City of Cincinnati as Trustee for the University of Cincinnati, to hold in trust forever for said University, the following property:.....

FORM OF BEQUEST TO THE ENDOWMENT FUND ASSOCIATION:—

I bequeath and devise to the Endowment Fund Association of the University of Cincinnati, for the use of the University of Cincinnati, the following property:.....

The sum of one hundred and fifty thousand dollars would erect a section of a Natural History Museum.

The sum of one hundred thousand dollars is the amount necessary to found a full professorship in any one of the departments. The donor has the privilege of naming the professorship.

Fifty thousand dollars would be required for a dormitory, and the contributor of such a sum would be privileged to name the building. There is nothing which the University needs more than a dormitory system.

Twenty thousand dollars endows an instructorship in a department. The donor has the right to name it.

Ten thousand dollars is the principal required to establish a fellowship in any one of the departments; the income being paid to the Fellow, who devotes his time to original research combined with a little teaching.

Three thousand dollars endows a free scholarship, the income from this sum remitting all fees and giving the donor the right during life to nominate to the scholarship, subject to the rules of the University.

The President of the University would be glad to give full information upon any question relating to foundation to any person or persons who may desire more detailed knowledge.

THE UNIVERSITY LIBRARY

The Van Wormer Library Building is of stone, fire-proof throughout, and is built in accordance with the most approved modern plans of library construction. The library is open from 8 A. M. to 9:30 P. M., on Monday and Friday; Saturday, 8 A. M. to 5 P. M.

The University Library, in this building, contains about 69,000 volumes and 10,000 pamphlets. In the Reference Room about 2,000 volumes are arranged on open shelves, to which the students have free access. The Periodical Room contains the current numbers of 300 periodicals. The library is provided with a card catalogue of its own books, and also with card catalogues of the books (non-fiction) received since 1905, by the Public Library of Cincinnati.

The Library contains some valuable special collections:

The Robert Clarke Library, comprising 6,761 volumes, was given by William A. Procter. This collection is especially rich in Americana, and contains some rare first editions.

The Enoch T. Carson Shakespeare Library, 1,420 volumes, was also given by William A. Procter.

The Bruehl Library, of about 2,000 volumes, contains many rare and valuable works on the history, archæology, and ethnology of Mexico and Central America. This collection was made by Dr. Gustav Bruehl, and presented to the Library by his son, Mr. Theodore A. Bruehl.

The Wilson Library, consisting of works of English, French, and Italian literature, 810 volumes, was given by Judge Moses F. Wilson.

The Merrill Library of engineering works, 876 volumes, 478 pamphlets, and 185 maps, charts, and photo-lithographs, was given by Mrs. William E. Merrill.

The Whittaker Medical Library, the bequest of Dr. James T. Whittaker to the Medical College of Ohio, comprises 1,547 volumes and 538 pamphlets.

The Thoms Library, miscellaneous works, was part of the bequest of the late Matthew Thoms.

The Brown Philological Library, containing the English philological library of the late Professor Edward Miles Brown, was presented to the University by Mrs. Edward Miles Brown. It consists of 318 bound volumes, 51 unbound volumes, and 83 pamphlets.

The Charlotte Hillebrand Memorial Library consists of French and German books, at present about 1,000 volumes, purchased from the proceeds of an endowment recently established in memory of the late Charlotte Hillebrand.

The library has many volumes on history and economics, purchased from the proceeds of an endowment provided in 1894 by the will of Laura Seasongood.

The Library of the American Association for the Advancement of Science has been placed under the charge of the University of Cincinnati, by the terms of an agreement with the Association, entered into on September 14, 1895. This collection consists at present of 5,600 volumes, for the most part periodical publications of foreign scientific societies.

The Historical and Philosophical Society of Ohio has rooms for its valuable collections of books, pamphlets, and other articles in the Van Wormer Library. This collection comprises over 25,000 volumes and 69,000 pamphlets, pertaining chiefly to the history of the Ohio Valley, and contains valuable collections of original letters and other manuscripts. Students of the University have access to this library and may withdraw books from it under certain conditions.

The total number of books, including duplicates, in the Van Wormer Library Building is about 99,600 volumes and 79,000 pamphlets.

To these collections must be added the libraries of departments of the University, situated in other parts of the city. These are:

The Library of the Observatory.....	4,000 volumes
The Library of the College of Medicine.....	3,000 volumes
The Library of the Municipal Reference Bureau.....	70 volumes
Total	7,070 volumes

The libraries of the University, excluding those of the Historical and Philosophical Society of Ohio and the American Association for the Advancement of Science, contain 75,500 volumes and 10,000 pamphlets.

The Public Library, 443,146 volumes; the Mercantile Library, containing about 83,453 books; and the Lloyd Library and Museum, consisting chiefly of scientific works, as well as those of the Lane Theological Seminary, the Hebrew Union College, the Art Museum and the College of Music, are open to University students.

MUNICIPAL REFERENCE BUREAU

The Municipal Reference Bureau was organized in 1913 under the Department of Political Science of the College of Liberal Arts. Its quarters in the City Hall are adjacent to the Council Chamber and the rooms of the Charter Commission. The library of this Bureau contains material relating to all phases of city government and municipal activities. This Bureau is primarily for the use of Council and the administrative officers of the city, but is available to the general public and students as well. Through this agency, students in political and social science are enabled to familiarize themselves more intimately with the actual operation of both the city government and the organizations and institutions working for political and social betterment.

PUBLICATIONS

The official publications of the University are as follows:

THE UNIVERSITY RECORD. This publication is issued at intervals during the year and comprises the President's Annual Report, the Annual Catalogue, and Announcements of the Graduate School, College of Liberal Arts, College for Teachers, College of Engineering, College of Medicine, and College of Commerce.

THE UNIVERSITY STUDIES. This publication is issued in parts and contains the results of research by members of the faculty or by other persons connected with the University of Cincinnati. A price list of the different numbers of this publication may be obtained by addressing the office of the Press.

Student publications of the University are as follows:

THE CINCINNATIAN. The Cincinnati is the University Annual, and is edited and published by the members of the Junior Class.

THE UNIVERSITY WEEKLY NEWS. This paper is the official student bulletin, and is issued every week during the University year by a student board of editors.

MUSEUMS

The Museum of Natural History consists of a number of geological and biological collections. Among others are specimens donated from the Zoological Garden from time to time, the Balke natural history collections, chiefly of mammals, birds and insects, the Huntington collection of shells, the Fillmore and Schneider collection of Philippine relics; the Fechheimer collection of igneous rocks; the Wetherby collection of rocks and minerals; and lastly, a series of specimens illustrating the chemical industries. The Department of Geology and Geography has also on exhibition a part of its working collections of maps, models, minerals, rocks, and fossils. Among recent valuable additions are the U. P. James collection of fossils and minerals, the Carl Holmes collection of Greenland birds, permanently loaned by Dr. and Mrs. C. R. Holmes; donations by Mr. E. Meyer and Dr. Arch I. Carson; and several group mounts of large animals by the custodian of the Museum.

In 1912 the heirs of the late Samuel A. Miller loaned to the University his large collection of fossils (more than 8,000 labels), gathered from various parts of America and Europe. In return for the use of this collection for educational purposes, the University has provided for its exhibition in specially adapted show-cases in a large well-lighted room devoted especially to that purpose. The collection is for sale and is open at all times for inspection by prospective buyers. It is earnestly hoped that some friend may purchase it for this institution. The University has also on loan and similarly exhibited the H. M. Norris collection of Indian implements.

The Greek Room contains reproductions of the most noted works of Greek art. There were added to this collection recently a cast of the "Winged Victory," "Aphrodite of Melos," "Faun Playing the Flute," "Esquiline Venus," "Capitoline Venus," and a pediment of the temple of Zeus at Olympia. Two additional statues (Minerva Giustiniani and the Lateran Sophocles) have been installed in the main corridor of McMicken Hall. These, together with the large carbon pictures of the Parthenon, Erechtheum, Acropolis, Corinth, and Paestum in the same hall, form a valuable adjunct to the collection of casts in the Art room.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

THE GRADUATE SCHOOL

THE D. A. R. FELLOWSHIP IN AMERICAN HISTORY. This fellowship was established in 1900 by the Daughters of the American Revolution, and yields an income of \$100 per year.

THE HANNA FELLOWSHIP IN PHYSICS. This fellowship was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is \$500 a year.

THE ALLIANCE FRANÇAISE SCHOLARSHIP, of \$300, was established in 1904 by the Alliance Française of the City of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

THE ARMSTRONG-HUNTER MEMORIAL FUND, valued at \$1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund will be used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees.

THE McMICKEN COLLEGE OF LIBERAL ARTS

THE CORNELIUS GEORGE COMEGYS SCHOLARSHIP, with an income of fifty dollars, was founded in 1899 by the Old Endowment Fund Association, which was composed of the alumni of the University. This scholarship is awarded annually to a meritorious undergraduate.

THE McMICKEN HONORARY SCHOLARSHIPS are awarded annually to the five Juniors who have the best scholastic standing, according to the records in the Registrar's office.

THE THOMS HONORARY SCHOLARSHIPS are awarded annually to the six Sophomores and the six Freshmen who have the best scholastic records.

THE JULIUS FLEISCHMANN SCHOLARSHIPS. Thirteen scholarships of \$75 each, offered for the years 1909-10, 1910-11, 1911-12, 1912-13, 1913-14, by ex-Mayor Julius Fleischmann. They cover the first year's tuition, in the College of Liberal Arts, of thirteen non-residents, who are members of the graduating classes of the accredited schools outside of Cincinnati.

THE OPTIMIST CLUB SCHOLARSHIPS. Two scholarships of \$75 each, offered in 1910, for four succeeding years, by a resident of

Cincinnati who wished his identity to remain unknown. According to the wishes of the donor, these scholarships will be awarded in the College of Liberal Arts to non-resident students who have attended the University for at least one year and need assistance.

THE JONES PRIZES. The first Jones Prize of forty dollars was founded in 1892 by the Honorable Frank J. Jones, and is awarded annually to that member of the Senior class in the College of Liberal Arts who writes and pronounces the best English oration. The subjects are chosen by the Dean and the Chairman of the Board of Directors. A committee consisting of three citizens of Cincinnati is appointed by the Chairman of the Board of Directors to judge the contest. The second Jones Prize of twenty dollars was founded by Mr. Jones in 1901. It is awarded to that member of the Senior class whose oration is judged by the committee to be second in merit. These prizes are permanently endowed.

THE EDWARD MILES BROWN PRIZE FOR EXCELLENCE IN ENGLISH. This prize of fifty dollars was established in 1908, by a provision of the will of the late Professor Edward Miles Brown. It is awarded annually to that member of the Senior class who has attained the highest excellence in English during his four years' undergraduate course.

THE HENRY HOCHSTETTER PRIZE IN CHEMISTRY. This prize was established in 1909 by Mr. Robert Hochstetter, of the Class of 1895, in memory of his brother, Henry Hochstetter. It is to be awarded annually for the best graduating thesis in Chemistry, and is open to both students of Liberal Arts and Engineering. The successful candidate is nominated by a committee consisting of the head of the Department of Chemistry and two members of the Cincinnati Section of the American Chemical Society.

THE ROBERT PATTERSON MCKIBBIN MEMORIAL PRIZE, a gold medal of the value of twenty-five dollars, was established in 1911 by the Reverend William McKibbin and family, in memory of their son Robert Patterson McKibbin, who died in 1910, while a member of the Junior class of this University. This prize aims to hold up before the male students of the University the ideals of manhood. It will be awarded to that young man of the Senior class who, in the judgment of the faculty, is the best embodiment of these ideals.

THE UNION BETHEL SCHOLARSHIPS IN SOCIAL SCIENCE. Four scholarships of \$75 each, offered for the year 1913-14, by Mr. J. O. White, resident director of the Union Bethel Settlement. These scholarships are awarded to four advanced students in the Department of Social Science who will carry on sociological investigations at the Union Bethel.

For the fellowships, scholarships, and prizes of the various colleges, consult their several announcements.

THE COLLEGE OF ENGINEERING

In the year 1906, the Lodge and Shipley Machine Tool Company donated two loan scholarships of the amount of one hundred dollars each to two students of the Co-operative Course in Engineering for the payment of their University fees.

THE ALLIANCE FRANÇAISE

The Alliance Française, a national association, officially recognized by a decree of the President of the French Republic, October 23, 1886, aims to promote the study of the French language and literature in foreign lands.

The Cincinnati branch of the Alliance Française, in co-operation with the University of Cincinnati, has arranged for a number of lectures to be given during the year by some of the most eminent French writers of the day. To these lectures students of the University of Cincinnati are admitted by season tickets free of charge.

In 1904 the Alliance Française of Cincinnati established a Scholarship of three hundred dollars in the University, to be awarded to the student showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

ATHLETICS

Athletics are so controlled in the University that they play an important part in the college life of the student without seriously interfering with his interest in class-room work.

All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: three hours per week for all members of the Freshman class, and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed only under exceptional conditions, for which special permission must be secured from the Dean in advance.

A large part of the work is done out of doors during good weather, and such games as football, baseball, basket ball, tennis and track athletics are a part of the students' training. Lessons in boxing, wrestling, and fencing are also given to students interested in this form of exercise.

All athletics and gymnastics are in charge of the Director of Physical Education and his assistants.

CARSON FIELD

An Athletic Field has recently been provided, which is one of the best college athletic fields in the country. It contains a baseball diamond, a football gridiron, and a quarter-mile cinder track, with a one hundred and twenty-four straight-away extending in front of the new grand stand. The proximity of this field to the gymnasium makes it a particularly valuable addition to the athletic equipment of the University. Its location between three hilltops, which form a natural amphitheater, affords opportunity for thousands of people to view the games.

The new gymnasium with its modern equipment—cork-covered running track, white-tiled swimming pool, and spacious locker rooms—is the most complete institution of its kind in the West.

PHYSICAL TRAINING FOR WOMEN

A special instructor has charge of the work in Physical Training for young women, which is required during the Freshman and Sophomore years. The work in the gymnasium is supplemented during the fall and spring with outdoors games.

STUDENT ORGANIZATIONS

The following student organizations met regularly throughout the academic year, 1913-14.

The Academic Club, composed of the men of the College of Liberal Arts; Blue Hydra, a permanent organization devoted to the study of Biology; The Chemical Journal Club; The Chemist's Club; The Co-op Club; The Debating Council; The French Club; The German Club; The History Club; The Literary Society; Men's Glee and Mandolin Clubs; The Speaker's Club, an oratorical and debating society composed entirely of young men; The Student Section of the American Society of Mechanical Engineers; The Student Section of the American Institute of Electrical Engineers; The University Club, composed of representatives from the student clubs, the fraternities, and the four classes; Women's Glee Club; A chapter of the Y. W. C. A.

The Woman Student's League is an organization open to all women students of the University and to the women of the faculty. Regular meetings are held, at which lecturers of note address the members on subjects connected with the general and economic interests of women.

A Student Tribunal for Self-Government exists in the College of Engineering. It consists of five members—three Seniors and two Juniors.

Membership in the Three Arts Club of Cincinnati is open to women students in the College of Liberal Arts.

ADMISSION

SPECIAL STUDENTS.—Persons at least twenty years of age and qualified to do University work may be admitted as special students to lectures and laboratory courses in the College of Liberal Arts and in the College for Teachers. They will be required to furnish documentary evidence to the Director of School Affiliation and Dean of the College of Engineering, respectively, and to satisfy the heads of the departments concerned, of their ability to carry on successfully the courses which they desire to enter.

Before any special student may become a candidate for a degree he must satisfy the entrance requirements. All special students are amenable to the same regulations as apply to regular students in matters of examination, probation, discipline, etc.

STUDENTS ENTERING FROM OTHER COLLEGES AND UNIVERSITIES.—An undergraduate of a college or university desiring to enter the McMicken College of Liberal Arts, the College for Teachers, or the College of Engineering, must present to the Director of School Affiliation, or the Chairman of the Board of Admission of the College of Engineering, satisfactory evidence that he has done a sufficient amount of preparatory work to meet the regular entrance requirements, together with a certificate of honorable dismissal from the college or university last attended. He will be given credit for work of university grade in accordance with the provision for "Admission to Advanced Standing."

ADMISSION TO ADVANCED STANDING.—Students may be admitted to advanced standing upon presentation of a certificate from a college of approved standing. All applications for advanced standing must be made within three weeks after matriculation to the Director of School Affiliation, and must be accompanied by a statement of the work done, signed by the proper officials of the college from which the applicant comes, and by a marked copy of the catalogue or by a written description in detail of the courses for which advanced credits are desired. In courses where note books or drawings or both are required, these also must be presented. The students applying for advanced standing must first have satisfied the entrance requirements the same as regular students.

REGISTRATION

New students registered in 1913 on Thursday and Friday, September 18 and 19; upper classmen on Saturday, September 20. In 1914 they should register on Friday, February 6. Students registering on any other days than those designated above will be required to pay a registration fee of one dollar.

No person will be admitted to any course after the beginning of the semester, unless a good and sufficient excuse for not entering at the opening of the semester be presented to the Dean; and *in no event will any person be permitted to enter the work of any semester after the close of the third week of that semester.* In accordance with this regulation no person was admitted to the work of the first semester of 1913-14 after October 11, 1913; for the second semester, the last day of admission will be February 28, 1914.

NEW STUDENTS.—A student shall (1) take to the Advisory Committee for Freshmen the Certificate of Admission received from the Director of School Affiliation and, after consultation, fill out the Course Card received from the Committee; (2) take the Certificate of Admission and the Course Card to the Registrar; (3) pay the library fee (also tuition and laboratory fees when such are required) to the Clerk of the Board; (4) get a receipt for matriculation from the Clerk of the Board; (5) file the Course Card received from the Advisory Committee in a box prepared for that purpose in the Registrar's office.

UPPER CLASSMEN should fill out the registration blank and present it to the Registrar, who will give in exchange a Card of Matriculation Fees, which must in turn be presented to the Clerk. After paying the library fee (also tuition and laboratory fees, when such are necessary), upper classmen should take the clerk's receipts to their respective Deans, and receive their Course and Schedule Cards. The young men will obtain these cards from the Dean of the College of Liberal Arts, and the young women from the Dean of Women.

On the Course Card each course must be designated by the department and the number of the course, especial title, and the number of hours' credit, e. g.:

English 1: Rhetoric and Composition.....	3
Mathematics 1: Algebra, Trigonometry, and Analytical Geometry	4

In filling out election blanks especial care should be taken to note the advertised hours of courses, in order that conflicts may be avoided.

All students who expect to become teachers should confer with the Dean of the College for Teachers before filling out their Course Cards.

No change will be permitted on the Course Card after the expiration of three days from the last day of registration.

All Course and Schedule Cards must be filled out and deposited in the boxes provided for that purpose before four o'clock on the last registration day.

GENERAL REGULATIONS

Each student shall, at the beginning of the year, leave his local address at the office of the Registrar and shall promptly report all subsequent changes of address.

UNIT OF INSTRUCTION.—The unit of instruction is one hour per week for one semester. Two and one-half hours of actual work in the laboratory, shop, or drafting-room, are considered equivalent to one recitation hour and the preparation therefor. Credit will be given for the number of hours officially published with the course, and for no more. University work not regularly registered is forbidden.

ABSENCES IN THE COLLEGE OF LIBERAL ARTS.—All absences of students, from any cause whatsoever, are recorded in the Registrar's office. If thirty or more absences are recorded against a student, two extra credits must be made in order to obtain the A. B. degree. No absences are excusable except those incurred by students representing the University in some public exercise outside of the city. Application for these excuses must be made to the Dean in advance.

ABSENCES IN THE COLLEGE OF ENGINEERING.—All absences of regular students from class work must be accounted for to the head of the department concerned. A student who has been absent must report it within a week after returning to the University, or his absence shall rank as unexcused.

PROBATION.—A student in the College of Liberal Arts or Engineering who receives a grade below D in one-half of his work at the mid-term, or at the end of any semester, shall be put upon probation for the next half semester of college work. Such a student, if similarly delinquent at the end of his probation, shall cease to be a member of the University.

If it shall be necessary to place a student upon probation a second time, after an interval has elapsed since the first time, it shall be within the power of the Dean to dismiss the student the moment his grades fall below D in one-half of his work.

READMITTANCE AFTER SUSPENSION.—Students suspended for inefficient work during the Freshman year may not return to the University as Freshmen until they have passed the entrance examinations of that year.

GRADES.—The scale of marks for recording grades is as follows: A, 90-100; B, 80-89; C, 70-79; D, 60-69, passed; E, 50-59, conditioned; F, 0-49, failed.

A student in the College of Engineering who has failed in any subject must register for that subject the next time it is given in the course, and may not register for any advanced subject whose hours conflict with the subject in which he has failed.

In case a student withdraws from the University during any

semester, credit will not be given for any of the work elected for that semester.

HONORABLE DISMISSAL.—It is required as a condition of honorable dismissal, that every student who wishes to withdraw from the University shall submit to the Registrar a written request to that effect.

A copy of the "Rules for the Guidance of Students" may be obtained at the Registrar's office.

FEES

Tuition in the Graduate School, the College of Liberal Arts, and the College for Teachers is free to regular students who are residents of Cincinnati.

All fees must be paid *in advance* to the Clerk of the Board of Directors during the days of registration. If fees are not paid promptly, the Deans are authorized to exclude students from attendance upon their classes. *No University fees are refunded.*

TUITION FEES

All regular non-resident students in the Colleges of Liberal Arts and Engineering, and in the College for Teachers, are charged a tuition fee of \$75.00 per year, payable in installments of \$37.50 per semester. If not paid during registration days, but if paid within the two weeks succeeding the last registration day, the fee is \$45.00 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$50.00 per semester. If not paid within four weeks after the last registration day, further attendance upon classes will be refused.

Students in the College of Liberal Arts who are residents of the city of Cincinnati, and elect any work whatsoever in the College of Engineering, are charged the full tuition fee of \$37.50 per semester.

All regular five-year co-operative students in the College of Engineering are charged a tuition fee of \$50.00 per year, payable in installments of \$25.00 per semester. If not paid during registration days, but if paid within the two weeks succeeding the last registration day, the fee is \$32.50 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$37.50 per semester. If not paid within four weeks after the last registration day, further attendance upon classes will be refused.

All regular students in the College of Medicine (except those who entered the College previous to September, 1913) are charged a tuition fee of \$150.00 per year, payable in installments of \$75.00 per semester. If not paid during registration days, but if paid within two weeks succeeding the last registration day, the fee is \$82.50 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$87.50 per semester, and if not paid within four

weeks after the last registration day, further attendance upon classes will be refused. This fee entitles students in the College of Medicine to attend all didactic and clinical lectures and recitations, except the clinics of the City Hospital, which the members of the advanced classes are required to attend, and for which they pay an additional fee of \$10.00 to the Hospital.

Students in the College of Commerce are charged a tuition fee of \$50.00 for a full year's work of five courses. Those taking less than a full year's work are charged \$6.00 per recitation hour per year. Thus the tuition for one two-hour course is \$12.00 a year.

Tuition in the University Evening Courses is free (a) to all residents of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of \$3.00 per course, per year. Non-residents, other than teachers, are charged tuition at the rate of \$3.00 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees will be charged for courses in the laboratory sciences.

FEES FOR SPECIAL AND IRREGULAR STUDENTS

All special students, and irregular students (i. e., students who have satisfied the entrance requirements, but take less than twelve hours a week by special permission), in the Colleges of Liberal Arts and Engineering, and in the College for Teachers, and all non-resident students in the Graduate School, are charged tuition at the rate of \$3.00 per credit hour, per semester, in advance. A credit hour is one hour's work a week carried through a semester or half year. For instance, tuition for a three-hour course would amount to \$9.00 a semester, or \$18.00 a year. If not paid within one week after the last registration day, an additional fee of \$1.00 will be charged. If not paid within four weeks after the last registration day, attendance upon classes will be refused.

All special and irregular students in the College of Medicine are charged tuition at the rate of \$5.00 per credit hour, per semester, in advance. A credit hour is one hour's work a week carried through a semester or half year. Three laboratory hours are the equivalent of one credit hour. If this tuition is not paid within one week after the last registration day, an additional fee of \$1.00 will be charged, and if not paid within four weeks after registration, further attendance upon classes will be refused.

EXTERNAL COURSES

A fee of five dollars will be charged for admission to *each* External Course.

* Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

SPECIAL COURSES FOR TEACHERS*

Teachers enrolled in *Special Courses for Teachers* in the University, pay the regular library fee of \$5.00 per year. Tuition in these courses is free (a) to all teachers in public schools who are residents of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of \$3.00 per course, per year, payable in advance.

The laboratory fee in a teacher's course is \$5.00 per year.

LABORATORY FEES

All laboratory fees are payable strictly *in advance*.

A student shall not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Biology, \$10.00 per semester.

Cement, \$5.00 per semester.

Chemistry, \$15.00 per semester; breakage deposit, \$10.00.

Drawing, \$1.00 per semester.

Geology, \$5.00 per semester; \$2.50 per semester for a course having but one laboratory period per week.

Metallurgy, \$7.50 per semester.

Physics, \$10.00 per semester; \$5.00 per semester for a course having but one laboratory period per week.

Psychology, \$5.00 per semester.

ENGINEERING LABORATORY.—Regular students in the College of Engineering pay \$5.00 per period per week per semester in advance. Co-operative students pay \$2.50 per period per alternate week per semester in advance.

COLLEGE OF MEDICINE LABORATORIES.—A student who entered the College of Medicine before September, 1913, will be charged a fee of \$5.00 for each laboratory course.

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of \$5.00 is charged every candidate for the degree of bachelor of arts, for the degree of bachelor of arts in education, and for an engineering degree. A graduation fee of \$10.00 is charged a candidate for the degree of master of arts, and a fee of \$20.00 is charged for the degree of doctor of philosophy, and for the degree of doctor of medicine.

* Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

BREAKAGE DEPOSITS

At the beginning of the year, a breakage deposit of \$10.00 will be required of each student who takes chemistry. Five dollars of this amount must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining \$5.00 a coupon ticket will be issued, with which supplies and apparatus may be obtained at the store-room. Should this coupon-ticket become exhausted, the student must purchase a new ticket (\$5.00) before supplies will be issued to him at the store-room.

A deposit of \$5.00 will be required of all engineering students except those taking chemistry.

A deposit of \$10.00 will be required of each student in the College of Medicine at the opening of each session as a guarantee against breakage of apparatus, instruments, furniture, etc., to be renewed by each student whenever the breakage or damage amounts to \$10.00. This deposit will be returned at the end of the year after deductions for such damage have been made.

COURSE FOR TEACHERS OF ART

The fees in the Special Course for Teachers of Art are as follows: matriculation fee, \$5.00; tuition fee for non-residents, \$18.00 (for one year's instruction in psychology and the history of education); laboratory fee, \$25.00 per year; tuition fee, payable at the Art Academy, \$25.00 per year.

MISCELLANEOUS FEES

Gymnasium Fee.—A gymnasium fee of \$5.00 per annum (\$2.50 per semester) will be charged all men in the College of Liberal Arts, in the College for Teachers, and in the College of Engineering, taking six or more hours of work per week. The same fee will be charged all men in the Graduate School who elect twelve hours of work per week.

A fee of \$5.00 per annum (\$2.50 per semester) will be charged all other men in the University who desire to avail themselves of the privileges of the gymnasium.

During the temporary use of the men's gymnasium by the classes for women, a gymnasium fee of \$1.00 per semester will be charged the women students.

Library Fee.—All students in the Graduate School, in the Colleges of Liberal Arts and Engineering, except fifth year co-operative students, in the College for Teachers, in the College of Commerce, and in the Evening Academic Courses, must pay a library fee of \$5.00 per year at the opening of the session.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated will be required to pay a fee of \$1.00.

Matriculation and Library Fee.—All students who entered the Medical College previous to September, 1913, must pay a University Matriculation and Library fee of \$5.00 per year. This fee entitles the student to matriculation in any College of the University, and also to the use of all of the libraries of the University.

Microscope Fee.—Each student in the College of Medicine must own a microscope approved by the professor of the department, or rent one from the College, at a cost of \$2.50 per session.

Special Examinations.—A fee of \$1.00 will be charged for each supplemental examination for the removal of conditions, and this fee must be paid even though the condition is removed without a supplemental examination. A fee of \$5.00 will be charged for entrance examinations on days other than those specified in the calendar. Every candidate who applies for the removal of a condition must present to the head of the department in which the condition occurred a receipt showing that the candidate has paid the fee of \$1.00, before the said head of department may report the removal of a condition to the Registrar.

Summer Course.—A fee of \$10.00 will be charged for the use of instruments in the summer courses in the College of Engineering.

EXPENSES

	Graduate School Liberal Arts, or College for Teachers	Engineering	Medicine
Tuition Fees	\$75 00	\$75 00	\$150 00
Library Fees	5 00	5 00	.....
Library and Matriculation Fee, payable each year....	.....	.....	‡\$5 00
Gymnasium Fee.....	5 00	5 00	.....
Laboratory Fees	*	\$35 to \$45	.....
Books	\$20 to \$25	\$25 to \$30	\$45 to \$60
Board and Room, per week..	\$5 to \$8	\$5 to \$8	\$5 to \$8
Total Expense per year.....	\$325 to \$450	\$350 to \$450	\$375 to \$500

The Secretary of the University will furnish information regarding suitable boarding places in the vicinity of the University.

‡ To be paid by students who entered the Medical College previous to September, 1913.

* Laboratory fees vary according to the courses taken.

THE GRADUATE SCHOOL

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
JERMAIN GILDERSLEEVE PORTER, Ph. D., Director of the Observatory
and Professor of Astronomy.
FREDERICK CHARLES HICKS, Ph. D., Sinton Professor of Economics
and Commerce.
HARRIS HANCOCK, Ph. D., D. Sc., Professor of Mathematics.
JOHN MILLER BURNAM, Ph. D., Professor of Latin.
MAX POLL, Ph. D., Professor of the Germanic Languages.
JOSEPH EDWARD HARRY, Ph. D., Professor of Greek and Dean of the
Graduate School.
* MERRICK WHITCOMB, Ph. D., Professor of History.
LOUIS TRENCHARD MORE, Ph. D., Professor of Physics.
BURTIS BURR BREESE, Ph. D., Professor of Psychology.
WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History
and Principles of Education.
JOHN WILLIAM HALL, A. M., Professor of Elementary Education.
STEPHEN ELMER SLOCUM, B. E., Ph. D., Professor of Applied
Mathematics.
NEVIN M. FENNEMAN, Ph. D., Professor of Geology and Geography.
LAUDER WILLIAM JONES, Ph. D., Professor of Chemistry.
GUY ALLAN TAWNEY, Ph. D., Professor of Philosophy.
FRANK WADLEIGH CHANDLER, Ph. D., Professor of English and Ropes
Professor of Comparative Literature.
PHILLIP OGDEN, Ph. D., Professor of Romance Languages.
PAUL GERHARDT WOOLLEY, B. S., M. D., Professor of Pathology.
MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.
HENRY McELDERRY KNOWER, Ph. D., Professor of Anatomy.
** HARRIS MILLER BENEDICT, A. M., Professor of Botany.
HENRY S. WEST, Ph. D., Professor of Secondary Education.
SELDEN GALE LOWRIE, Ph. D., Professor of Political Science.
_____, Professor of Zoology.
HARRY SHIPLEY FRY, Ph. D., Associate Professor of Chemistry.
WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor of
Bacteriology.

* Absent on leave, 1913-14.

** Absent on leave, first semester, 1913-14.

- SAMUEL JAMES MCINTOSH ALLEN, Ph. D., Associate Professor of
Physics.
- ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.
- CLAUDE M. LOTSPEICH, Ph. D., . Associate Professor of German.
- EMILIE WATTS McVEA, A. M., . . Assistant Professor of English.
- CHARLES NAPOLEON MOORE, Ph. D., Assistant Professor of Mathe-
matics.
- HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial
Chemistry.
- HARRY LEWIS WIEMAN, Ph. D., . Assistant Professor of Zoology.
- EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.
- J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
- RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance
Languages.
- ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and
Comparative Anatomy.
- BERTHA K. YOUNG, A. M., . . . Assistant Professor of English.
- CLYDE WILLIAM PARK, A. M., . . Assistant Professor of English.
- WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of Eco-
nomics and Social Science.
- JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
- HENRY G. HARTMANN, Ph. D., Assistant Professor of Philosophy.
- CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political
Science.
- CLARENCE D. STEVENS, A. M., . . Assistant Professor of English.
- JAMES FRANCIS DILWORTH, A. M., . Instructor in English History.
- LEROY JAMES COOK, A. M., Instructor in French.
- CLARENCE A. NASH, A. M., . . Instructor in Physical Chemistry.
- JAMES DYSART MAGEE, Ph. D., Instructor in Economics.
- PHILIP WALTER MACDONALD, A. M., . . . Instructor in History.

INFORMATION FOR STUDENTS

ADMISSION

The degree of Bachelor of Arts conferred by the University of Cincinnati entitles its holder to admission to the Graduate School. The University also offers its degrees of Master of Arts and Doctor of Philosophy to graduates of other institutions of high standing who shall complete their work in conformity with the regulations of the Graduate School. Students will not be admitted to the Graduate School after the third week of the semester.

INSTRUCTION

The work of each candidate for a graduate degree shall be under the direction of an Advisory Committee, composed of the Dean of the Graduate School and the heads of the departments in which the work is taken.

The unit of instruction in the Graduate School is one hour a week for one semester.

The nature of the graduate student's work will vary with the subjects pursued, but it is intended that the student's work shall require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as "in absentia." No credit will be given toward a graduate degree for work done prior to the conferring of the degree of Bachelor of Arts or its equivalent. No course in which a student obtains a grade below "B" will count for credit in the Graduate School.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

In order to receive the Master's degree the candidate must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than twenty-four units of graduate instruction, at least twelve units of which shall be elected in one department. In case the candidate has previously elected the work in the department as a major for the completion of the undergraduate degree, he shall, under the direction of the head of the department concerned, elect sufficient work in some allied department to complete the required twelve units. The requirement of a thesis is optional with the head of the department in which the major subject is taken. Wherever a thesis for the Master's degree is required, it must be filed with the Registrar, not less than six weeks before the close of the final semester of graduate study. The work for the Master's degree shall occupy the attention of the student for at least one full year in residence in the Graduate School. Students taking work in courses open to graduates and undergraduates shall be required to complete an additional amount of work estimated to be fifty per cent of the regular undergraduate requirements. Candidates for the degree of Master of Arts must pass an oral examination in their major subjects before a committee of the faculty.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

For the Doctor's degree, three years of graduate study will ordinarily be required. Where the student's college training has been defective or he cannot devote his whole time to the work, the

period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is of a satisfactory character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These shall be known as a major and two minor subjects, not more than two of which shall be selected in one department, and the candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, shall constitute an Advisory Committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree of Doctor of Philosophy, the candidate must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and to pass such written examinations on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment.

The candidate shall furthermore be required to present, in such form as the Advisory Committee may determine, a thesis which will give evidence of high attainment and power of independent research, and he shall pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University Library one hundred printed copies of his thesis. The candidate may receive his diploma before the thesis is printed, provided a type-written copy is deposited with the Librarian and the sum of fifty dollars with the Registrar of the University. This sum will be returned upon presentation to the Library of the required number of printed copies of the thesis.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained through work done in residence at the University of Cincinnati.

SPECIAL ARRANGEMENT FOR GRADUATE STUDENTS
IN LANE SEMINARY AND IN THE HEBREW
UNION COLLEGE

Courses in Hebrew taken in Lane Seminary and in the Hebrew Union College by graduates of recognized colleges and universities may count to the extent of twelve hours for the Master of Arts degree.

FELLOWSHIPS AND SCHOLARSHIPS

There are at present three fellowships, a traveling scholarship, and ten University scholarships open to students of the Graduate School. The fellowships and traveling scholarship carry a stipend of from one hundred to five hundred dollars. (For particulars see page 46). The emolument of the University scholarships is sufficient for the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

COURSES OF INSTRUCTION

For detailed description of the courses given in the Graduate School, see the Announcements of the College of Liberal Arts and the College for Teachers.

ANATOMY

7. Those interested in post-graduate work in anatomy, histology, or gross human anatomy, are requested to apply to the head of the department.

Professor Knowler, Assistant Professor Malone.

ASTRONOMY

FOR COURSES OPEN TO GRADUATES SEE PAGE 95.

BIOLOGY

To pursue advanced courses in botany or zoology the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology students must have completed Courses 1a, 2a, 3b, 4b, 15, 17b, 18b, 19a, 13b, 14b, 20a, or their equivalents, while in botany the required preliminary courses are 5a, 6a, 7b, 8b, 35, 24a, 25a, 26b, 27b, or their equivalents. (See Biology, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects toward the degree of Master of Arts by students who have elected majors in other departments. When botany or zoology is chosen as a minor for the Degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in zoology or botany. The requirements for a higher degree, when botany or zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (page 60).

Primarily for Graduates

30. Current Problems in Zoology.

Assistant Professor Wieman.

31. Research. Hours to be arranged.

Professor Benedict, Assistant Professor Wieman,
and Assistant Professor Chambers.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 98.

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

THE DEGREE OF DOCTOR OF PHILOSOPHY

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Chemistry, Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7b, 8a, 9a, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. The completion of these courses, however, does not satisfy the requirements made of the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and method of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual requirements will be Courses 1a, 2a, 3b, 4b, 5a, 6, 7b. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) will be required; if one of the biological sciences has been made the major subject, Courses 8a and 9a will be taken.

THE MASTER'S DEGREE

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

Primarily for Graduates

30. Research.

Professor Jones, Associate Professor Fry,
Assistant Professor Goettsch,
Assistant Professor Aston.

35b. Some Special Problems and Theories of Organic Chemistry.
Professor Jones.

40. Journal Club Meetings. Papers by instructors and advanced students.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 103.

ECONOMICS

(The Sinton Professorship)

FOR COURSES OPEN TO GRADUATES SEE PAGE 107.

EDUCATION

Education 3. Secondary Education.—S., 9:30-11:30.

Professor West.

Open to graduates and teachers who contemplate appointment to high school positions. For the conditions under which graduate students may enter the course see Program II, page 146.

Education 7. Seminar.—Investigations and reports on special problems, chiefly in educational administration. W., 4:00-6:00.

Professor Burriss and Professor West.

Education 12. Seminar.—Investigations and reports on problems in the theory and practice of teaching. T., 4:00-6:00.

Professor Hall and Assistant Professor Mead.

Education 1, 2 and 6.—These courses (for description of which see Announcement of the College for Teachers), when pursued by graduate students, may be counted for credit towards a graduate degree, provided such students do satisfactory pieces of independent work and embody the results of same in acceptable written theses. The number of credits allowed, respectively, for these courses, will be six, six, and two.

ENGLISH

COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates Only

20. Seminary.—Studies in Literary Theory. T., 3:30-5:30.

Professor Chandler.

FOR COURSES OPEN TO GRADUATES SEE PAGE 111.

GEOLOGY AND GEOGRAPHY

FOR COURSES OPEN TO GRADUATES SEE PAGE 114.

GERMAN**Primarily for Graduates**

12. Interpretation of both parts of Faust and Study of the Legend.—T., 4:00-6:00. Professor Poll.

Course 12 is open to students who have passed in Course 5.

[11b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester*, T., 4:00-6:00. Professor Poll.

Course 11b is open to students who have passed in Course 5 or 6. Omitted in 1913-14.

[7. Middle High German.] M., 4:00-6:00.

Omitted in 1913-14. Associate Professor Lotspeich.

8. Old High German.—M., 4:00-6:00.

Associate Professor Lotspeich.

[13. Gothic.] W., 4:00-6:00. Associate Professor Lotspeich.

Omitted in 1913-14.

26. Old Norse.—M., 4:00-6:00.

Associate Professor Lotspeich.

[9b. German Seminary.] *Second semester*, T., 4:00-6:00.

Omitted in 1913-14.

Professor Poll.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 117.

GREEK**Primarily for Graduates**

5. Rapid Reading.—W., 3:00-4:00. Professor Harry.

6. Practical Exercises in Greek.—F., 3:00-5:00.

Professor Harry.

7. Greek Seminary.—The Drama (1913-14); The Historians (1914-15). M., 3:00-5:00. Professor Harry.

Open to graduates and to those who have completed the undergraduate courses in Greek.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 120.

HISTORY

FOR COURSES OPEN TO GRADUATES SEE PAGE 121.

LATIN**Primarily for Graduates**

(Hours in all cases to be arranged)

9. Latin and Romance Palæography.—Professor Burnam.

Prerequisite: Four years of undergraduate work and ability to read French and German.

10. Latin Seminary.—Cicero. Professor Burnam.

12. Graduate Study.—Credit according to the work elected and completed under the direction of the teaching staff of the Department. Professor Burnam.

MATHEMATICS**Primarily for Graduates**

34.—Advanced Algebra, Part II.—M., Th., 4:00-6:00.

Professor Hancock.

29. Theory of Functions of a Real Variable.—S., 9:30-11:30.

Assistant Professor Moore.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 125.

MATHEMATICS (APPLIED)**Primarily for Graduates**11b. Fourier's Series and Spherical Harmonics.—*Second semester*, Th., 4:00-6:00; S., 9:30-10:30. Professor Slocum.10a. Theory of Errors and Method of Least Squares.—*First semester*, M., 4:00-5:00; W., 4:00-6:00. Professor Slocum.**For Graduates Only**

40. Seminary.—Theoretical and experimental research in some special topic of the mechanics of rigid, elastic, fluid or gaseous bodies.

Professor Slocum.

FOR OTHER COURSES IN MATHEMATICS SEE PAGE 125.

PATHOLOGY AND BACTERIOLOGY

8. Research.—Open to any qualified person after consultation with the head of the department.

Professor Woolley, Associate Professor Wherry.

PHILOSOPHY**Primarily for Graduates**

19. The Philosophy of Immanuel Kant with special reference to its historical development.—T., 12:30-2:30.

Assistant Professor Hartmann.

21. The Philosophy of Religious Experience.—Th., 1:00-3:00.

Professor Tawney.

14. Types of Philosophy.—Th., 3:00-5:00.

Professor Tawney.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 127.

PHYSICS**For Graduates Only**

7. Lectures on Theoretical Physics. Professor More.

25a. Theoretical Mechanics.—See under Applied Mathematics 16a.

Professor Slocum.

9. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the Mechanician.

Professor More and Associate Professor Allen.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 131.

PHYSIOLOGY

(The Joseph Eichberg Professorship)

7. Research.—Open to any qualified person after consultation with the head of the department.

Professor Fischer.

POLITICAL AND SOCIAL SCIENCE

FOR COURSES IN POLITICAL AND SOCIAL SCIENCE OPEN TO GRADUATES SEE PAGES 133, 135.

PSYCHOLOGY

Primarily for Graduates

3. Research.—Special investigation in the psychological laboratory. Professor Breese.

[4. Seminar.] A critical study of the most important problems in psychology. Th., 3:00-5:00. Professor Breese.
Omitted in 1913-14.

[6a. Educational Psychology.] *First Semester.* Hours to be arranged. Professor Breese.
Omitted in 1913-14.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 136.

ROMANCE LANGUAGES

FOR COURSES OPEN TO GRADUATES SEE PAGES 138, 139.

McMICKEN COLLEGE OF LIBERAL ARTS.

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
JERMAIN GILDERSLEEVE PORTER, Ph. D., Director of the Observatory
and Professor of Astronomy.
FREDERICK CHARLES HICKS, Ph. D., Sinton Professor of Economics
and Commerce and Supervisor of the Evening Academic Courses.
HARRIS HANCOCK, Ph. D., D. Sc., . . . Professor of Mathematics.
JOHN MILLER BURNAM, Ph. D., . . . Professor of Latin.
MAX POLL, Ph. D., . . . Professor of the Germanic Languages.
JOSEPH EDWARD HARRY, Ph. D., . . . Professor of Greek.
* MERRICK WHITCOMB, Ph. D., . . . Professor of History.
LOUIS TRENCHARD MORE, Ph. D., . . . Professor of Physics.
BURTIS BURR BREESE, Ph. D., . . . Professor of Psychology.
STEPHEN ELMER SLOCUM, B. E., Ph. D., Professor of Applied
Mathematics.
NEVIN M. FENNEMAN, Ph. D., Professor of Geology and Geography.
LAUDER WILLIAM JONES, Ph. D., . . . Professor of Chemistry.
GUY ALLAN TAWNEY, Ph. D., . . . Professor of Philosophy.
FRANK WADLEIGH CHANDLER, Ph. D., Professor of English, Ropes
Professor of Comparative Literature, and Dean of the
College of Liberal Arts.
PHILLIP OGDEN, Ph. D., . . . Professor of Romance Languages.
** HARRIS MILLER BENEDICT, A. M., . . . Professor of Botany.
HENRY S. WEST, Ph. D., . . . Director of School Affiliation.
SELDEN GALE LOWRIE, Ph. D., . . . Professor of Political Science.
_____, . . . Professor of Zoology.
HARRY SHIPLEY FRY, Ph. D., . . . Associate Professor of Chemistry.
SAMUEL JAMES McINTOSH ALLEN, Ph. D., Associate Professor of
Physics.
ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.
CLAUDE M. LOTSPEICH, Ph. D., . . . Associate Professor of German.
EMILIE WATTS McVEA, A. M., Assistant Professor of English and
Dean of Women.
CHARLES NAPOLEON MOORE, Ph. D., Assistant Professor of Mathe-
matics.

* Absent on leave, 1913-14.

** Absent on leave, first semester, 1913-14.

- HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial Chemistry.
- BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Public Speaking and English.
- HARRY LEWIS WIEMAN, Ph. D., . Assistant Professor of Zoology.
- WILLIAM TUNSTALL SEMPLE, Ph. D., Assistant Professor of Latin.
- J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
- RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance Languages.
- ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and Comparative Anatomy.
- BERTHA K. YOUNG, A. M., . . . Assistant Professor of English.
- CLYDE WILLIAM PARK, A. M., . . Assistant Professor of English.
- WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of Economics and Social Science.
- JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
- HENRY G. HARTMANN, Ph. D., Assistant Professor of Philosophy.
- CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political Science.
- CLARENCE D. STEVENS, A. M., . . Assistant Professor of English.
- ALFRED BRODBECK, Director of Physical Education.
- FLORENCE CAMERON LAWLER, B. S., . . Instructor in Mathematics.
- ARTHUR JAMES KINSELLA, A. M., Instructor in Greek.
- JOSEPH HENRY KINDLE, A. M., Instructor in Mathematics.
- JAMES FRANCIS DILWORTH, A. M., . Instructor in English History.
- PLATT BISHOP EVENS, Mechanician and Instructor in Laboratory Arts.
- CORA MAY BOX, A. M., Instructor in Zoology.
- MARGUERITE GRAY, A. B., Instructor in Physical Education.
- VERNON LANTIS, A. M., Instructor in Botany.
- LEROY JAMES COOK, A. M., Instructor in French.
- ELEANOR KATHERINE NIPPERT, A. B., Instructor in German.
- ROBERT E. CLYDE GOWDY, Ph. D., Instructor in Physics.
- THOMAS LANSING PORTER, Ph. D., Instructor in Physics.
- CLARENCE A. NASH, A. M., Instructor in Physical Chemistry.
- EDWIN W. ESSLINGER, A. M., Instructor in Analytical Chemistry.
- WALTER H. BUCHER, Ph. D., Instructor in Geology.
- PHILIP WALTER MACDONALD, A. M., Instructor in History.
- JAMES DYSART MAGEE, Ph. D., Instructor in Economics.
- CHARLES OSCAR CHAMBERS, Ph. D., Instructor in Botany.
- EDWARD MACK, A. M., D. D., Lecturer on Biblical Literature.

Other Appointments for 1913-14

- SCHACHNE ISAACS, A. M., Assistant in Psychology.
- RAPHAEL ISAACS, A. M., Assistant in Embryology and Zoology.
- LESLEY HENSHAW, A. M., Assistant in History.

EDWARD JOSEPH LORENZ, A. M., . . .	Hanna Fellow in Physics.
MARGARET B. PLIMPTON, A. B., D. A. R.	Fellow in American History.
EMMA ANDRIESSEN, A. M., . . .	Graduate Assistant in German.
RALPH EDWARD OESPER, A. M.,	Graduate Assistant in Chemistry.
LEONORA NEUFFER, A. B., . . .	Graduate Assistant in Chemistry.
MARY LOUISE NUTE, A. B., . . .	Graduate Assistant in Botany.
ARCHIBALD BERNSTEIN, A. M., . . .	Student Assistant in Spanish.
RALPH E. BELSINGER,	Student Assistant in Physics.
WILLIAM H. DRESCH, A. B., B. D.,	Student Assistant in Philosophy.
JOHN D. ELLIS, A. B., LL. B., . . .	Student Assistant in English.
ESTELLE HUNT,	Student Assistant in English.
ELISE LOEBMAN, A. M.,	Student Assistant in English.
WALTER A. MCINTIRE,	Student Assistant in Physics.
HENRY ALBERT MARKS,	Student Assistant in Chemistry.
HAROLD F. RICHARDS,	Student Assistant in Physics.
CLIFFORD J. ROLLE,	Student Assistant in Chemistry.
OSCAR SEE,	Student Assistant in Economics.
HELEN STANLEY, A. B.,	Student Assistant in English.
PAUL RAYMOND STEVENSON, A. B.,	Student Assistant in Psychology.
AGNES VAN SLYCK, A. M.,	Student Assistant in English.
HELEN JUDITH VICKERS, A. B.,	Student Assistant in Romance Languages.
MARY WHITFIELD, A. B.,	Student Assistant in English.
MATTIE WINSTON,	Student Assistant in English.
NEIL WRIGHT,	Student Assistant in Chemistry.
CLINTON WUNDER,	Student Assistant in Social Science.

REQUIREMENTS FOR ADMISSION TO THE McMICKEN COLLEGE OF LIBERAL ARTS

Candidates for admission as undergraduates must be at least sixteen years of age. They must give evidence of having completed satisfactorily an amount of preparatory study represented by sixteen units, a unit being the quantity of work represented by a full year's study, of five periods per week, of one of the subjects listed below, and the completion of the assignment specified for that subject in the section headed "Definition of Units." Of these sixteen units every candidate for admission to the McMicken College of Liberal Arts must present the following:

ENGLISH—Three units, in which there can be no "condition."

MATHEMATICS—One unit in Algebra and one unit in Plane Geometry.

HISTORY—One unit.

LANGUAGE—Three units, from the five languages: Latin, Greek, French, German, Spanish; two units must be in the same language. Candidates who intend to pursue the study of Latin in the University must present four units in Latin.

In addition to these fixed requirements the candidate must offer a number of units selected from the list of subjects below, sufficient, with the units specified above, to amount to a total of sixteen. The number of units that may be offered in any subject is shown in the following table:

		NUMBER OF UNITS ACCEPTED FOR ADMISSION	
		Minimum	Maximum
English	.....	3 required	.....or..... 4
Latin	.....	1	.....or 2 or 3 or 4
Greek	.....	1	.....or.....2 or 3
French	.....	1	.....or 2 or 3 or 4
German	.....	1	.....or 2 or 3 or 4
Spanish	.....	1	.....or..... 2
General or Medieval and Modern History	.....	1	.....or..... 1
Ancient	.....	1/2	.....or..... 1
English	.....	1/2	.....or..... 1
American	.....	1/2	.....or..... 1
American and Civics	.....	1	.....or..... 1
Algebra	.....	1 required	.....or...1 1/2 or 2
Geometry, Plane	.....	1 required	.....or..... 1
Geometry, Solid	.....	1/2	.....or..... 1/2
Trigonometry	.....	1/2	.....or..... 1
Civics	.....	1/2	.....or..... 1/2
Physics	.....	1	.....or..... 1
Chemistry	.....	1	.....or..... 1
*Zoology	.....	1	.....or..... 1
*Botany	.....	1	.....or..... 1
Physical Geography	.....	1/2	.....or..... 1
Astronomy	.....	1/2	.....or..... 1/2
Drawing	.....	1	.....or..... 1
Manual Training	.....	1	.....or 2 or 3 or 4
Domestic Science	.....	1	.....or 2 or 3 or 4

ENTRANCE CONDITIONS

Students who are deficient in not more than two units of the sixteen required for admission, provided their credit includes three units of English, may be admitted conditionally to the College of Liberal Arts. All such entrance conditions must be removed before the student is allowed to register as a regular student for a second year of residence at the University.

ENTRANCE EXAMINATIONS

Examinations for admission were held on September 15, 16, 17, 18, 19, 20, 1913. In 1914 they will be held on January 5, 6, 7, 8, 9, 10, and on June 15, 16, 17, 18, 19, 20.

Students who desire to take these examinations must obtain permission beforehand from the Director of School Affiliation. All applications for permission to take the entrance examinations should be made at least two days before the first day of the examination

* One-half unit will be allowed in Zoology and one-half unit in Botany when these two subjects are presented together as one unit in the same year.

period. Some of the examinations may be taken in the spring and the remainder in the fall if so desired. Students who apply for entrance examinations at times other than the days specified will be charged a fee of five dollars.

Examinations for candidates without graduation certificates.—

A candidate for admission to the University, coming from one of the accredited schools, who is not a graduate of such school, will not be admitted to the entrance examinations within one year after leaving such preparatory school, unless recommended for examination by the principal of the school from which he comes.

Students intending to take the entrance examinations should consult the statement of the entrance requirements, as printed on a preceding page, and arrange to take their examinations

(a) in the fixed requirements, and

(b) in enough additional subjects to make a total of sixteen units.

The work covered by each unit or group of units in the various subjects may be found on the following pages. Specimen entrance examination questions will be furnished free of charge on application to the Director of School Affiliation.

SCHEDULE OF ENTRANCE EXAMINATIONS

September 15, 1913; January 5, and June 15, 1914:

8:30-11:00	English	3 units
11:00-12:00	English	1 unit additional
1:00- 3:00	Physics	1 unit
3:00- 4:00	Solid Geometry	$\frac{1}{2}$ unit
4:00- 5:00	Physical Geography	$\frac{1}{2}$ or 1 unit

September 16, 1913; January 6, and June 16, 1914:

8:30-10:30	Latin	1 or 2 units
10:30-12:00	Latin	1 or 2 units additional
1:00- 3:00	Chemistry	1 unit
3:00- 4:00	Astronomy	$\frac{1}{2}$ unit
4:00- 5:00	Civics	$\frac{1}{2}$ unit

September 17, 1913; January 7, and June 17, 1914:

8:30-10:30	French	1 or 2 units
10:30-12:00	French	1 or 2 units additional
1:00- 2:30	Plane Geometry	1 unit
2:30- 4:00	Algebra	1 unit
4:00- 5:00	Advanced Algebra	$\frac{1}{2}$ or 1 unit additional

September 18, 1913; January 8, and June 18, 1914:

8:30- 9:30	Ancient History	$\frac{1}{2}$ or 1 unit
9:30-10:30	American History	$\frac{1}{2}$ or 1 unit
10:30-12:00	{ General or Medieval and } { Modern History	1 unit
1:00- 2:00	English History	$\frac{1}{2}$ or 1 unit
2:00- 3:00	American History and Civics	1 unit
3:00- 5:00	Spanish	2 units

September 19, 1913; January 9, and June 19, 1914:

8:30-10:30....	German.....	1 or 2 units
10:30-12:00....	German.....	1 or 2 units additional
1:00- 3:00....	Zoology.....	½ or 1 unit
3:00- 5:00....	Botany.....	½ or 1 unit

September 20, 1913; January 10, and June 20, 1914:

8:30-10:30....	Greek.....	1 or 2 units
10:30-11:30....	Greek.....	1 unit additional
11:30-12:00....	Drawing.....	1 unit
1:00- 2:00....	Trigonometry.....	½ or 1 unit
4:00- 5:00....	Manual Training.....	4 units
4:00- 5:00....	Domestic Science.....	4 units

DEFINITION OF UNITS

Detailed statements showing the exact amount of work required for each unit or group of units in the various subjects are here presented:

ENGLISH COMPOSITION AND LITERATURE

I. THREE UNITS.—The preparation should include the following subjects:

Composition.—There should be practice in writing at regular and frequent intervals throughout all the years of the preparatory course. Special attention should be given to the proper structure of sentences and paragraphs, and the method of planning or outlining an essay.

Grammar.—It is expected that the applicant will be familiar with the essentials of English grammar, and will be able to explain the construction of sentences that occur in the classics he has read.

English Classics.—The following books are recommended for reading and study:

For Reading in 1914 and 1915

I (two to be selected): 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 omission, 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; Virgil's *Aeneid*. The *Odyssey*, *Iliad*, and *Aeneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

II (two to be selected): Shakespeare's *Merchant of Venice*;

Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.

III (two to be selected): Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; Scott's *Ivanhoe* or *Quentin Durward*; Hawthorne's *House of the Seven Gables*; Dickens' *David Copperfield* or *Tale of Two Cities*; Thackeray's *Henry Esmond*; Mrs. Gaskell's *Cranford*; George Eliot's *Silas Marner*; Stevenson's *Treasure Island*.

IV (two to be selected): Bunyan's *Pilgrim's Progress*, Part I; the *Sir Roger de Coverley* papers in *The Spectator*; Franklin's *Autobiography* (condensed); Irving's *Sketch Book*; Macaulay's *Essays on Lord Clive* and *Warren Hastings*; Thackeray's *English Humorists*; *Selections* from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail*; either Thoreau's *Walden*, or Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; Stevenson's *Inland Voyage* and *Travels with a Donkey*.

V (two to be selected): Palgrave's *Golden Treasury* (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard* and Goldsmith's *Deserted Village*; Coleridge's *Ancient Mariner* and Lowell's *Vision of Sir Launfal*; Scott's *Lady of the Lake*; Byron's *Childe Harold*, Canto IV, and *Prisoner of Chillon*; Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's *Raven*, Longfellow's *Courtship of Miles Standish*, and Whittier's *Snow-Bound*; Macaulay's *Lays of Ancient Rome* and Arnold's *Sohrab and Rustum*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *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*, *Herz Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*.

For Intensive Study in 1914 and 1915

Shakespeare's *Macbeth*; Milton's *L'Allegro, Il Penseroso*, and *Comus*; either Burke's *Speech on Conciliation with America*, or both Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; either Macaulay's *Life of Johnson* or Carlyle's *Essay on Burns*.

All the books should be read with care and appreciation, but particular attention should be given, with regard to form, structure, and style, to those intended for intensive study. In addition, the

student should have some definite knowledge of the lives of the authors read and of the history of their times.

II. FOUR UNITS.—For four units in English composition and literature the preparation should extend throughout the four years of the high school course. Besides the subjects mentioned above, the applicant should have studied the outlines of English literary history. His study should be based upon one of the recent manuals of English literature, the study of the text being accompanied by as much reading as possible of representative authors.

LATIN

I. FIRST UNIT.—The student should have digested some Beginner's Book like that of Coy, or Collar and Daniel.

II. SECOND UNIT.—Caesar's *Gallic War*, Books I-IV, or an equivalent amount selected from the remaining portions of that work. It is expected that in the first year's preparation the student has mastered the declensions, comparisons, and verbal inflections, knows the leading rules of syntax, and possesses some vocabulary. Along with Caesar there should be some exercise in Latin Composition, a wider and deeper acquaintance with grammatical principles of the language, and a good vocabulary. Sallust's *Catiline* or an equivalent amount of the *Jugurtha* may be substituted for two books of Caesar. It is furthermore suggested that the teacher, if possible, vary the Caesar lessons by selections from Books V-VII. The Department of Latin is also willing to accept Miller and Beeson's second year Latin Book as a substitute for Caesar.

III. THIRD UNIT.—Cicero, *In Catilinam*, I-IV, and *Pro Archia*, with more practice in composition. It is also preferred that the student should study an additional oration or short treatise, e. g., *de Amicitia*, or selections from the *Letters*. He should also begin the practice of writing continuous prose.

IV. FOURTH UNIT.—Vergil's *Aeneid*, I-VI, with scanning and prosody. An equivalent amount of verse from *Aeneid*, VII-XII, or Ovid will be accepted in place of *Aeneid*, III and V. If circumstances permit, it is very advantageous to let Ovid precede Vergil. It is preferable that the composition done during this year be based on Cicero.

GREEK

I. FIRST UNIT.—White's *Beginner's Book* or an equivalent. Grammar and composition work.

II. SECOND UNIT.—Xenophon's *Anabasis*, Books I and II. Grammar and composition work.

III. THIRD UNIT.—In addition to the work outlined in paragraphs I and II, the following:

Xenophon, *Anabasis*, Books III and IV.

Homer, *Iliad*, Books I-III.

Composition.

Grammar: Babbitt, Goodell, Goodwin, or Hadley-Allen

FRENCH

I. ONE UNIT.—

(a) The translation at sight of very simple French prose.

(b) The translation into French of easy sentences to test the candidate's familiarity with elementary grammar.

(c) One full year of five periods a week is necessary to meet the requirements in one unit. The first one hundred and fifty pages in Fraser and Squair's *French Grammar* may be taken as a standard of the amount of grammar which should be covered during that period.

II. TWO UNITS.—

(a) The translation at sight of ordinary prose. The passages set for translation must be rendered into clear and idiomatic English.

(b) A test of the candidate's knowledge of the regular verbs; the auxiliaries être, avoir; the more frequent irregular verbs.

(c) The translation into French of sentences to test the candidate's familiarity with elementary grammar.

Two full years of five periods a week are necessary to meet the requirements in two units. Fraser and Squair's *French Grammar*, complete, may be taken as a standard of the amount of grammar which should be covered during that period. Not less than three hundred duodecimo pages should be read from the works of at least three different authors. Suitable texts for these two units are: *Le Siège de Berlin* and *La Dernière Classe*, Daudet; *La Mère Sauvage*, Maupassant; *Le Tour de la France*, Bruno; *Le Petit Chose*, Daudet; *Sans Famille*, Malot; *La Tache du Petit Pierre*, Mairat; *La Poudre aux Yeux*, Labiche et Martin; *Le Voyage de M. Perrichon*, Labiche et Martin; *La Cigale chez les Fourmis*, Legouvé et Labiche.

III. THREE UNITS.—A continuation for one year of work just outlined. The candidate should be able to read at sight ordinary French prose or poetry, to translate into French easy English prose, to answer questions involving a more thorough knowledge of the essentials of French syntax, especially the ordinary uses of tenses and modes. It is expected that the candidate for three units will have worked through a grammar and will have read five or six hundred pages of French during three years of five periods a week.

Suitable texts for these three units are: The plays of Labiche, Scribe, etc.; *Gil Blas*, Lesage; *Le Tour de la France*, Bruno; *La Belle Nivernoise*, Daudet; *Les Fourberies de Scapin*, *Le Médecin Malgré Lui*, Molière; Voltaire's historical writings; *Le Cid*, Corneille; Coppée's poems, etc.

IV. FOUR UNITS.—

(a) The translation at sight of standard French. The passages set for translation must be rendered into clear and idiomatic English.

(b) A test of the candidate's knowledge of the irregular verbs and the essentials of French syntax, especially the uses of tenses, modes, prepositions, and conjunctions.

(c) The translation into French of a connected passage of English prose.

(d) The writing of a theme in French on a given topic.

Four full years in a good preparatory school are necessary to meet the requirements for four units. Not less than six hundred pages should be read from the works of at least five different authors. Suitable texts besides those given above are *Colomba*, Mérimée; *La Mare au Diable*, Sand; *Pêcheur d'Islande*, Loti; *La Canne de Jonc*, Vigny; *Horace*, Corneille; *L'Avare* and *Le Bourgeois Gentilhomme*, Molière; *Athalie*, Racine; *Le Gendre de M. Poirier*, Sandeau; *Récits des Temps Mérovingiens*, Thierry; *L'Expédition de Bonaparte en Egypte*, Thiers.

The student should have constant practice in giving paraphrases and abstracts. He should be trained to write French from dictation in order to enable him to understand lectures delivered in that language.

GERMAN

I. ONE UNIT.—

(a) The translation at sight of very simple German prose.

(b) The translation into German of easy sentences, to test the candidate's familiarity with elementary grammar.

The candidate ought to have read not less than one hundred pages of easy German, such as is found in Hewitt's or Harris' *German Reader*.

II. TWO UNITS.—

(a) The translation at sight of simple German prose.

(b) The translation into German of easy connected prose, to test the candidate's familiarity with elementary grammar. The requirement in elementary grammar includes the conjugation of the weak and strong verbs; the declination of articles, adjectives, pro-

nouns, and such nouns as are readily classified; the prepositions; the simpler uses of the modal auxiliaries; the elements of syntax, especially the rules governing the order of words.

The candidate ought to have read not less than two hundred pages of easy German, such as is found in Hewett's or Harris's *German Reader*.

In general, to obtain two units in German, two years' work in a good preparatory school is required.

III. THREE UNITS.—

(a) The translation at sight of ordinary German.

(b) The translation into German of a connected passage of English prose, to test the candidate's familiarity with grammar.

The candidate ought to have read not less than four hundred pages of classical and contemporary prose and verse. It is recommended that the reading be selected from such works as Schiller's *Wilhelm Tell*; Lessing's *Minna von Barnhelm*; Goethe's *Hermann und Dorothea*; Wildenbruch's *Das edle Blut*; Fontane's *Vor dem Sturm*; Moser's *Kopnickerstrasse*.

Generally speaking, three years' work in a good preparatory school will be necessary in order to meet the requirements for three units.

IV. FOUR UNITS.—

(a) The translation at sight of ordinary German.

(b) The translation into German of a connected passage of English prose, to test the candidate's familiarity with grammar. The candidate will be expected to show a thorough knowledge of accident, the principal uses of prepositions and conjunctions, and the essentials of syntax, especially the uses of the modal auxiliaries and of the subjunctive and infinitive modes.

The candidate ought to have read not less than six hundred pages of classical and contemporary prose and verse. It is recommended that the reading be selected from such works as Schiller's *Jungfrau von Orleans*; Goethe's *Iphigenie*; Freytag's *Die Journalisten, Soll und Haben, Bilder aus der deutschen Vergangenheit*; Riehl's *Cultur-geschichtliche Novellen*.

In general, to obtain four units in German, four years' work in a good preparatory school is required.

SPANISH

I. ONE UNIT.—

(a) The translation at sight of simple Spanish prose.

(b) The essentials of grammar, including the conjugations of the regular and the most frequently used irregular verbs. The translation into Spanish of short sentences, intended to test the candidate's knowledge of the essential points in grammar. Conversation and dictation.

In general, one year's work in a preparatory school, or its equivalent, is necessary to meet the requirements for one unit. The candidate will be expected to have worked through a short Spanish grammar, or the principal parts of a more complete one, and to have read at least one hundred pages of simple Spanish. Suitable texts for one unit are: *Spanish Reader*, Bronsby; *Victoria y Otros Cuentos*, Asensi; *Gil Blas*, Padre Isla; *El Pájaro Verde*, Valera; *O Locura o Santidad*, Echegaray; *Zaraguëta*, Carrión y Vital Aza; *El Clavo*, Alarcón, etc.

II. TWO UNITS.—

In general, two years' work in a preparatory school, or its equivalent, will be needed to meet the requirements for two units. In addition to the work outlined in Paragraph I, the candidate will be expected to have worked through an elementary composition book and to have read from two to three hundred pages of modern Spanish. Suitable texts for the second unit are: *El Capitán Veneno*, Alarcón; *El Sí de las Niñas*, Moratín; *Doña Perfecta*, Galdós; *Guzmán el Bueno*, Gil y Zárate; *Cuentos Alegres*, Taboada; *Legends, Tales, and Poems*, Bécquer; *El Haz de Leña*, Nuñez de Arce; *José*, Valdés, etc.

MATHEMATICS

I. ALGEBRA. ONE UNIT. DEFINITIONS.—Integral numbers. Rational numbers. Irrational numbers. The six fundamental operations of algebra. Algebraic expressions. Rational Algebraic expressions. Application of the four fundamental operations to Rational Algebraic expressions. The use of parentheses. Especial emphasis given to working within the parentheses. Factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, simple and complex. Simple equations, both numerical and literal, containing one or more unknown quantities. Systems of equations. Problems depending on linear equations. Involution and evolution of monomials and polynomials. Radicals, including rationalization.

Exponents, including the fractional and negative. Imaginary quantities. Elementary treatment of quadratic equations. The solution of simple problems in quadratic equations.*

II. ALGEBRA. ONE AND ONE-HALF UNITS.—In addition to Paragraph I, the following: The completion of quadratic equations, both numerical and literal. A standard form for the solutions of these equations. The discriminant condition for equal roots, real and imaginary roots. Relations among the roots and the co-efficients of the equation. The nature of the roots when the different co-efficients approach zero. Simultaneous quadratic equations. Systems of equations, simple and quadratic. Property of quadratic surds and solution of equations containing radicals. Problems leading to quadratic equations. Ratio and proportion. The binomial theorem for positive integral exponents.

III. ALGEBRA. TWO UNITS.—In addition to the work outlined in Paragraphs I and II, the following: Convergence of infinite series. Binomial theorem with fractional negative exponents. Exponential and logarithmic series. Formation of logarithms to base e , to base 10. Properties and application of logarithms. The progressions. Continued fractions.

IV. PLANE GEOMETRY. ONE UNIT.—The work required in Plane Geometry is practically the equivalent of the first five books in Wells', Sanders', or Wentworth's Geometry. Emphasis should be given to the demonstration of original problems and the solution of original exercises, including loci problems. Application to the mensuration of lines and plane surfaces.

V. SOLID GEOMETRY. ONE-HALF UNIT.—The usual theorems and constructions of good text-books. Emphasis should be given to the demonstration of original problems and the solution of original exercises, including loci problems. Application to the mensuration of surfaces and solids.

VI. PLANE TRIGONOMETRY. ONE-HALF UNIT.—Definitions and relations of the six trigonometric functions as ratios, not as lines. Circular measurement of angles. Proofs of principal formulas, in

* It is assumed that the pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Familiarity with the metric system is pre-supposed. Some of these problems should be chosen from mensuration, from physics and from commercial life. The use of graphic methods and illustrations, particularly in connection with the solution of equations, is also expected. On the other hand, the student must be guarded against the tendency to become mechanical in his algebraic work. Algebra is not to be used as a T-square. Above all, the student should be thoroughly grounded in the fundamental principles, operations and definitions. It is recommended that Wells's Academic Algebra, Wentworth's Algebra, or an equivalent be used.

particular those for the sine, cosine and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expression for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas.

VII. TRIGONOMETRY. ONE UNIT.—In addition to Paragraph VI, the following: Solutions of triangles, right-angled and oblique, requiring a knowledge of logarithms. Application to heights and distances. Demoiivre's Theorem. Properties of spherical triangles. Formulas connecting the sides and angles of spherical triangles. Napier's Analogies. Gauss' Theorem. Solution of spherical triangles.

PHYSICS

ONE UNIT.—The candidate must be well prepared in the elementary theory of the subject and must present a note-book showing the quantitative work done by him in the laboratory. One full year of four to five periods a week is necessary to meet the requirements for one unit.

The instruction in the class-room should include qualitative lecture-room experiments, the solution of numerous problems, and the study of some one standard text-book, such as Hall and Bergen.

Every candidate for admission on examination is required to present a laboratory note-book, signed by the teacher, containing the results of quantitative experiments performed by him in the laboratory. At least thirty quantitative experiments must have been performed, of which ten must be in mechanics, and which must also include three of the subjects, light, heat, electricity, and sound. The thirty experiments are to be selected from some standard list such as the list adopted by the National Education Association, which may be found in *The Teaching of Chemistry and Physics*, Smith and Hall, Chapter X.

Laboratory note-books will be examined for neatness, language, accuracy, and proficiency in physics. They should be called for within one month after presentation.

CHEMISTRY

ONE UNIT.—The student's preparation should consist of an elementary course in chemistry (one year)* of the character taught in the better class of high schools. It should include:

* The course should cover from thirty-five to forty weeks, with four to five periods per week. Two hours of laboratory work count as one period of recitation.

(a) Individual laboratory work, to the extent of at least one-third of the time;

(b) Instruction by lecture table demonstration, to be used when expensive apparatus or superior skill in manipulation is indispensable;

(c) The study of at least one standard text-book, to the end that the pupil may gain a connected view of the subject.

Either in the class-room or by experimental treatment in the laboratory, the course should take up for consideration the important modes of occurrence, the principal methods of preparation, the essential physical and chemical properties, and the recognition of the elementary substances and their chief compounds, commonly considered in the standard text-books. More detailed study should be given to those of frequent occurrence, or of especial scientific importance.

The candidate should be able to state the significance of such commonly used terms as homogeneous body, solution, element, compound. By the use of definite examples, he should be able to show what kinds of facts have led to the formulation of such essential laws as the laws of definite and of multiple proportions, the law of combining weights, the laws of the expansion of gases, and the law of volumes of reacting gases.

He should be qualified to give a statement of the nature of the processes by the aid of which chemists determine equivalent weights, choose molecular weights, and select atomic weights; furthermore, to explain the significance of chemical symbols, and the manner of arriving at chemical formulæ (not graphic) after the necessary quantitative data are obtained in the laboratory.

Such terms as valence, acid, base, salt, neutralization, hydrolysis, oxidation, reduction, decomposition, dissociation, electrolysis, ionization, should have a meaning to the student, and he should be prepared to define them correctly, at least by well-chosen illustrations, if they cannot be defined precisely by words.

At the time of and as part of the examination in chemistry, every student must present a note-book, containing a description of at least forty experiments. The note-book must include drawings of essential pieces of apparatus used, and an index of the experiments. The laboratory note-book should be called for within one month after presentation.

Text-books recommended: McPherson and Henderson, Hessler and Smith, Newell, Bradbury, Remsen (Briefer Course), Torrey, and Story and Lindsay. Other texts than the one prescribed should be available to the student for reference. Ostwald's *Conversations on Chemistry* will be found stimulating and suggestive for collateral reading.

ZOOLOGY

ONE UNIT.—The candidate will be required to present his original note-book of practical laboratory study, together with the dates and the endorsement of his teacher, certifying that the book is a true record of the pupil's own work. The note-book should contain carefully labeled outline drawings of the chief structures studied in at least fifteen different animals, together with notes on the same. The note-book will be graded as one-third of the examination. The student will be expected to know the classification of animals into phyla and classes, and he must be able to state the chief characteristics and to compare the general life activities of examples of each of the principal classes. He must know the general plan of internal structure of one vertebrate (frog or fish) in general comparison with the human body; an arthropod (crustacean or insect); an annelid (earth-worm or *Nereis*); a coelenterate (hydroid, hydra or sea-anemone); a protozoan (a ciliate and amoeba when possible). A mollusk (clam or mussel), an echinoderm or a second vertebrate may be substituted for any of the above types. A knowledge of the very general features of cell division, of the cellular nature of germ-cells, and the essentials of embryological development will be expected, as well as some understanding of the main facts involved in the struggle for existence, adaptation to environment and variation of individuals.

One full year of at least five periods a week is necessary to meet the requirements for one unit.

Such books as Benedict's *Animal Adaptations*, Colton's *Descriptive and Practical Zoology*, Harvey's *Introduction to the Study of Zoology*, or Kingsley's *Comparative Zoology* cover this ground adequately. At least half of the student's work must have been laboratory work, guided by definite directions.

BOTANY

ONE UNIT.—A laboratory note-book containing drawings of the parts of two kinds of flowering plants, of a fern, moss, liverwort, toadstool, lichen, and mould, must be presented with the certificate of his teacher that it is the student's own work. The note-book will count for one-third of the work.

A knowledge of the names and distinguishing characteristics of the different phyla and the classes will be required, and the kind of alternation of generations found in the three highest phyla must be known. A general knowledge of the principal plant societies and the relation between their structures and environments, as well as an understanding of the adaptations by which the flowering plant does its necessary work are important requirements.

Bergen, Bessey, Atkinson, Caldwell, Coulter, and Leavitt are representatives of the type of elementary texts accorded recognition. At least half of the student's work must have been laboratory work, guided by definite directions.

BOTANY AND ZOOLOGY

ONE UNIT.—A unit will be accepted only when Botany and Zoology have each been studied for half a year in one continuous course which extends throughout the year. Such a course will be reckoned as a one-unit course in Biology. A half year of one, independent of the other, will not be accepted. It is strongly recommended that the student devote an entire year to Botany or to Zoology for one unit, instead of combining Botany and Zoology for a single unit.

At least half of the work must have been laboratory work guided by definite directions. A laboratory note-book containing drawings and observations upon at least ten kinds of animals (both vertebrate and invertebrate) and ten kinds of plants (both flowering and non-flowering) must be presented with the certificate of the teacher that it is the student's own work. The student will be required to answer in writing general questions upon familiar animals, such as the frog, fish, earth-worm, paramoecium, crayfish, etc., and upon common plants, such as the fern, moss, mushroom, and simple flowering plants. In both Botany and Zoology a knowledge of the names and distinguishing characteristics of the different phyla and their classes will be required. The note-book will count for one-third of the work.

PHYSICAL GEOGRAPHY

ONE-HALF UNIT.—The scope of the work required for one-half unit in Physical Geography is represented by the standard modern text-books, some of which are named below. This includes the earth as a whole, atmosphere, ocean and land, with special emphasis on the work of water on the land in making topographic features. Entrance examinations may include simple interpretations of topographic maps, weather maps, and such charts as are given in text-books, the pointing out of features of scientific importance in such pictures as are used in text-books, and simple demonstrations with globes.

Dryer, *Lessons in Physical Geography*; Tarr, *New Physical Geography*; Gilbert and Brigham, *Introduction to Physical Geography*; Davis, *Physical Geography*; Ward, *Practical Exercises in Elementary Meteorology*; and *Physiography of the United States* (10 National Geographic Monographs), are recommended as suitable texts.

ONE UNIT.—For a sufficiently thorough and extended knowledge of the subject, and at the option of the examiner, a credit of one unit may be given. Examinations for one unit's credit assumes a knowledge of the larger text-books, a greater familiarity with laboratory exercises, and such a knowledge of the United States as will enable the candidate readily to cite illustrations of all topographic forms. One full year of four to five periods a week is necessary to meet the requirements for one unit.

ASTRONOMY

ONE-HALF UNIT.—The student should be familiar with:

(a) Such fundamental notions and definitions as are necessary to locate celestial bodies.

(b) The names and positions of the most conspicuous stars and constellations, and be able to trace the positions of the ecliptic across the sky at certain times during the year.

(c) The most important facts concerning the form, dimensions, mass, density, rotation and orbital motion of the earth, including seasons, tides, eclipses, and other dependent phenomena; also methods for determining the mass of the earth.

(d) The essentials concerning the sun, moon, and planets, including methods for determining their respective distances, motions, etc.

(e) The various hypotheses of the stellar universe and cosmogony.

Every student should visit a well-equipped observatory at least twice, once during the day to examine the apparatus, and once at night to view the heavens.

HISTORY

I. GENERAL HISTORY, OR MEDIEVAL AND MODERN HISTORY. ONE UNIT.—General History: Myers, Barnes, or G. B. Adams (complete); Medieval and Modern History: Munro and Whitcomb, Myers, Thatcher and Schwill, Harding's *Essentials*, or Robinson's *History of Western Europe* (complete).

II. ENGLISH HISTORY. ONE UNIT.—English History: Montgomery, Walker, Andrews, Cheyney, Larned or Wrong (complete). (Where half time is given to this subject a half unit may be offered.)

III. ANCIENT HISTORY. ONE UNIT.—Ancient History: Myers, Seignobos, West, or Wolfson (complete). (Where half time is given to the subject a half unit may be offered.)

IV. AMERICAN HISTORY. ONE UNIT.—American History: Adams and Trent, Channing, Larned, McLaughlin, Montgomery (student's), McMaster, or Hart's *Essentials* (complete).

V. AMERICAN HISTORY AND CIVICS. ONE UNIT.—See list in IV for American History. For Civics, James and Sanford: *Government in State and Nation*, or an equivalent text.

CIVICS

ONE-HALF UNIT.—James and Sanford: *Government in State and Nation*, or an equivalent text. (See V under History above.)

DRAWING

ONE UNIT.—One unit for entrance will be allowed for Freehand Drawing or Mechanical Drawing, or both. The student must have done the equivalent of at least two years' work of not less than four periods a week of forty-five minutes each.

The work in Freehand Drawing should include outline drawing from models, principles of light and shade, application of conventional forms, ornaments, design, etc.

The course in Mechanical Drawing should cover lettering, simple geometric problems, projections, solution of problems of helix, cycloid, parabola, etc.

The candidate for admission on examination must present at the time of, and as a part of, his examination a full set of drawings, with the teacher's certificate that they are the candidate's work.

MANUAL TRAINING

Manual Training Including Shop Work and Mechanical Drawing.—Credit will be allowed in this subject to the extent of from one to four units according as one, two, three, or four years are devoted to the work; but it must be done in accordance with the regulations governing laboratory work; that is, twice the time must be given to the subject each week as is given to a regular academic subject.

The course must include carpentry, wood turning, pattern making, foundry work, forging, and machine work, and the proper courses in drawing must accompany such work.

The candidate for admission on examination must present at the time of, and as part of his examination, a certified list of courses completed by him, the drawings for the same, and such statements of his work as will give an adequate idea of the efficiency of the course.

DOMESTIC SCIENCE

One to four units of credit is allowed in this subject according as one, two, three, or four years are given to the work; but it must be done in accordance with the regulations governing laboratory work; that is, twice the time should be given to this work each week as is given to the academic studies which it displaces. The course should include the drawing and art work which usually accompany a first-class course in this subject. The first two years should include a study of textiles, drafting of patterns, and the making of dresses, and the designing and construction of hats. The last two years of work should consist of the study of cooking, chemistry of foods, home construction and sanitation, dietetics, food adulteration, bacteriology, laundering, decorating, and home economics.

ADMISSION ON CERTIFICATE FROM ACCREDITED SCHOOLS

Work of satisfactory grade (not lower than 70 per cent) will be accepted from graduates of the University's accredited schools in lieu of the entrance examinations upon the presentation of the proper certificate, signed by the principal of the school, certifying to the work of the candidate. All certificates presented for admission must specify the work actually done, the time devoted to each subject, and the grade received in each course. Blank forms will be furnished upon application to the Director of School Affiliation.

These certificates, properly made out, should be sent to the Director of School Affiliation, University of Cincinnati, Cincinnati, Ohio, as soon as possible after graduation, and at least five days before the first day of registration. Upon receipt of the certificate, the Director of School Affiliation will pass upon the application, and if it is satisfactory, will send a card of admission, which should be presented to the Registrar at the opening of the session. If the certificate is not satisfactory, the candidate will be informed, so that he may prepare himself for the entrance examinations.

A candidate from an accredited school who is not a graduate of such school will not be admitted upon certificate at all, but must enter by examination in accordance with the rule given above under the heading "Entrance Examinations."

*LIST OF ACCREDITED SCHOOLS

The following preparatory schools and high schools are on the accredited list of the University of Cincinnati. This list is subject to change from year to year, and each school is visited from time to time by a representative of the University:

* Superintendents or principals who may desire to have their schools accredited by the University, should address the Director of School Affiliation.

CITY	NAME OF SCHOOL	PRINCIPAL
Bellevue, Ky.....	High School.....	*W. P. King
Cincinnati, O.....	Oakhurst Collegiate School.....	Miss H. F. Kendrick
Cincinnati, O.....	The Bartholomew Clifton School..	} Miss E. A. Ely } Mary F. Smith } J. E. White } G. S. Sykes
Cincinnati, O.....	Franklin School.....	
Cincinnati, O.....	The College Preparatory School for Girls.....		Mary Doherty
Cincinnati, O.....	The H. Thane Miller School.....	} Mrs. H. Miller } Emma L. Parry
Cincinnati, O.....	Hughes High School.....		E. D. Lyon
Cincinnati, O.....	Walnut Hills High School.....	††A. T. Henshaw
Cincinnati, O.....	Woodward High School.....	Pliny A. Johnston
Cincinnati, O.....	University School.....	Wm. E. Stilwell
Cincinnati, O.....	Ohio Military Institute.....	} *A. M. Henshaw } S. P. C. Roberts } §C. B. Wood
Cincinnati, O.....	Hartwell High School.....		Arthur Powell
Cincinnati, O.....	Madisonville High School.....	C. M. Merry
Cincinnati, O.....	Pleasant Ridge High School.....	T. L. Simmermon
Covington, Ky.....	High School.....	} H. S. Cox } *H. O. Sluss
Danville, Ky.....	Kentucky College for Women.....		†John C. Acheson
Dayton, O.....	Steele High School.....	} C. L. Loos, Jr. } *E. J. Brown
Delhi, O.....	Mt. St. Joseph on the Ohio Academy		Sister Eveline
Glendale, O.....	High School.....	*J. C. Chapin
Glendale, O.....	Glendale College.....	†Jane R. DeVore
Hamilton, O.....	High School.....	} C. H. Lake } *Darrel Joyce
Jeffersonville, Ind..	High School.....		} Emmett Taylor
Lawrenceburg, Ind..	High School.....	} *C. M. Marble } Lydia A. Sembach
Lebanon, O.....	High School.....		} *J. W. Riddle
Lockland, O.....	High School.....	} C. H. Bruner } *C. H. Young
Ludlow, Ky.....	High School.....		*C. F. Sharp
Maysville, Ky.....	High School.....	} *W. D. Reynolds } C. O. Morgan
Middletown, O.....	High School.....		} Earl F. Chase
Milford, O.....	High School.....	} *J. W. Bradner } Elsor Heater
Newport, Ky.....	High School.....	
Norwood, O.....	High School.....	} J. F. Hardin } *F. P. Timmons
Oldenburg, Ind.....	Academy of the Immaculate Con- ception.....		} *J. A. Sharon
St. Bernard, O.....	High School.....	} Wm. A. Evans } W. W. McIntire } *W. S. Cadman
Wyoming, O.....	High School.....		Sister Mr. Clarissa Mr. Trisler
		} *C. S. Fay } Evelyn M. Prichard

* Superintendent † Commandant ‡ President †† Acting Principal.

LIST OF RECOGNIZED SCHOOLS

The work of the following schools is recognized by the University. Graduates of these schools will be given entrance credit without examination for such work as they have completed in a satisfactory manner :

CITY	NAME OF SCHOOL	PRINCIPAL
Cincinnati, O.....	East Night High School.....	Albert Schwartz
Cincinnati, O.....	West Night High School.....	E. W. Wilkinson
Dayton, Ky.....	High School.....	{ J. M. McVey L. N. Taylor, Supt.
Highlands, Ky.....	High School.....	F. A. Cosgrove
Loveland, O.....	High School.....	John Morris, Supt.
Terrace Park, O.....	High School.....	E. H. Foster
Williamsburg, O.....	High School.....	R. C. Franz

ACCREDITED SCHOOLS OF THE NORTH CENTRAL ASSOCIATION

Graduates of the secondary schools approved by the North Central Association of Colleges and Secondary Schools will be admitted to the University of Cincinnati in accordance with the provision for "Admission on certificate from accredited schools."

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

The degree of Bachelor of Arts is the only degree conferred upon graduates of the College of Liberal Arts.

The unit for reckoning credit in the University is a subject pursued for one hour per week for one semester. This hour is one credit. One hundred and twenty-four credits are required for the degree of Bachelor of Arts, of which the required subjects as outlined below must be a part. In addition, moreover, one-half of the recorded grades must be C or higher.

All students who are candidates for the Bachelor of Arts degree must fulfill the following requirements :

1. English 1, three hours per week, to be taken in the Freshman year.

2. One of the sciences,* Biology, Chemistry, Geology, or Physics, with laboratory work, five hours per week for one year. Those students who elect Mathematics in their Freshman year are permitted to postpone their work in Science until the Sophomore year.

3. A three-hour course for one year in either Psychology or Philosophy, not to be taken in the Freshman year.

4. A reading knowledge of two languages out of five (Greek, Latin, French, German, or Spanish). It is advised that this knowledge be acquired before the Junior year.

Students who have had four years' preparation in either German, French, or Spanish in the High School, will not be required to do further work in these languages in the University, provided they satisfy the head of the department in regard to their reading knowledge of the language. Students who have had two years' preparation in Greek must take at least Greek 15 in addition in fulfillment of the requirement. Students who wish to fulfill the requirement in Latin must have completed Course 1 or its equivalent.

5. A three-hour or two-hour course for one year in History, Political and Social Science, or Economics.

6. Five hours per week in the Department of Physical Education.—It is expected that these hours will be distributed as follows: three hours per week for all members of the Freshman class, and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed only under exceptional conditions, for which special permission must be secured from the Dean in advance.

On or before the first week of the Senior year students who have not been certified by the heads of the Departments of Greek, Latin, French, German, or Spanish, as having fulfilled the requirements with respect to language, must pass an examination to determine that they have fulfilled these requirements.

At or before the beginning of the Junior year each student is required to select work in two departments, in each of which he shall have obtained at least sixteen credits before graduation.

The last year of work required for the degree of Bachelor of Arts must be done in residence at the University of Cincinnati.

* Science may be elected in the Sophomore year by students who take both Greek and Latin in the Freshman year.

ELECTION OF STUDIES

The following courses are prescribed for all Freshman students in the College of Liberal Arts:

English 1.....	3 credit hours
Language	3 credit hours
*Science or Mathematics.....	5 credit hours
Physical Education.....	1 credit hour
	<hr/>
Total.....	12 credit hours

The selection of the remainder of the work for the Freshman year is left to each student in conjunction with the Advisory Committee.

Subject to the restrictions noted under "Requirements for the Bachelor of Arts Degree," the department statements, and "Election of Studies," all studies are open to election.

In all laboratory courses two and one-half hours in the laboratory are considered as equivalent to one recitation hour and the preparation therefor. Without permission from the Dean, no student shall elect courses amounting to more than eighteen hours per week of University work, exclusive of the work in Physical Education.

Students who have satisfied the requirements for admission, but take less than twelve hours per week, are called "irregular students," and a tuition fee is charged in every instance. (See "Fees.") No student is permitted to elect courses in more than five departments in any one semester.

SPECIAL ARRANGEMENTS

CREDIT FOR WORK DONE IN THE COLLEGE OF LAW.—A student who has received credit for the work of the first two years in the College of Liberal Arts may, in the third year, elect from four to six hours per semester of the lectures of the first year of the law course, as a substitute for studies in the College of Liberal Arts, and in the following year he may, in the same way, take the remainder of the thirteen hours of the first year's course in the College of Law. Or, if he so desires, he may elect, in his Senior year, the entire thirteen hours of the first year law course (equivalent to twenty-six credit hours in the College of Liberal Arts), provided he has fulfilled all the requirements for obtaining his B. A. degree. Thus a student may obtain both the academic and legal degrees in six years. In either of

* Freshmen who elect Mathematics or both Greek and Latin will be permitted to postpone their science to the Sophomore year. Mathematics does not fulfill the science requirement.

the above cases, the student will be classified as an irregular student in the College of Liberal Arts, and will be required to pay tuition at the regular rate of three dollars per credit hour per semester.

SIX-YEAR COMBINED COLLEGIATE AND MEDICAL COURSE.—In this combined course the student takes the first two years of work in the College of Liberal Arts, and the last four in the College of Medicine. At the end of six years he is granted the degrees of B. S. and M. D.

CREDIT FOR HEBREW TAKEN IN THE HEBREW UNION COLLEGE AND IN LANE THEOLOGICAL SEMINARY.—Arrangements have been made with the Hebrew Union College and with Lane Theological Seminary, whereby students of these institutions who are pursuing a course in the University of Cincinnati may be allowed to count work in Hebrew taken in these institutions for the degree of Bachelor of Arts, to the amount of two hours a week throughout the Freshman and Sophomore years, and three hours a week throughout the Junior and Senior years, for the Hebrew Union College, and three hours per week for three years in Lane Theological Seminary, provided such work is regularly entered upon the election schedules of the University.

CREDIT FOR WORK DONE IN THE ART ACADEMY OF CINCINNATI.—By an arrangement with the Art Academy of Cincinnati, students from the University may elect from the courses stated in the catalogue in drawing, modeling and carving, not more than six hours' work in any one semester, and receive credit therefor on the books of the University, provided these courses have been duly entered on the election blank and the proper certificate from the Director of the School is presented on their satisfactory completion. Not more than twelve hours of work in the Art Academy will be credited for the degree of Bachelor of Arts.

CREDIT FOR WORK DONE IN THE COLLEGE FOR TEACHERS.—Certain courses in Education, to the number of twenty-four credits, may be elected by undergraduates during the Senior year and be counted toward fulfilling requirements for the A. B. degree.

COURSES OF INSTRUCTION

ASTRONOMY

JERMAIN GILDERSLEEVE PORTER, PH. D., Director of the Observatory
and Professor of Astronomy

For Undergraduates

1b. Descriptive Astronomy.—Lectures and class work. No mathematical training is required beyond a geometrical conception of the sphere and its circles. The object of the course is to give a comprehensive view of astronomy in its historic and practical relations, as well as a general résumé of our knowledge concerning the heavenly bodies. Reference books: *Popular Astronomy*, Newcomb; *Manual of Astronomy*, Young; *The Stars in Song and Legend*, Porter. M., F., 10:30—11:30, *second semester*. Professor Porter.

2a. General Astronomy.—Text-book: Young's *Manual of Astronomy*. W., 2:00-3:00, *first semester*. Professor Porter.

For Course 2a Trigonometry, Analytical Geometry, and Calculus will be required.

3b. General Astronomy.—Text-book: Young's *Manual of Astronomy*. W., 2:00-3:00, *second semester*. Professor Porter.

Course 3b is open only to those who have taken Course 2a.

For Undergraduates and Graduates

4a. Celestial Mechanics.—Investigation of the fundamental equations of motion and of the formulæ for determining the positions of bodies revolving about the sun. Text-book: Watson's *Theoretical Astronomy*. *First semester*; hours to be arranged.

Professor Porter.

5b. Computation of a parabolic orbit from three observations, and of an elliptic orbit with perturbations. Text-book: Watson's *Theoretical Astronomy*. *Second semester*; hours to be arranged.

Professor Porter.

Courses 4a and 5b are given at the Observatory.

BIBLICAL LITERATURE

EDWARD MACK, A. M., D. D., . . . Lecturer on Biblical Literature.

For Undergraduates and Graduates

8a. The Political and Social Institutions of the Ancient Hebrews in Relation to Modern Civilization.—A study of the life and literature of the Old Testament, particularly in their social aspects. *First semester*, T., Th., 2:00-3:00. Dr. Mack.

8b. The Social Teachings of Jesus and the Apostles.—Their teachings with regard to the nature of man, his individuality and responsibility; the family, rights of children, divorce; society, the method of its improvement; the state and our relations to it; wealth, the rich and the poor, "the social question;" crime, criminals, and their treatment; non-resistance, peace and war, etc. *Second semester*, T., Th., 11:30-12:30. Dr. Mack.

Other hours will be arranged if there is sufficient demand.

BIOLOGY

* HARRIS MILLER BENEDICT, A. M., Professor of Botany.
 HARRY LEWIS WIEMAN, PH. D., Assistant Professor of Zoology.
 ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and
 Comparative Anatomy.
 CORA MAY BOX, A. M., Instructor in Zoology.
 VERNON LANTIS, A. M., Instructor in Botany.
 C. O. CHAMBERS, Ph. D., Instructor in Botany.
 RAPHAEL ISAACS, A. M., Assistant in Embryology.
 ROBERT T. HANCE, A. B., Assistant in Zoology.
 MARY LOUISE NUTE, A. B., Graduate Assistant in Botany.

When a biological science is chosen as one major for the degree of Bachelor of Arts, the sixteen credits regarded as a minimum must be in zoology or in botany.

In the advanced courses training in physics and chemistry, as well as ability to read French and German, is expected. Special facilities are afforded students pursuing courses of research.

Students who expect to do advanced work in botany or zoology are advised to take general inorganic chemistry during their first year and organic chemistry during their second year, together with the courses in botany or zoology.

Students who desire to be recommended as teachers of botany or zoology in secondary schools must complete as a minimum, Courses 1a to 8b inclusive and Courses 15 and 35. It is very desirable that they also do at least one year of graduate work.

For Undergraduates

1a. Animal Biology.—Lectures dealing with topics of a general biological nature, such as animal activities and adaptations, protoplasm, the cell, sex, development, etc. The course is intended to provide a thorough foundation for further work in zoology. This course must be accompanied by Course 2a. *First semester*, M., W., F., 9:30-10:30.

Assistant Professor Wieman.

* Absent on leave, first semester, 1913-14.

2a. Animal Biology, Laboratory.—This course consists of the practical laboratory and field work which must accompany Course 1a. Certain animals, selected as types to illustrate general principles, are dissected and compared. Careful notes and drawings of all dissections are required. *First semester.*

Sec. I, M., W., 1:00-4:00.

Sec. II, T., Th., 1:00-4:00.

Sec. III, T., Th., 9:30-12:30.

Assistant Professor Wieman and Miss Box.

3b. General Zoology.—Lectures dealing in a comparative way with the various groups of animals, including life-histories, evolution, heredity, and classification. This course must be accompanied by Course 4b. *Second semester, M., W., F., 9:30-10:30.*

Assistant Professor Wieman.

Course 3b is open to students who have passed in Course 1a.

4b. General Zoology, Laboratory.—This course consists of the practical work which must accompany Course 3b. Careful dissections, drawings, and comparisons are required. *Second semester.*

Sec. I, M., W., 1:00-4:00.

Sec. II, T., Th., 1:00-4:00.

Sec. III, T., Th., 9:30-12:30.

Assistant Professor Wieman and Miss Box.

5a. Plant Biology.—Lectures dealing with the physiology, ecology, and evolution of plants. The course is designed to provide the proper foundation for the study of systematic botany. This course must be taken in conjunction with Course 6a. *First semester, M., W., F., 10:30-11:30.*

Dr. C. O. Chambers.

6a. Experimental Plant Biology.—This course consists of laboratory and field investigations of the physiology and ecology of selected plants. Each student is required to keep a careful record in a notebook of the results of experiments and observations, illustrating them with exact drawings. This course must be taken in connection with Course 5a. T., Th., 1:00-4:00.

Mr. Lantis.

7b. General Botany.—Lectures on the structure, reproduction, and adaptation to environment of the plants of the various phyla of the plant kingdom, including short series of special lectures on "Bacteria and Disease" and "History and Value of Cultivated Plants." It must be taken in connection with Course 8b. *Second semester, M., W., F., 10:30-11:30.*

Professor Benedict.

8b. General Botany, Laboratory.—Thorough laboratory study of the structure of selected plants as examples of the different phyla of the plant kingdom, as well as carefully organized field trips for the purpose of learning to identify the commoner plants in their own habitats. This course must be taken in connection with Course 7b. T., Th., 1:00-4:00.

Professor Benedict and Mr. Lantis.

[9. Sanitary Biology.] Lectures on the biological principles involved in sanitary engineering, designed to enable the engineer to solve local problems in sanitation and to appreciate the significance of specialists' reports. M., 2:00-3:00, throughout the year.

Course 9 is open to all students.

Professor Benedict.

Omitted in 1913-14.

12b. Field Ornithology.—A field study of the identification, classification, songs, and habits of our native birds. One laboratory period per week during the second semester. Hours to be arranged.

Professor Benedict.

35. Systematic Botany.—A course designed to give a working knowledge of the flora of this vicinity, comprising field trips followed by laboratory work in classification and in the preservation of plants, discussions on plant relationships and the preparation of "keys." T., Th., 9:30-12:30.

Professor Benedict and Mr. Lantis.

Course 35 is open to students who have taken Courses 5 and 7, and under certain conditions to all Seniors. It is required of all who desire to be recommended as teachers of Biology or Nature-Study in secondary schools.

[15. Invertebrate Zoology.] An advanced laboratory course dealing with selected forms of Invertebrates. Credit according to number of hours elected.

Miss Box.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

Omitted in 1913-14.

For Undergraduates and Graduates

19a. Embryology of Vertebrates.—The work consists of lectures and demonstrations dealing with the history of the germ cells, cleavage of the ovum, embryo formation, and the development of the principal organs of the body. This course must be accompanied by Course 20. T., Th., 1:00-2:00.

Assistant Professor Chambers.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

20a. Embryology of Vertebrates, Laboratory.—Laboratory work to accompany Course 19a. The work is based largely on the chick and pig. T., Th., 2:00-5:00.

Assistant Professor Chambers and Mr. Isaacs.

[17b. Comparative Anatomy of Vertebrates] Lectures on the anatomy, classification, habits, and distribution of vertebrates. The anatomy is studied in a comparative way, with special reference to the evolution of the various organs. This course must be accompanied by Course 18b. *Second semester*, T., Th., 1:00-2:00.

Assistant Professor Chambers.

Prerequisite: Courses 19a and 20a.

Omitted in 1913-14.

[18b. Comparative Anatomy of Vertebrates, Laboratory.] The work consists in the careful dissection and study of selected forms to accompany Course 17b. *Second semester*, T., Th., 2:00-5:00.

Omitted in 1913-14. Assistant Professor Chambers.

13b. Animal Physiology.—Lectures dealing with fundamental physiological phenomena of animal life. This course must be accompanied by Course 14b. *Second semester*, T., Th., 1:00-2:00.

Assistant Professor Chambers.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

14b. Animal Physiology Laboratory.—Experiments on different organisms selected for the study of physiological activities, such as irritability, conductivity, reproduction, tropisms, etc., to accompany Course 13b. *Second semester*, T., Th., 2:00-5:00.

Assistant Professor Chambers.

Courses 13b and 14b alternate with Courses 17b and 18b. Courses 13b and 14b are given in 1913-14.

10a. Microscopical Technique.—The course includes the preparation and use of standard fixing and staining agents, and drill in the manipulative processes incident to general microscopy and cytology. *First semester*, M., W., 1:00-4:00.

Assistant Professor Wieman.

Prerequisite: Courses 19a and 20a.

10b. Cytology.—A laboratory course intended to serve as an introduction to cytology and the general field of cellular biology. *Second semester*, M., W., 1:00-4:00.

Prerequisite: Course 10a. Assistant Professor Wieman.

21. Histology and Organology.—This course belongs to the Department of Anatomy of the Medical College. It is numbered 2 in the catalogue of the Medical College, and is open to academic students who are taking or have taken Courses 19a and 20a. See catalogue of Medical College for full description of this course and others open to academic students. M., W., 8:30-11:30.

Assistant Professor Chambers.

23. Field Work.—Practical directions for collecting, identifying, and preserving specimens will form a minor part of the work. Each student is assigned a special problem. The work may be taken as a two or a three-hour course. Hours to be arranged.

Professor Benedict.

Prerequisite: Courses 5a, 6a, 7b, and 8b.

[24a. Plant Histology.] Lectures on the general histology of the Spermatophytes, special attention being given to the physiological adaptations of the tissues to their functions. This course must be taken in connection with Course 25a. *First semester, T., 10:30-11:30.*

Professor Benedict.

Prerequisite: Courses 5a, 6a, 7b, and 8b.

Omitted in 1913-14.

[25a. Plant Histology, Laboratory.] In this course the student will be given sufficient practice in microscopical botanical technique to enable him to prepare the slides which he will use in his laboratory study of the tissues of selected plants. Accurate drawings and descriptions will be required. A few exercises on the identification of food adulterations will be given. This course must be taken in connection with Course 24a. *First semester, T., Th., 8:30-11:30.*

Omitted in 1913-14.

Professor Benedict.

26b. The Reproduction and Embryology of the Spermatophytes.—Lectures on the origin and nature of sexual reproduction in the flowering plants and the general principles of Spermatophyte embryology. This course must be taken in connection with Course 27b. *Second semester, T., 10:30-11:30.*

Professor Benedict.

Prerequisite: Courses 24a and 25a.

27b. Reproduction of the Angiosperms.—A laboratory investigation of the origin of the sex cells and the formation of the seed in selected Angiosperms. While a few special slides will be supplied the student will be required to make his own preparations. This course must be taken in connection with Course 26b. *Second semester, T., Th., 8:30-11:30.*

Professor Benedict.

40. Current Problems in Botany.—Lectures, assigned readings, and discussions upon present problems in plant physiology and cytology. A reading knowledge of French or German is required. Two credit hours. Professor Benedict and Dr. C. O. Chambers.

Prerequisite: Courses 5a, 6a, 7b, 8b, 24a, 25a, 26b, 27b, and 35.

Primarily for Graduates

30. Current Problems in Zoology.—Assigned readings and discussions to accompany courses of research. A reading knowledge of French and German is required. Two credit hours.

Assistant Professor Wieman.

31. Research.—Credit according to number of hours elected.

Professor Benedict, Assistant Professor Wieman,
and Assistant Professor Chambers.

Evening Course

50. Principles of Animal Biology.—A lecture and laboratory course. The lectures deal with general biological topics, such as animal organization, physiology, adaptation, heredity, and evolution. In the laboratory certain animals selected as types are dissected and compared. Lecture, F., 7:30-9:30; Laboratory, Th., 7:30-9:30.
Assistant Professor Wieman and Mr. Isaacs.

CHEMISTRY

LAUDER WILLIAM JONES, PH. D., Professor of Chemistry.
HARRY SHIPLEY FRY, PH. D., . Associate Professor of Chemistry.
HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
Chemistry.

EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Physio-
logical Chemistry.

JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.

CLARENCE A. NASH, A. M., . . . Instructor in Physical Chemistry.

EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.

RALPH EDWARD OESPER, A. M., Graduate Assistant in Chemistry.

MARY LOUISE NUTE, A. B., . . Graduate Assistant in Chemistry.

STUDENT ASSISTANTS: Henry Marks, Neil Wright, Clifford Rolle.

For Undergraduates

1a. General Inorganic Chemistry.—The Non-metals. This course gives a definite idea of the fundamental laws of general chemistry, and furnishes a survey of the important facts concerning the chemistry of the non-metals and their compounds. Lectures, recitations, and quizzes illustrated by experiments, charts, and specimens. Course 2a forms an integral part of, and must accompany Course 1a. M., W., F., 8:30-9:30.

Associate Professor Fry and Assistants.

2a. General Inorganic Chemistry, Laboratory.—Two laboratory exercises per week. *First semester.* Experiments complementary to the subject-matter of Course 1a.

Sec I, T., Th., 1:00-4:00.

Sec. II, M., W., 1:00-4:00.

Associate Professor Fry and Assistants.

3b. General Inorganic Chemistry.—The Metals. A continuation of Course 1a. The properties of the metals and their compounds. Three hours per week. *Second semester.* Students who have completed Courses 1a and 2a are eligible for this course. It must be accompanied by Course 4b. M., W., F., 8:30-9:30.

Associate Professor Fry and Assistants.

4b. General Inorganic Chemistry, Laboratory.—Two laboratory exercises per week. *Second semester*. Experiments complementary to the subject-matter of Course 3b.

Sec. I, T., Th., 1:00-4:00.

Sec. II, M., W., 1:00-4:00.

Associate Professor Fry and Assistants.

5a. Qualitative Analysis.—Lectures and recitations on the principles and practice of qualitative analysis. Considerable emphasis will be laid upon the application of the laws of chemical equilibrium, and the theories of solutions and of electrolytic dissociation to the practical problems of the analyst. Three exercises a week. *First semester*. M., W., F., 8:30-9:30. Mr. Nash.

Prerequisite: Courses 3b and 4b.

6. Qualitative Analysis, Laboratory.—To accompany Course 5a. During the first few weeks of the semester the student will perform important tests commonly used in the processes of analytical chemistry. The later work of the course will furnish abundant training in the qualitative examination of salts, minerals, alloys, etc. Two exercises a week, *first semester*; two laboratory periods and one quiz period, *second semester*. T., Th., 1:00-4:00.

Mr. Nash and Mr. Esslinger.

7b. Quantitative Analysis.—An introductory laboratory course in gravimetric and volumetric analysis. Occasional conferences are held, at which analytical methods and calculations are discussed, and at which reports are submitted covering assigned reading. Three exercises a week. *Second semester*. M., W., F., 1:00-4:00.

Prerequisite: Courses 5a and 6 (first semester). Mr. Esslinger.

8a. Elementary Organic Chemistry.—Three exercises a week. *First semester*. Quizzes and lectures which are experimental, covering the chief classes of organic compounds of both the aliphatic and aromatic series. This course is arranged to meet the needs of those who intend to specialize in chemistry, in medicine, or in biology. It serves as a general introduction for those who intend to go deeper into the study of organic chemistry. M., W., F., 11:30-12:30.

Prerequisite: Courses 3b and 4b.

Professor Jones.

9a. Organic Reactions and Preparations.—Laboratory practice to accompany the lectures of Course 8a. M., W., 1:00-4:00.

Professor Jones, assisted by Dr. Reemelin.

Prerequisite: Courses 3b and 4b.

14b. Metallurgy.—Five credit hours per week. *Second semester*. A study of fuels, refractories, ferrous and non-ferrous metallurgy, and practice in metallurgical calculations. Emphasis is laid upon foundry and steel works processes. Excursions will be made to

metallurgical establishments in Cincinnati and vicinity. M., T., W., Th., 9:30-10:30; M., 1:00-4:00. Assistant Professor Aston.

Prerequisite: Courses 5a, 6, and Physics 1.

15b. Assaying.—One afternoon a week. *Second semester.* Laboratory practice in the fire assay of ores and base metals for gold, silver, and lead. Hours to be arranged.

Prerequisite: Course 7b. Assistant Professor Aston.

[16a. Technical Inorganic Chemistry.] Three periods a week. *First semester.* For details consult p. —. M., W., F., 9:30-10:30. Assistant Professor Goetsch.

Prerequisite: Courses 5a and 6.

Omitted in 1913-14.

17. Technical Analysis.—The course consists of analyses of typical industrial products, involving the use of gravimetric, volumetric, gasometric, electrolytic, and colorimetric processes. For details consult p. 173. T., Th., F., 1:00-4:00.

Assistant Professor Goetsch, assisted by Mr. Esslinger.

Prerequisite: Course 7b.

18b. Technical Organic Chemistry.—For details consult p. —. M., W., F., 8:30-9:30. Assistant Professor Goetsch.

Prerequisite: Courses 8a, 9a, and 16a.

[29a. Practical Photography.] One lecture and one laboratory period a week. *First semester.* The course embraces a study of the exposure and development of photographic plates; the treatment of defective negatives; the preparation and use of various printing papers; copying, enlarging, and lantern-slide making. W., 8:30-9:30; F., 1:00-4:00. Assistant Professor Goetsch.

Prerequisites: 1a, 2a, 3b, and 4b.

Omitted in 1913-14.

For Undergraduates and Graduates

10a. Advanced Inorganic Chemistry.—Two exercises a week during the first semester. Special topics and recent theories of inorganic chemistry, including colloids, reactions in non-aqueous solvents; inactive gases; radioactive elements and emanations; the electron; valence, structure, and co-ordination theories. T., Th., 8:30-9:30. Associate Professor Fry.

Prerequisite: Courses 5a, 6, and 7b.

11a. Inorganic Preparations.—Three laboratory exercises a week. *First semester.* Experiments supplementary to the subject-matter of Course 10a. Hours to be arranged.

Prerequisite: Course 7b. Associate Professor Fry.

12a. Physical Chemistry.—Lectures and recitations. Three exercises a week. *First semester.* An introductory course which considers the general properties of gases, liquids, solids and solutions, as well as the principles determining reaction velocity and the equilibria in homogeneous and heterogeneous systems. T., Th., S., 11:30-12:30. Mr. Nash.

Prerequisite: Chemistry 5a, 6a, and 7b, Physics 26a and 27b, Mathematics 5.

13a. Physical Chemistry, Laboratory.—Two exercises a week. *First semester.* Designed to illustrate the principles developed in Course 12a, and to provide a knowledge of the common methods used in physical-chemical measurements. This course must accompany Course 12a. Th., F., 1:00-4:00. Mr. Nash.

32b. Electrochemistry.—Lectures and recitations. Three exercises a week. *Second semester.* A general consideration of the electrical properties of matter with special reference to the theory of aqueous solutions. M., W., F., 11:30-12:30. Mr. Nash.

Prerequisite: 12a.

33b. Electrochemistry, Laboratory.—Two exercises a week. *Second semester.* Determination of conductivity with its application, transference numbers, electromotive force, dielectric constant, etc. Th., F., 1:00-4:00. This course accompanies Course 32b.

Mr. Nash.

[34a. Thermodynamics Applied to Chemistry.] Two exercises a week. *First semester.* Devoted to an elementary consideration of the principles of thermodynamics and their application to physical-chemical problems. The work will be illustrated by the solution of many numerical examples. Hours to be arranged. Mr. Nash.

Prerequisite: Courses 12a and 32b.

Omitted in 1913-14.

41a. Phase Rule.—Lectures and recitations. A study of the phase rule and its applications. Two exercises a week. *First semester.* Hours to be arranged. Mr. Nash.

Prerequisite: Course 12a.

20. Advanced Organic Chemistry.—Three lectures and conferences a week, embracing a systematic study of the principles and practices of organic chemistry, and treating of the modes of formation, properties, reactions, and constitutional formulae of typical members of the most important classes of organic compounds. Hours to be arranged. Professor Jones.

Prerequisite: Courses 5a, 6, 7b, 8a, 9a, and a reading knowledge of German and French.

21. Advanced Organic Chemistry, Laboratory.—Practice in the preparation of a number of typical organic compounds. This course will require considerable reading in the journals of chemistry and in various hand-books and works of reference. Credit according to number of hours elected. Professor Jones.

Prerequisite: As in Course 20b.

22b. Bio-Chemistry.—Among other subjects, the course will take up for discussion the nature of carbohydrates, fats, and protein substances; the processes of digestion and metabolism; the chemical composition of the body tissues, secretions, and excretions, including the methods employed in their analysis. *Second semester*, M., W., F., 11:30-12:30. Assistant Professor Reemelin.

Prerequisite: Courses 8a and 9a.

22b. Bio-Chemistry, Laboratory.—Laboratory exercises arranged to accompany the lectures. Reactions of carbohydrates, fats, and protein substances applied to the qualitative detection of, and the quantitative estimation of, these substances in body tissues, secretions, and excretions. Digestion, the analysis of gastric and fecal matter and of urine will be considered from the chemical point of view. *Second semester*, M., W., F., 1:00-4:00.

Assistant Professor Reemelin.

Prerequisite: Courses 8a and 9a.

24b. History of Chemistry.—Special attention is directed to the classical memoirs of the Greek philosophers, the tenets of the alchemists, and those researches of the past century that have developed the atomic and structure theories of modern chemistry. Lectures, collateral readings, and papers. Three exercises per week. *Second semester*. Hours to be arranged.

Associate Professor Fry.

Prerequisite: Courses 5a, 6, 8a and 9a, or 20b and 21.

28b. Elementary Spectrum Analysis (Qualitative).—The course consists largely of laboratory work. The emission (flame and electric sparks) and absorption spectra of inorganic and some organic substances are studied from the chemist's point of view. Two laboratory periods a week. *Second semester*; hours to be arranged.

Professor Jones.

Prerequisite: Courses 5a, 6, 8a, and 9a; Physics, 1 year.

Primarily for Graduates

30. Research.—This course requires intensive laboratory work under the direction of some member of the department. Problems for investigation may be chosen from the following: organic

chemistry (30a), inorganic chemistry (30b), physical chemistry (30c), or industrial chemistry (30d).

Professor Jones, Associate Professor Fry,
Assistant Professor Goettsch, Assistant Professor Aston.

During the summer of 1913, students engaged in research were allowed to enroll in the Graduate School.

35b. Some Special Problems and Theories of Organic Chemistry.—A critical discussion of the working hypotheses and the theories of organic chemistry. With this end in view, their application to the difficulties of certain complex cases are presented in detail. Topics for consideration will be chosen each year from the following: Optical and geometrical isomerism of compounds of carbon, nitrogen, and other elements; tautomerism; bivalent carbon derivatives; oxonium compounds; purine derivatives; the carbohydrates; the alkaloids; the terpenes; the polypeptides, proteins; the organic dyes, etc. *Second semester.* Two hours a week, to be arranged.

Professor Jones.

40. Journal Club Meetings.—Instructors and advanced students of the department present papers dealing with subjects under investigation in the department, or critical reviews of papers of general interest to those engaged in advanced work or research. All students interested in chemistry are invited to attend. Meetings are held fortnightly, and last one hour. Subjects to be discussed are announced one week in advance.

ECONOMICS

(The Sinton Professorship)

FREDERICK CHARLES HICKS, PH. D., Sinton Professor of Economics
and Commerce.

JAMES DYSART MAGEE, Ph. D., Instructor in Economics.

Students desiring a general knowledge of economics are recommended to take Course 1 or Courses 1 and 2. Courses 11, 12a, and 13b are required of students taking a major in economics.

For Undergraduates

1. Economics.—This course is intended to give the student a general view of the subject. It includes a study of (1) the elements of economics: wealth, value, price, competition, monopolization, production, and distribution; (2) the evolution of industry from local organization and control during the middle ages, through nationalism and the industrial revolution, to modern conditions; and (3) the leading economic problems of today. Lecture, W., 11:30-12:30; Sec. I (for men), M., 11:30-12:30; Sec. II (for women), F., 11:30-12:30. Professor Hicks and Dr. Magee.

2. Economic History.—A study of industrial development since the tenth century, including the economic history of the United States. Subjects considered: the local industry of feudalism, the manorial and guild systems; the rise of nationalism; the colonial policy and national regulation of industry under the mercantile system; the industrial revolution, 1750-1850; and the distinguishing features of the complex and highly developed economic organization of modern times. Sec. I, T., Th., 11:30-12:30.

Dr. Magee.

For Undergraduates and Graduates

11. Elements of Economics.—An advanced course in the fundamental principles of economics. The work will consist mainly of a comparison of the views of representative economists. T., Th., 9:30-10:30.

Professor Hicks.

Course 11 is open to students who have completed Courses 1 and 2 and to others by special permission.

12a. Industrial Evolution.—An analysis of the modern economic system and a study of its development from earlier forms of industry. W., F., 9:30-10:30.

Professor Hicks.

Course 12a must be preceded or accompanied by Course 11.

13b. Applied Economics.—The application of economic principles to leading problems, such as socialism, land nationalization, labor, trusts, money, transportation, and the tariff. W., F., 9:30-10:30.

Professor Hicks.

Course 13b must be preceded by Course 12a.

[14. Seminary.] For the detailed study of special problems. Credit according to number of hours elected.

Omitted in 1913-14.

Evening Courses

1. Economics (See above).—Sec. III. W., 7:30-9:30.

Professor Hicks.

2. Economic History (See above).—Sec. II. Th., 7:30-9:30.

Dr. Magee.

30. Commercial Geography.—A study of the leading articles of commerce, including both raw materials and manufactured products, their character and relative importance, the principal sources of supply, and their distribution in the world's markets. W., 4:45-6:45.

Dr. Magee.

31. Statistics.—The principles of the statistical method and their application to social and economic problems. M., 4:45-6:45.

Dr. Magee.

EDUCATION

- WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History and Principles of Education.
 JOHN WILLIAM HALL, A. M., Professor of Elementary Education.
 HENRY SKINNER WEST, Ph. D., Professor of Secondary Education.
 CYRUS DE WITT MEAD, A. M., Assistant Professor of Elementary Education.
 ABBIE LOUISE DAY, B. S., B. Di., Instructor in Elementary Education.

The following courses may be elected by undergraduates during the Senior year, and be counted toward fulfilling requirements for the A. B. degree in the McMicken College of Liberal Arts.

1. History and Principles of Education.—6 credits. M., W., F., 10:30-11:30. Professor Burris.
2. Theory and Practice of Teaching.—8 credits. Three hours class-room work and fifteen hours of practice per semester. Hours for practice to be arranged before registration. M., W., F., 9:30-10:30. Professor Hall.
4. School Economy.—2 credits. F., 11:30-12:30. Miss Day.
14. The Teaching of English.—4 credits. M., W., 8:30-9:30. Miss Day.
16. The Teaching of History.—2 credits. F., 8:30-9:30. Assistant Professor Mead.
20. The Teaching of Mathematics.—2 credits. *Second semester*, M., W., 11:30-12:30. Assistant Professor Mead.
22. The Teaching of Geography.—2 credits. *First semester*, M., W., 11:30-12:30. Assistant Professor Mead.

Prerequisite Courses:

Psychology 1a and 1b.

Philosophy 5a.

Geology and Geography 1.

History 15. (For those who did not offer a year's work in American history for admission.)

Education Courses 1, 2 and 4, and eight credits for work elected in Courses 14, 16, 20, and 22, making a total of twenty-four credits, entitle the graduate to a Teacher's Diploma, conferred by the College for Teachers, and a place on the preferred list of those eligible to appointment in the Cincinnati schools.

Students may count Education as one of the two departments in each of which they are required to obtain at least sixteen credits for graduation.

Students who take Education with a view of obtaining a Teacher's Diploma should invariably consult with the Dean of the College for Teachers before registration. They will be required, in case of doubt, to give satisfactory evidence of physical qualifications for the work of teaching.

For further information, including statements in detail concerning the requirements of professional programs for those who wish to prepare for various positions in educational work, see announcement of the College for Teachers.

ENGLISH

COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

FRANK WADLEIGH CHANDLER, PH. D., Professor of English and Ropes Professor of Comparative Literature.

EMILIE WATTS McVEA, A. M., Assistant Professor of English.

BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Public Speaking and of English.

CLYDE WILLIAM PARK, A. M., . . . Assistant Professor of English.

BERTHA K. YOUNG, A. M., . . . Assistant Professor of English.

CLARENCE DIMICK STEVENS, A. M., Assistant Professor of English.

STUDENT ASSISTANTS: John D. Ellis, A. B., LL. B.; Estelle Hunt; Elise Loebman, A. M.; Helen Stanley, A. B.; Agnes Van Slyck, A. M.; Mary Whitfield, A. B.; Mattie Winston.

All students in English, before making their election of courses, are advised to consult with some member of the department, and to read carefully the departmental bulletin of information as to the proper sequence in which such courses should be taken.

No student should enter or withdraw from a two-semester course at the beginning of the second semester without first consulting both the instructor concerned and the head of the department.

Students majoring in English are required to do 16 credits of English work over and above the University credits allowed them for English 1, 2, 3, and 25; but English 1 and 3 (10 credits) are prerequisites for entering upon the work of the major in English, and students so majoring must also take as part of their course either 7a (with 8b) or 10.

For Undergraduates

1. English Composition.—This course presents a general survey of the principles of English composition and endeavors to en-

force them by practice in writing. A certain amount of reading in English literature is also required.

Sec. I, M., W., F., 9:30-10:30.

Sec. II, T., Th., S., 8:30-9:30.

Sec. III, M., W., F., 10:30-11:30.

Sec. IV, M., W., F., 10:30-11:30.

Sec. V, M., W., F., 1:00-2:00.

Sec. VI, M., W., F., 1:00-2:00.

Assistant Professors McVea, Van Wye, Park,
Young, and Stevens.

Course 1 is required for all students in the College of Liberal Arts in the Freshman year. It cannot be counted towards a major in English.

2a. Argumentation.—*First semester*, T., Th., 8:30-9:30.

Assistant Professor Van Wye.

[2b. Description and Narration.] *Second semester*, T., Th., 8:30-9:30.

Assistant Professor Stevens.

Omitted in 1913-14.

Courses 2a and 2b are recommended for Sophomores, but cannot be counted towards a major in English.

3. Types of Literature.—An appreciative rather than an historical study of the principal literary kinds—lyric, narrative verse, drama, prose fiction, and essay—illustrated by readings in representative masterpieces, chiefly English. Lectures, class papers, discussions. T., Th., 9:30-10:30. Professor Chandler.

Course 3 is recommended for Freshmen and Sophomores only. It is a prerequisite for all students who wish to major in English, but cannot be counted toward that major.

4. Nineteenth Century Prose.—Studies in the thought and style of the great prose writers, other than novelists, from Coleridge to Carlyle (during the first semester), and from Emerson to Pater (during the second semester). M., W., F., 10:30-11:30.

Assistant Professor Young.

Course 4 is recommended for Juniors and Seniors.

5. Shakespeare.—A study of the life and times of Shakespeare, his dramatic methods, and the literary history of his plays. Some of the plays are examined in detail, and most of the others are assigned for reading. M., W., F., 9:30-10:30.

Assistant Professor Young.

Course 5 is recommended for Sophomores.

6. Victorian Poetry.—A study of the poetical works of Tennyson, Browning, Arnold, Rossetti, and Swinburne, involving a dis-

cussion of their technic, art, growth of mind, general interpretation of life, and relation to their time. M., W., F., 8:30-9:30.

Professor Chandler.

Course 6 is recommended for Juniors and Seniors.

[11. The English Novel.] This course considers the origin and history of the English novel, and discusses its characteristics as a form of prose literature. T., Th., 9:30-10:30.

Omitted in 1913-14.

Assistant Professor Stevens.

[16. Wordsworth and His Contemporaries.] A study of the English romantic poets of the early nineteenth century—Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats—involving a discussion of their technic, art, growth of mind, general interpretation of life, and relation to their time. M., W., F., 8:30-9:30.

Omitted in 1913-14.

Professor Chandler.

Course 16 is recommended for Juniors and Seniors.

18. American Literature.—Irving, Hawthorne, Poe, Emerson, Longfellow, Lowell, Holmes, and some of their contemporaries. T., Th., 1:00-2:00.

Assistant Professor McVea.

25. Public Speaking.—Control of the voice and body, correct enunciation, and practice in effective expression.

Sec. I, T., Th., 10:30-11:30.

Sec. II, T., Th., 11:30-12:30.

Assistant Professor Van Wye.

Course 25 counts as only one University credit for each semester. It is recommended for students who expect to take Course 13, but it cannot be counted toward a major in English.

13. Forms of Public Address.—This course is intended to serve as an introduction to debating and as a preparation for effective public speaking. T., 1:00-3:00.

Assistant Professor Van Wye.

Course 13 is open to students who have passed creditably in Course 1 and Course 2a. It is recommended for Seniors who are candidates for the Jones prizes.

[26a. The Essay.] A consideration of the origin and history of the English essay, involving a study of the rise of periodical literature and some reading of foreign examples of the type. *First semester*, M., W., F., 1:00-2:00.

Assistant Professor Park.

Omitted in 1913-14.

For Undergraduates and Graduates

7a. Old English Prose.—An elementary reading course in Old English. *First semester*, T., Th., S., 8:30-9:30.

Assistant Professor Young.

Either Course 7a or Course 10 (Chaucer) is required of all students who choose English as a major subject. Those who elect Course 7a must also elect either Course 8b or Course 9b.

8b. Old English Poetry.—*Beowulf* or some other long poem, supplemented by readings in the history of Old English literature. *Second semester*, T., Th., S., 8:30-9:30.

Assistant Professor Young.

[9b. Early Middle English.] A study of the development of the English language and its literature from the Norman Conquest to the Age of Chaucer, with especial emphasis upon the flourishing of romance. *Second semester*, T., Th., S., 8:30-9:30.

Omitted in 1913-14.

Assistant Professor Young.

10. Chaucer.—The work and influence of Chaucer: his times, sources, contemporaries, and immediate successors, studied chiefly from the literary point of view. M., W., F., 11:30-12:30.

Assistant Professor Stevens.

Either Course 10 or Course 7a (Old English) is required of all students who choose English as a major subject. Those who elect Course 7a must also elect Course 8b or Course 9b.

12. Literary Composition.—This course considers the various prose literary forms from the point of view of original composition. Only those students are admitted to the course who satisfy the instructor of their ability to write well. T., Th., 11:30-12:30.

Assistant Professor McVea.

[14. The English Drama before Shakespeare.] This course considers the origins of the English drama and its earlier manifestations in miracle plays, moralities, and interludes, as well as the regular drama to the death of Marlowe. M., W., F., 9:30-10:30.

Omitted in 1913-14.

Assistant Professor Stevens.

15. The English Drama from the Death of Marlowe to 1642.—A study of Shakespeare's contemporaries and immediate successors in the development of the drama. M., W., F., 9:30-10:30.

Assistant Professor Stevens.

[27. English Drama Since the Restoration.] A study of the development of the drama in England during the eighteenth and nineteenth centuries, with some attention to its foreign relations. M., W., F., 1:00-2:00.

Assistant Professor Park.

Omitted in 1913-14.

[19a. The English and Scottish Popular Ballads.] A study of the characteristics of folk-poetry and of the origin and development of the popular ballad. *First semester*, T., Th., 1:00-2:00.

Omitted in 1913-14.

Assistant Professor Stevens.

21. English Poetry from Spenser to Burns.—A study of the development of English poetry, exclusive of the drama, from the beginning of the Elizabethan Age through the eras of Milton and Pope to the close of the eighteenth century. T., Th., 9:30-10:30.

Assistant Professor Stevens.

22. Foreign Backgrounds of English Literature.—An introduction to the literature of modern Europe, presenting a general survey of some of the more important works and tendencies since the Renaissance, with particular stress upon such as have proved influential in England. T., Th., 2:00-3:00. Professor Chandler.

[23. The Literary Movement of the Eighteenth Century.] A detailed study of the characteristics of romanticism and of their manifestation in the literature of England, France, and Germany, prior to the culmination of the movement in the early nineteenth century. W., 4:00-6:00. Professor Chandler.

Omitted in 1913-14.

24. Recent European Drama.—A study of the new dramatic literature, its varieties, technic, aims, and problems, beginning with the later plays of Ibsen, and considering the art and thought of such other representative writers for the stage as Björnson, Hauptmann, Sudermann, Schnitzler, Maeterlinck, Hervieu, Rostand, D'Annunzio, Echegaray, Strindberg, Tchekov, Pinero, Jones, Phillips, Synge, and Shaw. W., 4:00-6:00. Professor Chandler.

For Graduates Only

20. Seminary.—Studies in Literary Theory.—An examination of the principal theories of literature considered historically and philosophically. The later portion of the course will be devoted to the investigation of special problems in literary criticism. T., 3:30-5:30. Professor Chandler.

For Teachers

For courses available for teachers see Courses 24 and 20, and the evening courses.

Evening Courses

30. English Composition.

Sec. I, Th., 7:30-9:30.

Assistant Professor Park.

Sec. II, T., 4:45-6:45.

Assistant Professor Stevens.

[31. Nineteenth Century Prose.]

Omitted in 1913-14.

Assistant Professor Young.

32. Shakespeare. M., 7:30-9:30.

Assistant Professor Young.

33. Public Speaking. T., 7:30-9:30.

Assistant Professor Van Wye.

GEOLOGY AND GEOGRAPHY

NEVIN M. FENNEMAN, Ph. D., Professor of Geology and Geography.

J. ERNEST CARMAN, B. S., . . . Assistant Professor of Geology.

WALTER H. BUCHER, Ph. D., Instructor in Geology.

For Undergraduates

1. An introductory study of minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean; followed by a brief study of the physiography of the United States. Lectures, M., W., F., 8:30-9:30; Laboratory, M., W., 2:00-4:30; T., Th., 9:30-12:00; T., Th., 2:00-4:30; T., Th., 1:00-3:30.

Professor Fenneman and Dr. Bucher.

2. General Geology.—This course is primarily for co-operative engineering students, but Liberal Arts students will also be admitted. An introductory study of minerals and rocks, dynamic geology and topography, followed in the second semester by stratigraphic, structural, and economic geology. M., T., 9:30-10:30; W., 9:30-11:30.

Assistant Professor Carman.

9. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure; special attention given to the economic deposits of each period. Frequent local (half-day) excursions noting fossils, stratigraphy, physiography, and economic relations. Lectures, T., Th., 8:30-9:30; Laboratory, M., 2:00-4:30. Course 1 is prerequisite.

Assistant Professor Carman.

Geology 9 is accepted as graduate work by agreement with the professor in charge.

For Undergraduates and Graduates

5b. Field Geology and Survey Methods.—The study and mapping of assigned areas in the vicinity of Cincinnati. Students work singly or in parties of two, and submit typewritten reports with topographic and geologic maps. *Second semester.* Hours to be arranged by agreement with each party. Credit according to number of hours elected. Course 1 is prerequisite.

Assistant Professor Carman.

*7. Mineralogy.—This course embraces (1) geometrical study of crystal forms illustrated by wooden models; (2) description and classification of minerals, about 400 species being used in laboratory study; (3) determinative mineralogy and blowpipe analysis. M., 9:00-10:30; W., 8:30-11:30.

Dr. Bucher.

* Course 1 is not prerequisite to Course 7, but the latter is not accepted as a graduate course for students making Geology a major, unless Course 1 or its equivalent has been taken.

[8. Introductory Paleontology.] The work of this course is mainly with fossil invertebrates, their specific features, the age of the rocks which contain them, their migrations and association in societies. Recognition at sight is emphasized. Three hours, to be announced. Assistant Professor Carman.

Omitted in 1913-14.

[12. Petrology.] This course embraces (1) the optical principles of mineralogy; (2) the microscopic study of minerals in rock sections; (3) a systematic study of rocks, their constitution, structure, origin, and classification. Two or three hours, to be announced.

Course 7 is prerequisite.

Omitted in 1913-14.

13. Special Work in Geology.—Any student in this department may, by agreement with the instructors in charge, register for individual study or investigation not described in the list of courses. Such work must be regularly supervised and approved upon examination or by the preparation of a thesis. Credit according to number of hours elected.

14. Course 14 is outlined under the heading "For Teachers." Open to college students only by special agreement with the professor in charge.

16. Course 16 is outlined under the heading "For Teachers."

For Teachers

14. General Geology for Teachers.—Elements of dynamic, structural, and physiographic geology, being identical with the corresponding parts of Course 1. Lecture, S., 8:30-10:30. Field or Laboratory, 10:30-12:50. Professor Fenneman.

16. Advanced Physiography of the United States.—Course 1 (or Course 14) and Course 9 are prerequisite. Lecture, W., 4:00-6:00; S., 10:30-11:30. Professor Fenneman.

Course 16 runs through more than one year, but may be entered at the beginning of any semester.

Course 9 is also given to teachers who have had Course 14. Lecture, S., 8:30-10:30; Field or Laboratory, 10:30-12:50.

Assistant Professor Carman.

Evening Course

18. Elementary Geology.—Equivalent to the first half of Course 1, but treating certain subjects more fully. Lecture, T., 7:30-9:30; laboratory, Th., 7:30-9:30. Assistant Professor Carman.

GERMAN

MAX POLL, PH. D., . . . Professor of the Germanic Languages.

CLAUDE M. LOTSPEICH, PH. D., . Associate Professor of German.

ELEANOR NIPPERT, A. B., Instructor in German.

MARTIN LUDWICH, M. E., Instructor in German.

ASSISTANT: Emma Andriessen, A. M.

For Undergraduates

1. Elementary German.—Grammar, translation from German into English, and elementary exercises in translating into German.

Sec. I, T., Th., S., 8:30-9:30.

Sec. II, M., W., F., 11:30-12:30.

Sec. III, M., W., F., 1:00-2:00.

Associate Professor Lotspeich and Miss Nippert.

Course 1 is open to students who have had no German in the high school.

2. German Prose and Poetry.—Reading at sight, grammar, composition, and dictation.

Sec. I, M., W., F., 9:30-10:30.

Sec. II, M., W., F., 10:30-11:30.

Sec. III, M., W., F., 11:30-12:30.

Associate Professor Lotspeich and Miss Nippert.

Course 2 is open to students who have passed in Course 1 or who have had two years of German in the high school.

Course 2 does not count towards a major in German.

20. German Scientific Prose.—Subjects in natural science. T., Th., 11:30-12:30. Associate Professor Lotspeich.

Course 20 is open to students who have passed in Course 1 or its equivalent. Course 20 does not count towards a major in German. If taken after Course 2, Course 20 will count only as a half course.

3. German Composition (Beginners' Course).—German grammar, conversation, and practice in writing German. T., Th., 10:30-11:30. Miss Nippert.

Course 3 is open to students who have passed in Course 1. Courses 2 and 3 may be advantageously taken together.

**4. Introduction to German Literature of the Eighteenth Century.—Lessing's *Emilia Galotti*, Schiller's *Jungfrau von Orleans* and *Maria Stuart*, Goethe's *Iphigenie*, *Egmont*, *Tasso* and *Goetz von Berlichingen*. Translation and reading at sight. Practice in

** Students entering the University who have done advanced work in German may anticipate this course by passing an examination on the work as outlined above, within three weeks after matriculation.

writing German, based on the reading. This course is conducted mainly in German.

Sec. I, M., W., F., 10:30-11:30.

Sec. II, M., W., F., 9:30-10:30.

Professor Poll, Miss Nippert, and Assistant.

Course 4 is open to students who have passed in Course 2. Students in this course are urged to take a composition course in addition.

21. German Composition (Intermediate Course).—Practice in composition, conversation and in writing German. T., Th., 9:30-10:30.
Miss Nippert.

Courses 4 and 21 may be advantageously taken together.

For Undergraduates and Graduates

5. History of German Literature to the Nineteenth Century, with special study of the Classic Periods of the Twelfth and Eighteenth Centuries. Among other works the following are read in 1913-14: *An Anthology of German Literature*, by Calvin Thomas; the *Nibelungenlied* (translated into modern German by R. Woerner); Lessing's *Nathan*; Schiller's *Wallenstein* and *Braut von Messina*, and Goethe's *Faust*. Lectures in German, collateral reading. M., W., F., 9:30-10:30.
Professor Poll and Assistant.

Course 5 is open to students who have passed in Course 4.

6. German Literature of the Nineteenth Century.—The Romantic School. The Novel. The Drama and Lyrics. Lectures, collateral reading and written reports by the class. Th., 4:00-6:00.
Professor Poll.

Course 6 is open to students who have passed in Course 5.

10. German Composition (Advanced Course).—Advanced composition and practice in writing German. S., 9:30-11:30.

Professor Poll.

[30. Glimpses of German Life and Culture.] Papers and discussions in German. Advanced composition. S., 9:30-11:30.

Omitted in 1913-14. Professor Poll.

Primarily for Graduates

12. Interpretation of both parts of Faust and Study of the Legend.—Collateral reading and written reports. T., 4:00-6:00.

Professor Poll.

Course 12 is open to students who have passed in Course 5.

[11b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] Lectures in German and collateral reading. *Second semester*, T., 4:00-6:00. Professor Poll.

Course 11b is open to students who have passed in Course 5 or 6.

Omitted in 1913-14.

[7. Middle High German.] Wright's *Middle High-German Primer*. Bachmann's *Mittelhochdeutsches Lesebuch*. Translation into modern German. M., 4:00-6:00.

Omitted in 1913-14.

Associate Professor Lotspeich.

[8. Old High German.] Braune's *Althochdeutsche Grammatik*, and the same author's *Althochdeutsches Lesebuch* are used as textbooks. Translation into modern German. During a part of the second semester the Old Saxon phonology and morphology will be studied and selections from the Heliand will be read. M., 4:00-6:00.

Omitted in 1913-14.

Associate Professor Lotspeich.

[13. Gothic.] Braune's *Gotische Grammatik*; reading of selections from Ulfilas, lectures on Germanic philology. W., 4:00-6:00.

Omitted in 1913-14.

Associate Professor Lotspeich.

26. Old Norse.—Hensler's *Altislaendisches Elementarbuch*. Reading of selections from the Sagas. In the second semester selected poems of the Edda will be read. M., 4:00-6:00.

Associate Professor Lotspeich.

[9b. German Seminary.] Willem's *Van den vos Reinaerde. Second semester*. T., 4:00-6:00.

Professor Poll.

Omitted in 1913-14.

For Teachers

Courses 10 and 30, outlined above, are intended primarily for teachers.

Evening Courses

33. Elementary German.—Grammar, translation from German into English, and elementary exercises in translating into German. W., 7:30-9:30.

Mr. Ludwich.

34. Advanced German, Prose and Poetry.—Translation, sight reading, grammar, composition, dictation. T., 7:30-9:30.

Associate Professor Lotspeich.

35. Introduction to German Literature of the Eighteenth Century.—Translation and reading at sight. Practice in writing German, based on the reading. This course is conducted in German. W., 7:30-9:30.

Professor Poll.

GREEK

JOSEPH EDWARD HARRY, PH. D., Professor of Greek.

ARTHUR JAMES KINSELLA, A. M., Instructor in Greek.

For Undergraduates

1. Oratory—Epic Poetry—Philosophy.—Lysias, six orations; Herodotus, one book; *Iliad*, Books XIX-XXII.

The Lyric Poets.—Selections. Plato: *Protagoras*; *Lysis*; *Laches*; *Charmides*. Collateral reading: two orations of Lysias; two books of the *Iliad*; Plato's *Apology* and *Crito*. M., W., F., 9:30-10:30, throughout the year. Professor Harry.

A collateral course is offered by Mr. Kinsella for those students who are unable to attend at this hour.

2. Greek Prose Composition.—M., 10:30-11:30, throughout the year. Mr. Kinsella.

Course 2 should be taken in connection with Course 1.

3. The Drama.—Euripides, *Hippolytus*; Sophocles, *Oedipus Tyrannus*; Aeschylus, *Prometheus*; Aristophanes, *Nubes*. Collateral reading—Euripides: *Alcestis*, *Ion*. M., W., F., 10:30-11:30, throughout the year. Professor Harry.

Course 3 is open to students who have completed Course 1.

4. The Odyssey.—Two hours weekly; to be arranged.

Mr. Kinsella.

8. The Life and the Literature of the Ancient Greeks.—Greek Life, *first semester*. Homer, *second semester*. Th., 10:30-11:30.

Professor Harry.

Students who are not acquainted with the Greek language may be admitted to Course 8.

9. Elementary Greek.—First Greek book and grammar. Xenophon. M., W., F., 9:30-10:30. Mr. Kinsella.

10. The New Testament.—A course in grammar and translation. Two hours; to be arranged with the instructor.

Throughout the year.

Mr. Kinsella.

Course 10 alternates with Course 16.

[11. Advanced Course in the Greek Drama.] *Iphigenia*, *Antigone*, *Agamemnon*, *Aves*, *Ranae*. M., W., F., 10:30-11:30.

Omitted in 1913-14.

Professor Harry.

12. Xenophon's *Hellenica*, *first semester*. *Symposium*, *Memorabilia*, *second semester*. T., Th., 10:30-11:30. Mr. Kinsella.

15. Intermediate Greek.—Prose Composition. Homer, I-III. M., W., F., 11:30-12:30. Mr. Kinsella.

Prerequisite: Course 9 or its equivalent.

[16. Hellenistic Greek] Philo and other writers of this period. Two hours throughout the year; to be arranged with the instructor.

Course 16 alternates with Course 10.

Mr. Kinsella.

Omitted in 1913-14.

17. First Year Greek.—T., Th., S., 11:30-12:30.

Professor Harry.

18. Advanced Course in Greek Drama.—*Bacchae*, *Ajax*, *Vespae*, *Pax*. T., 2:00-4:00; Th., 2:00-3:00.

Mr. Kinsella.

Course 18 alternates with Course 11.

20b. Greek Mythology.—A lecture course with collateral reading. T., Th., 9:30-10:30. Mr. Kinsella.

Students who are not acquainted with the Greek language may be admitted to Course 20b.

For Undergraduates and Graduates

13. Greek Art.—A course in the grammar and history of Greek art, including architecture. Special attention is given to the spirit and principles of plastic art, to the influence of religion and athletics, to the temples and their decorations, and to the masterpieces of the great Greek sculptors. Pre-Hellenic archaeology, Greek architecture, and sculpture (1914-15); vase paintings, coins, gem engraving, wall paintings (1913-14). T., 10:30-11:30.

This class is limited to forty students. Professor Harry.

Primarily for Graduates

5. Rapid Reading.—W., 3:00-4:00. Professor Harry.

6. Practical Exercises in Greek.—F., 3:00-5:00.

Professor Harry.

7. Greek Seminary.—The Drama (1913-14); The Historians (1914-15). M., 3:00-5:00.

Professor Harry.

Course 7 is open to graduates and to those who have completed the undergraduate courses in Greek.

HISTORY

* MERRICK WHITCOMB, PH. D., Professor of History.

ISAAC JOSLIN COX, PH. D., . . . Associate Professor of History.

JAMES FRANCIS DILWORTH, A. M., . Instructor in English History.

PHILIP W. MACDONALD, A. M., Instructor in History.

ASSISTANTS: Lesley Henshaw, A. M., Margaret B. Plimpton, A. B.

For Undergraduates

1. Middle Ages—Renaissance.—This course includes the main facts of European history from the fall of the Roman Empire to the beginning of the Lutheran Reformation. Lectures and recitations. M., W., F., 9:30-10:30. Mr. MacDonald.

3. The Revolution and Napoleon.—Beginning with the Bourbon period this course includes a study of the Ancien Régime and the French Revolution, and follows the fortunes of Napoleon to 1815. Lectures and recitations. M., W., F., 10:30-11:30.

Mr. MacDonald.

13. General Course in English History.—This course, while open to all students, is especially recommended for those who de-

* Absent on leave, 1913-14.

sire a general introductory course as preparatory to the study of both European and American history. The course traces the development of the English people from the earliest times to the present. The method is by lecture, text-book, and source-book. M., W., F., 1:00-2:00. Mr. Dilworth.

29. Ancient History to 476, A. D.—This course comprises a brief survey of the development of the principal Oriental nations; the political and the social life of the Greeks; the early political life and expansion of the Roman people, and their social and economic development under the Empire. T., Th., 8:30-9:30. Mr. MacDonald.

15. General Course in American History.—This course, while open to all, is especially recommended for those who have not had American history in the high school and for those who contemplate taking work in the College for Teachers. The work covers the period from the earliest discoveries to the present time and is based largely upon a text-book, supplemented by regular reports and lectures. Special quiz sections and conference groups at other hours, if necessary. M., W., F., 8:30-9:30. Associate Professor Cox.

For Undergraduates and Graduates

25. European History Since 1814.—An advanced course dealing with the problems of European history in the nineteenth century. France since 1814; Germany since 1814; the Kingdom of Italy; the Eastern Question; Colonization. T., Th., 10:30-11:30.

Open to Seniors; to Juniors by permission. Mr. MacDonald.

[46. History of Germany.] Beginning with the early Germans this course will follow the history of the German peoples down to the present time. The relations of the Germans to the Roman Empire; conquests of Charles the Great; the Medieval Empire; the Reformation; rise of the Hohenzollern dynasty; period of Frederick the Great; Napoleon; Wars of Liberation; organization of the German Empire. T., Th., 10:30-11:30.

Omitted in 1913-14.

20. Spain and Spanish America.—A brief view of the development of the Spanish nation, tracing typical institutions that later affected the Spanish colonies; the discovery of America and the development of the Spanish colonial system; the struggle for Spanish American independence; the subsequent development of selected countries in Latin America, their relations with Europe and the United States; Pan-American movements of the present day. Lectures and special reports. Open to advanced students. Th., 9:30-11:30. Associate Professor Cox.

21. American Constitutional History.—The course treats of the development of governmental institutions during the Colonial era, and of the important constitutional questions occurring between the Revolution and the Civil War. M., W., F., 11:30-12:30.

Associate Professor Cox.

Open to those who have had Course 15 or an equivalent.

[22. American Constitutional History (Continued).] A review of the leading governmental problems connected with the Civil War and Reconstruction Periods, and the subsequent industrial and territorial expansion of the United States. Lectures and special reports.

Omitted in 1913-14.

Associate Professor Cox.

[28. Problems of American Expansion.] A general view of the territorial development of North America with the United States as its chief factor. Emphasis will be given to filibustering operations in connection with Spanish-American relations. Lectures and special reports.

Associate Professor Cox.

Omitted in 1913-14.

35. The Ohio Valley and the Old Northwest.—A survey of the discovery, exploration, and settlement of this locality and of its development to the Civil War. Lectures and special reports. Open to teachers and advanced students. This is suggested as a preparatory course for Course 39 and for those who teach local history in the grades. S., 9:30-10:30.

Associate Professor Cox.

39. Seminary in American History.—Politics and Political Leaders of the Ohio Valley. The course is devoted to an intensive study, from the original sources, of selected national political issues affecting this section, and the social and economic causes underlying them. Seniors may be admitted. S., 10:30-12:30.

Associate Professor Cox.

Open to properly qualified teachers.

40. English Constitutional History.—The course traces the development of English political institutions from the Saxon period to the present times. Recommended for students who intend to enter upon the study of law, and for those who wish to specialize in American history. T., Th., 11:30-12:30.

Mr. Dilworth.

[44. English History Since 1856.] This course deals with the political, economic, and religious history of England since the close of the Crimean War and with the present day problems. Students are requested to subscribe to *The London Times* (Weekly Edition). T., Th., 11:30-12:30.

Mr. Dilworth.

Open to Seniors and Juniors.

Omitted in 1913-14.

Evening Courses

[48. General Course in English History.] This course, while open to all students, is especially recommended for those who desire a general introductory course as preparatory to the study of both European and American history. The course traces the development of the English people from the earliest times to the present. The method is by lecture, text-book, and source-book. W., 7:30-9:30.

Omitted in 1913-14.

Mr. Dilworth.

[47. General Course in American History.] The work of this course covers the Colonial and Revolutionary Periods and is based largely upon a text-book, supplemented by regular reports and lectures. Th., 7:30-9:30.

Associate Professor Cox.

Omitted in 1913-14.

49. General Course in American History (Continued).—The work of this course covers the period from 1789 to the present time, and is conducted in the same manner as Course 47. Th., 7:30-9:30.

Associate Professor Cox.

55. English Constitutional History.—The course traces the development of the English constitution from the Saxon period to the present times. Recommended for students who intend to enter upon the study of law, and for those who wish to specialize in American History. W., 7:30-9:30.

Mr. Dilworth.

LATIN

JOHN MILLER BURNAM, PH. D., Professor of Latin.

WILLIAM TUNSTALL SEMPLE, PH. D., Assistant Professor of Latin.

For Undergraduates

1. Livy.—Horace.—Selections from Livy. Selected Odes and Epodes of Horace. Informal discussion of the life and thought of the times.

Sec. I, T., Th., S., 8:30-9:30.

Sec. II, M., W., F., 10:30-11:30.

Sec. III, M., W., F., 10:30-11:30.

Professor Burnam and Assistant Professor Semple.

2. Cicero, Tacitus, Plautus, Horace.—Cicero's *Laelius*, Tacitus' *Agricola*, Plautus' *Menaechmi*, selections from Horace's Satires and Epistles.

Sec. I, T., Th., S., 9:30-10:30.

Sec. II, M., W., F., 9:30-10:30.

Assistant Professor Semple.

Course 2 is open to students who have completed Course 1.

6. Prose Composition.—One hour per week throughout the year. T., 10:30-11:30. Assistant Professor Semple.

Course 6 is required of all students who choose Latin as a major. It may be taken any year after the completion of Course I.

3. Plautus and Terence.—M., W., F., 11:30-12:30.

Assistant Professor Semple.

Course 3 is open to students who have passed in Courses 1 and 2.

4. Tacitus and Gaius.—Three hours, to be arranged.

Professor Burnam.

Course 4 is open to students who have passed in Courses 1 and 2.

5. Latin Literature.—A general survey of the life and letters of the Roman people from the earliest times until the later Empire. W., 2:00-3:00. Assistant Professor Semple.

Primarily for Graduates

Hours in all cases to be arranged

9. Latin and Romance Palaeography.—The history of the Latin alphabet in Western Europe, from A. D. 1 to the close of the fifteenth century. Students are given abundant practice in reading facsimiles. Three hours. Professor Burnam.

Course 9 must be preceded by at least four years of undergraduate work, and requires the ability to read French and German.

10. Latin Seminary.—

10a. Cicero. Three hours.

10b. Virgil. Omitted in 1913-14.

10c. Caesar. Omitted in 1913-14.

The seminary considers Caesar, Cicero, and Virgil, in successive years in the order mentioned. The author to be studied in 1913-14 (Course 10a) is Cicero. Professor Burnam.

12. Graduate Study.—Credit according to work elected and completed under the direction of the teaching staff of the department.

Evening Course

13. Livy.—Horace.—Selections from Livy. Selected Odes and Epodes of Horace. Informal discussions of the spirit and life of the times. M., 7:30-9:30. Assistant Professor Semple.

***MATHEMATICS**

HARRIS HANCOCK, PH. D., D. Sc., . . . Professor of Mathematics.
 STEPHEN ELMER SLOCUM, PH. D., Professor of Applied Mathematics.
 CHARLES NAPOLEON MOORE, Ph. D., Assistant Professor of Mathematics.
 LOUIS BRAND, A. M., . . . Assistant Professor of Mathematics.
 FLORENCE CAMERON LAWLER, B. S., . . . Instructor in Mathematics.
 JOSEPH HENRY KINDLE, A. M., . . . Instructor in Mathematics.
 EDWARD SMITH, M. S., Instructor in Mathematics.

For Undergraduates

1. Algebra—Trigonometry — Analytical Geometry.— Selected portions of Algebra and the elementary Theory of Equations. Rietz and Crathorne, *College Algebra*.

Trigonometry. Crockett, *Trigonometry*; Rothrock, *Trigonometry*.

Analytical Geometry of Two Dimensions treated from the Cartesian standpoint. Nichols, *Analytic Geometry*.

Sec. I, M., T., W., Th., F., 8:30-9:30. Miss Lawler.

Sec. II, M., T., W., Th., F., 9:30-10:30.

Assistant Professor Moore.

Sec. III, M., T., W., Th., F., 10:30-11:30. Miss Lawler.

Sec. IV, M., T., W., Th., F., 9:30-10:30. Miss Lawler.

5. Calculus, Differential and Integral.—Osborne, *Calculus*; Davis, *Calculus*. M., T., Th., F., 10:30-11:30.

Sec. I, Professor Hancock.

For Undergraduates and Graduates

8a. Advanced Integral Calculus.—Byerly, *Integral Calculus*. Lectures. M., W., F., 9:30-10:30, *first semester*.

Professor Hancock.

9b. Differential Equations.—Forsyth, *Differential Equations*. Lectures. M., W., F., 9:30-10:30, *second semester*.

Professor Hancock.

[15. Theory of Equations, Including Determinants.] Burnside and Panton, *Theory of Equations*. Lectures. M., W., F., 9:30-10:30.

Omitted in 1913-14. Professor Hancock.

6. Advanced Analytical Geometry of Two Dimensions.—C. Smith, *Conic Sections*. Lectures. T., 2:00-4:00.

Assistant Professor Moore.

* See other courses in Mathematics and Applied Mathematics, College of Engineering.

[7a. Analytical Geometry of Three Dimensions.] The plane, straight line and quadric surfaces; theory of surfaces and curves. C. Smith, *Solid Geometry*. Lectures and text. T., Th., S., 10:30-11:30, *first semester*. Professor Slocum.

Course 7a is open to graduate students and to those who have passed in Course 5.

Omitted in 1913-14.

Primarily for Graduates

34. Advanced Algebra.—Part II.—M., Th., 4:00-6:00.

Professor Hancock.

11b. Fourier's Series and Spherical Harmonics.—Byerly, *Fourier's Series and Spherical Harmonics*. This course is intended as an introduction to mathematical physics. After a preliminary study of certain trigonometric series, Fourier's theorem for the development of a function into a trigonometric series is derived, and the limitations of its validity investigated. This is followed by the study of Lagrange's, Laplace's, and Lamé's functions, with applications to problems in heat, electricity, potential, elasticity, etc. *Second semester*, Th., 4:00-6:00; S., 9:30-10:30.

Professor Slocum.

10a. Theory of Errors and Method of Least Squares.—Wright and Hayford, *Adjustment of Observations*. The general theory of the adjustments of observations, with applications to triangulation and the derivation of empirical formulas from experimental data. *First semester*, M., 4:00-5:00; W., 4:00-6:00. Professor Slocum.

40. Seminary.—Theoretical and experimental research in some special topic of the mechanics of rigid, elastic, fluid, or gaseous bodies. Results to be summarized in a form suitable for publication. Credit according to number of hours elected. Hours by special arrangement. Professor Slocum.

29. Theory of Functions of a Real Variable. S., 9:30-11:30.

Assistant Professor Moore.

The following courses which are given from time to time are omitted in 1913-14:

16a. Theoretical Mechanics.

16b. The Mathematical Theory of Elasticity.

26. The History and Teaching of Mathematics.

30. Theory of Numbers, Part I.—Natural Numbers.

31. Theory of Numbers, Part II.—Algebraic Numbers.—Dedekind's Theory.

32. Theory of Numbers, Part III.—Kronecker's Theory.

24. Elliptic Functions, Part I.—Analysis.

25. Application of Elliptic Functions, Part II.
 20. Theory of Maxima and Minima Involving Several Variables. The Calculus of Variations.
 36. Vector Analysis.
 28. Theory of Functions.—Lectures on the Theory of Functions of a Complex Variable.
 33. Advanced Algebra.—Lectures.
 18a. Theory of Minimal Surfaces.

Evening Courses

40. Algebra—Trigonometry.—Selected portions of algebra and the elementary Theory of Equations. Ashton and Marsh, *College Algebra*. Trigonometry: Rothrock, *Trigonometry*. F., 7:30-9:30.
 Mr. Smith.
 42. Analytical Geometry and Elementary Calculus. W., 7:30-9:30.
 Mr. Kindle.

PHILOSOPHY

GUY ALLAN TAWNEY, PH. D., Professor of Philosophy.
 HENRY G. HARTMANN, Ph. D., Assistant Professor of Philosophy.

For Undergraduates

- 1a. Introduction to Philosophy.—An outline study of the field of philosophical discussion, with a definition of its chief problems and the method of investigating them. Open to students who have completed one year of university work. *First semester*, M., W., F., 9:30-10:30.
 Professor Tawney.
 2b. Logic.—An introductory course in the theory of reasoning, including the essentials of formal logic and the principles of proof. Open to students who have completed at least one year of work in the University. *Second semester*, M., W., F., 9:30-10:30.
 Professor Tawney.

For Undergraduates and Graduates

- [3a. History of Philosophy from the Italian Renaissance to the time of Kant, the opening of the nineteenth century.] *First semester*, M., W., F., 8:30-9:30.
 Professor Tawney.
 Omitted in 1913-14.
 [4b. History of Philosophy from Kant to the Present.] Courses 3a and 4b will alternate biennially with Courses 5a and 6b. *Second semester*, M., W., F., 8:30-9:30.
 Professor Tawney.
 Omitted in 1913-14.

5a. History of Ancient Philosophy to the beginning of the Christian Era.—*First semester*, M., W., F., 8:30-9:30.

Assistant Professor Hartmann.

6b. History of the Philosophy of the Middle Ages.—*Second semester*, M., W., F., 8:30-9:30. Assistant Professor Hartmann.

7a. Ethics.—An introduction to the theory of morals. The course includes, beside the theory of morality, discussions of selected problems of present moral experience. Open to students who have completed two years of work in the University. *First semester*.

Sec. I, M., W., F., 10:30-11:30.

Sec. II, M., W., F., 1:00-2:00.

Professor Tawney and Assistant Professor Hartmann.

18b. Ethical Interpretation.—A study of the life of practical activity from the ethical standpoint. The fundamental concepts of political philosophy, the relation of morality to legislation, the morality of the economic order, and the problems of moral training, receive special attention. Course 7a is prerequisite.

Sec. I, M., W., F., 10:30-11:30.

Sec. II, M., W., F., 1:00-2:00.

Professor Tawney.

9a. Social Psychology.—See Psychology 8a.

This course counts towards a major in either psychology or philosophy.

Assistant Professor Hartmann.

10b. Aesthetics.—A discussion of the facts and principles involved in the experience of the beautiful and in the creation and appreciation of the various art-products. The course is to be conducted by means of lectures, text-book, and assigned readings. *Second semester*, M., W., F., 11:30-12:30.

Assistant Professor Hartmann.

11a. Scientific Method.—A study of the general laws of research and systematic representation in the field of science. *First semester*, M., W., F., 11:30-12:30.

Professor Tawney.

15b. Scientific Method.—A study of the methods of five groups of sciences, namely, the mathematics, biology, physics, psychology, and philosophy. *Second semester*, M., W., F., 11:30-12:30.

Professor Tawney.

Primarily for Graduates

19. The Philosophy of Immanuel Kant with special reference to its historical development. T., 12:30-2:30.

Assistant Professor Hartmann.

21. The Philosophy of Religious Experience.—This course involves a survey of the history of religions, as well as the theory of the religious life and a study of some of the problems of religious education. Th., 1:00-3:00.

Professor Tawney.

14. Types of Philosophy.—Th., 3:00-5:00.

Professor Tawney.

For Teachers

12. The History of Philosophy.—In the fall of 1913 this course will begin with the philosophy of Immanuel Kant, it being part of a cycle of courses dealing with the history of philosophy. One hour throughout the year. S., 9:30-10:30. Professor Tawney.

20. Ethics.—S., 8:30-9:30.

Professor Tawney.

It should be remembered that work in the Department of Philosophy is facilitated by courses in psychology, sociology, political science, general history, economics, the history of education, art, and other allied subjects dealing with human life and the products of civilization.

Evening Courses

22. Ethics.—An outline of the history of morality, the theory of the moral life, and a study of the moral problems of the political and economic organization of society. M., 7:30-9:30.

Professor Tawney.

23. Logic. Th., 4:45-6:45.

Assistant Professor Hartmann.

PHYSICAL EDUCATION

ALFRED BRODBECK, Director of Physical Education.

MARGUERITE GRAY, A. B., Instructor in Physical Education.

Physical Training for Men.—All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: Three hours per week for all members of the Freshman class (lectures on hygiene, one hour, work in the gymnasium, two hours), and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed only under exceptional conditions, for which special permission must be secured from the Dean in advance.

A physical examination is required of each student of the two lower classes upon entrance and upon completion of the required work. Appointments for the examination must be made with the Physical Director at the beginning of the first semester.

Credit: One credit will be given for each semester's work.

Hours.—Phys. Ed. 1 (Freshmen). Gymnasium, T., Th., 10:30-11:30; M., W., 11:30-12:30; Lecture, F., 2:00-3:00.

Phys. Ed. 2 (Sophomores), T., Th., 4:00-5:00; T., Th., 11:30-12:30. Boxing, wrestling, fencing (voluntary). Mr. Brodbeck.

Physical Training for Women.—The work is arranged with a view to obtaining the best hygienic, corrective and recreative results. A physical examination will be made at the beginning of the Freshman and at the end of the Sophomore year.

The course for Freshmen consists of three hours attendance per week throughout the year. Two hours each week are spent in exercising in the gymnasium; the other hour is devoted to lectures on hygiene. The lectures must be attended by every member of the Freshman class, irrespective of the fact that she may be excused from the gymnasium work.

The course for Sophomores consists of two hours of exercise in the gymnasium, prescribed for all members unless excused by the Director of Physical Education or on a physician's certificate.

Credit: One credit will be given for each semester's work.

Hours—Phys. Ed. 1 (Freshmen), M., W., 1:00-2:00; M., W., 2:00-3:00; Lecture, F., 2:00-3:00.

Phys. Ed. 2 (Sophomores), T., Th., 1:00-2:00; T., Th., 2:00-3:00.
Voluntary Class.—F., 1:00-2:00. Miss Gray.

PHYSICS

LOUIS TRENCHARD MORE, PH. D., Professor of Physics.
SAMUEL JAMES McINTOSH ALLEN, PH. D., Associate Professor of
Physics.

ROBERT E. CLYDE GOWDY, Ph. D., Instructor in Physics.
THOMAS LANSING PORTER, Ph. D., Instructor in Physics.

ASSISTANTS: Mr. Evens, Mr. Lorenz, A. M.

For Undergraduates

26a. General Physics.—Lectures and recitations on mechanics, sound, and heat, illustrated with lecture experiments. *First semester*, M., W., F., 11:30-12:30. Professor More and Dr. Gowdy.

27b. General Physics.—Lectures and recitations on light, electricity and magnetism, illustrated with lecture experiments. *Second semester*, M., W., F., 11:30-12:30.

Professor More and Dr. Gowdy.

N. B.—The above courses are designed for students in the College of Liberal Arts only; they may be elected in the Freshman year. They will present the fundamental laws and phenomena of physics, and will be non-mathematical in treatment. Taken with Courses 2a and 22b, Experimental Physics, they satisfy the science requirement.

28a. Advanced General Physics.—Lectures and recitations on Mechanics and Heat. *First semester*. Twice weekly.

Dr. Porter.

29b. Advanced General Physics.—Lectures and recitations on Light, Electricity, and Magnetism. *Second semester*. Twice weekly.

Dr. Porter.

Prerequisites for Courses 28 and 29 are Courses 26 and 27, and Mathematics 1.

2a. Experimental Physics.—Laboratory work arranged to accompany General Physics. *First semester*.

Associate Professor Allen, Dr. Gowdy, Dr. Porter, and Assistants.

Sec. I, T., Th., 8:30-11:30.

Sec. II, T., Th., 1:00-4:00.

Sec. III, M., F., 1:00-4:00 (for Engineers only).

Sec. IV, W., 1:00-4:00.

22b. Experimental Physics.—Laboratory work arranged to accompany General Physics. *Second semester*.

Associate Professor Allen, Dr. Gowdy, Dr. Porter, and Assistants.

Sec. I, T., Th., 8:30-11:30.

Sec. II, T., Th., 1:00-4:00.

Sec. III, M., W., F., 1:00-4:00 (for Engineers only).

4. Advanced Experimental Physics.—Experiments in photometry, spectrum analysis, calibration of weights and thermometers, etc., requiring exact measurement. Twice weekly. It may be elected either semester.

Dr. Gowdy.

For Undergraduates and Graduates

3a. Theoretical Mechanics.—A course of lectures on the mathematical laws of mechanics. *First semester*, T., Th., S., 11:30-12:30.

Professor More.

18b. Theory of Electricity and Magnetism.—A course of lectures on the mathematical laws of electricity and magnetism. *Second semester*, T., Th., S., 11:30-12:30.

Professor More.

[19a. Theory of Heat.] A course of lectures on the mathematical laws of heat. *First semester*, T., Th., S., 11:30-12:30.

Omitted in 1913-14.

Professor More.

[15b. Theory of Light.] A course of lectures on the mathematical laws of light. *Second semester*, T., Th., S., 11:30-12:30.

Omitted in 1913-14.

Professor More.

The above courses may be elected for a minor in Physics, the following courses for a major, in graduate work.

8. Experimental Physics.—The exact determination of some of the standard and classical experiments. Credit according to number of hours elected. Professor More.

10. Seminary.—The reading and discussion of papers in physical journals. T., 4:00-5:00. Professor More.

16. Physical Manipulations.—A series of exercises in scientific shop-work. Shop-work; soldering and metal-working, screw-cutting and elementary lathe-work. Glass-work and physical processes; glass-blowing, cutting, grinding, polishing, silvering; fiber suspensions and preparations useful in the laboratory. Hours to be arranged. Without credit. Mr. Evens.

17b. Electric Waves and Wireless Telegraphy.—A course of lectures on the radiation emitted by electric and magnetic oscillators, with applications to wireless telegraphy and the theory of light. *Second semester*, M., W., 4:00-5:00.

Associate Professor Allen.

[20b. Ionization and Radio-activity.] A course of lectures and experimental demonstrations on the discharge of electricity through gases and the properties of the radio-active substances. *Second semester*, twice weekly. Associate Professor Allen.

Omitted in 1913-14.

For Graduates Only

7. Lectures on Theoretical Physics.—This course is designed to include three years' work. In 1913-14 the lectures discuss the theory of heat and generalized co-ordinates; 1914-15, electricity and magnetism; 1915-16, light. Twice weekly. Professor More.

25a. Theoretical Mechanics.—See under Mathematics 16a. Professor Slocum.

9. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the Mechanician. Daily. Professor More and Associate Professor Allen.

For Teachers Only

11. Laboratory Methods for Teachers.—This course comprises a set of experiments designed especially for teachers. The exercises will include those which are usually given in schools, and also those of a more difficult nature which illustrate the theoretical principles. S., 8:30-11:30. Dr. Porter.

Evening Courses

30a. General Physics.—Lectures with demonstrations on mechanics, heat, and sound. *First semester*, M., 7:30-9:30.

Associate Professor Allen.

30b. General Physics.—Lectures with demonstrations on light, electricity, and magnetism. *Second semester*, M., 7:30-9:30.

Associate Professor Allen.

31a. Experimental Physics.—Laboratory work to accompany General Physics. *First semester*. Sec. V, W., 7:30-9:30.

Dr. Porter.

31b. Experimental Physics.—Laboratory work to accompany General Physics. *Second semester*. Sec. V, W., 7:30-9:30.

Dr. Porter.

POLITICAL AND SOCIAL SCIENCE

SELDEN GALE LOWRIE, Ph. D., . . . Professor of Political Science.

CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political Science.

WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of Economics and Social Science.

POLITICAL SCIENCE

1. American Government.—The primary aim of this course is to prepare for the duties of citizenship and lay a foundation for the further study of political science. The nature and organization of our federal government will be studied the first semester, and state and local government will be studied the second semester. M., W., F., 10:30-11:30. Assistant Professor Gardner.

Not open to Freshmen.

For Undergraduates and Graduates

2a. European Governments.—A study of the nature and organization of the principal governments of Europe. *First semester*, M., W., F., 11:30-12:30. Assistant Professor Gardner.

Open to Juniors and Seniors and to those students taking Course 1.

2b. International Law.—A study of the principles, rules, and customs controlling the states of the civilized world in their relation to each other. *Second semester*, M., W., F., 11:30-12:30.

Not open to Freshmen. Assistant Professor Gardner.

[6a. American Legislatures and Legislative Methods.] A detailed study of the manner in which law-making bodies are organized and operated. Special attention will be given to the organization and operation of the Ohio General Assembly. Problems before the General Assembly will be considered and practice given in the drafting of bills and municipal ordinances. *First semester*, T., Th., 8:30-9:30. Professor Lowrie.

Omitted in 1913-14.

[6b. Public Finance and Taxation.] An introductory course in the principles of taxation and the existing methods of levying and collecting taxes—federal, state, and local. Also a study of the budget systems of the countries of the world as well as of states and cities. *Second semester*, T., Th., 8:30-9:30. Professor Lowrie.

Open to Juniors and Seniors and to those students who have taken Economics 1.

Omitted in 1913-14.

11a. Municipal Government.—A comparative study of municipal organization and administration in the United States and in European countries. Special attention is given to social and economic problems connected with urban life. *First semester*, M., W., F., 8:30-9:30. Assistant Professor Gardner.

Not open to Freshmen.

11b. Municipal Functions.—A study of the activities of the modern city. Special attention will be given the problems involved in the contemporary development of Cincinnati. This course will be given in co-operation with the Municipal Reference Bureau. *Second semester*, M., W., F., 8:30-9:30. Professor Lowrie.

4b. Political Parties and Party Methods.—A study of the theory and organization of political parties in the United States with particular reference to party methods and machinery. *Second semester*, T., Th., 8:30-9:30. Assistant Professor Gardner.

Not open to Freshmen.

[17b. Constitutional Law.] A study of the American Constitution, and its development through the interpretation of the Supreme Court. *Second semester*, T., Th., 8:30-9:30.

Omitted in 1913-14. Assistant Professor Gardner.

25b. Seminar in Charter Making.—A study will be made of the newer city charters. Particular attention will be given to the work of the Cincinnati Charter Commission. Given in co-operation with the Municipal Reference Bureau. *Second semester*, M., 4:00-6:00.

Open to those who have had Course 11a. Professor Lowrie.

3. History of Political Ideas.—A study of the development of political thought. The first part of the course is devoted to a series of lectures on Oriental, Greek, Roman, and medieval political ideas, students being assigned collateral reading in Aristotle, Plato, Polybius, St. Augustine, Thomas Aquinas, Dante, and others. The political philosophers of later date are studied principally from their writings, particular attention being given to Machiavelli, Bodin, Hobbes, Locke, Montesquieu, Rousseau, Burke, Bentham, Mill, Maine, and Seeley. The relationship between the systems of the various philosophers and the history of their times will receive special attention. W., 4:00-6:00. Assistant Professor Gardner.

Evening Course

30. American Government.—M., 7:30-9:30. The scope of this course is practically the same as that of Course 1 described above.
Assistant Professor Gardner.

SOCIAL SCIENCE**For Undergraduates**

5. Elementary Sociology.—An introductory course designed to present a working theory of the nature of society, the prevailing types of social organizations, and the larger problems connected therewith. The nature of sociology, facts of social evolution, social control, social organization, social ideals, social pathology, methods of social investigation, and the history of sociology. T., Th., 9:30-10:30.
Assistant Professor Parker.

For Undergraduates and Graduates

7. Modern Social Theories.—Lectures and assigned readings on the social theories of Comte, Mill, Spencer, Gumpłowicz, Tarde, Mackenzie, Ward, Giddings, Small, and others. Particular attention is given to the development of social theory and to the consequences of the theories of these writers in the field of practical social reform. M., W., 10:30-11:30.
Assistant Professor Parker.

15. Modern Philanthropy.—A study of the problems of charity. Treatment of the pauper, feeble-minded, insane, and of dependent children. Reform suggestions regarding the best methods of dealing with these classes. As an integral part of this course there will be a series of lectures on the scope and method of the work of the Associated Charities, the Department of Charities and Corrections of the City of Cincinnati, the House of Refuge, the Juvenile Court, the Juvenile Protective Association, the National Child Labor Organization, and the Social Settlement. M., W., 9:30-10:30.
Assistant Professor Parker.

20. Criminals and Delinquents.—Problems of Crime. Criminal anthropology, physical and psychical. Criminal diagnostics, definition of crime, detection and identification of criminals, state control of criminals. Criminal therapeutics, penalties, punishment and reformation of criminals, jails, prisons, and reformatories. Criminal hygienics, police prevention of crime, presumptive criminals. Principles of scientific penology, lynch-law, and the trend of crime in modern times. T., Th., 10:30-11:30.

Assistant Professor Parker.

21. Social Problems.—A study of current social problems and the influence of certain factors in social evolution. The function,

origin, forms, development, and problems of the family. Problems of population, immigration, the negro, the city, poverty and pauperism, education, and social progress. T., Th., 11:30-12:30.

Assistant Professor Parker.

22. Seminary.—Opportunity is here given for the detailed study of special problems in social science. Credit according to number of hours elected.

Assistant Professor Parker.

Evening Course

5. Elementary Sociology.—A fundamental course dealing with the origin, composition, evolution, and functions of society. Special attention will be given to the study of the existing social organization and certain of the larger problems connected therewith. This course is designed to be introductory to all advanced work in the field of Social Science. Th., 7:30-9:30.

Assistant Professor Parker.

PSYCHOLOGY

BURTIS BURR BREESE, PH. D., Professor of Psychology.

SCHACHNE ISAACS, A. M., Assistant in Psychology.

STUDENT ASSISTANT: Paul Raymond Stevenson, A. B.

For Undergraduates

1a. Introductory Psychology.—An analytical study of mental phenomena, with special attention to accurate observation and description. A general account of the subject matter of psychology. *First semester.* M., W., F., 11:30-12:30. Professor Breese.

1b. A continuation of 1a.—Section 1. *Second semester.* M., W., F., 11:30-12:30. Professor Breese.

For Undergraduates and Graduates

2a. Experimental Psychology.—Laboratory course. *First semester,* M., W., F., 2:00-4:30. Professor Breese and Mr. Isaacs.

2b. Experimental Psychology.—A continuation of 2a. *Second semester,* M., W., F., 2:00-4:30.

Professor Breese and Mr. Isaacs.

8a. Social Psychology.—The aim of this course is to exhibit the human mind in its development within a social environment; to show how, under the influence of the social environment, the native tendencies of the mind become gradually organized into systems of increasing complexity, and the ways in which they co-operate in shaping and sustaining such institutions as come to exist among

men in civilized societies. Open to students who have had Introductory Psychology. *First semester*, M., W., F., 9:30-10:30.

Dr. Hartmann.

9. Mental and Physical Tests.—Laboratory methods. Two credits per semester. Hours to be arranged.

Professor Breese and Mr. Isaacs.

Primarily for Graduates

3. Research.—Special investigation in the psychological laboratory. Hours to be arranged. Professor Breese.

[4. Seminar.] A critical study of the most important problems in psychology. Reports and discussions. Th., 3:00-5:00.

Omitted in 1913-14.

Professor Breese.

[6a. Educational Psychology.] The experimental and statistical methods in mental measurements. Intended for advanced students and teachers of experience. *First semester*. Hours to be arranged.

Omitted in 1913-14.

Professor Breese.

For Teachers

[5. Elements of Psychology.] A general account of the facts of mental life and their application to education. One credit per semester for A. B. S., 11:30-12:30. Professor Breese.

Omitted in 1913-14.

Evening Course

10. Introductory Psychology.—An analytical study of mental phenomena, with special attention to accurate observation and description. A general account of the subject matter of psychology. T., 7:30-9:30.

Professor Breese.

ROMANCE LANGUAGES

PHILLIP OGDEN, PH. D., . . . Professor of Romance Languages.

RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance Languages.

LEROY JAMES COOK, A. M., Instructor in French.

STUDENT ASSISTANT: Helen Judith Vickers, A. B.

FRENCH

For Undergraduates

1. Elementary French.—Fraser and Squir, *French Grammar and Reader*; Aldrich and Foster, *A French Reader*; Enault, *Le*

Chien du Capitaine; Coppée, On rend l'argent. Composition based on Fraser and Squair's *French Reader*.

Sec. I, M., W., F., 11:30-12:30.

Sec. II, T., Th., S., 8:30-9:30.

Mr. Cook.

2. Intermediate French.—*First semester*, Fraser and Squair's *French Grammar*, Part II; François, *French Prose Composition*; dictation and modern texts. *Second semester*, nineteenth century prose writers, etc. Dictation and composition.

Sec. I, M., W., F., 9:30-10:30.

Sec. II, M., W., F., 9:30-10:30.

Sec. III, T., Th., S., 9:30-10:30.

Professor Ogden, Miss Vickers, Mr. Cook.

Course 2 is open to students who have taken Course 1 or its equivalent.

11. French Literature in the Nineteenth Century.—A study of the principal authors, supplemented by lectures and collateral reading on the life and literature of the time. Daudet; Hugo; Zola; Loti. M., W., F., 10:30-11:30.

Professor Ogden.

Course 11 is open to students who have passed in Course 2.

3. French Composition.—Review of the more difficult points in French Grammar and Syntax. Dictation. Reproduction of narrative and descriptive passages read by the instructor from French authors. Conversation. Original composition in French. T., Th., 11:30-12:30.

Mr. Cook.

With the permission of the instructor.

Course 3 is open to students who have taken Course 2.

For Undergraduates and Graduates

4. French Drama in the Seventeenth Century.—A study of the principal authors, supplemented by lectures and collateral reading on the life and literature of the time. Corneille, Racine, Molière. T., Th., 9:30-10:30.

Professor Ogden.

Course 4 is open to students who have passed in Course 11.

5. French Drama in the Nineteenth Century. W., F., 1:00-2:00.

Mr. Cook.

10. Old French Readings.—Constans, *Chrestomathie de l'Ancien Français*. Lectures on historical French grammar. T., 4:00-6:00.

Professor Ogden.

Course 10 is open to students who have passed in Course 4 or its equivalent.

24. Special Studies in Modern French Literature.—Philosophic School; Parnassian School; Symbolists. T., 4:00-6:00.

Professor Ogden.

Course 24 is open to students who have passed in Course 4 or Course 11.

26. French Schools of Poetry in the Nineteenth Century.—Lectures; outside reading; conversation in French. T., Th., 8:30-9:30.
Professor Ogden.

For Teachers

30. Intermediate French.—Advanced grammar, composition, conversation. One credit per semester for A. B. S., 10:30-11:30.

Mr. Cook.

24. Course 24, outlined above, is open to teachers, by permission, as well as to regular students.

Teachers who are pursuing graduate studies and are qualified to do advanced work in the Romance languages can elect courses from the above upon advice from the head of the department.

SPANISH

For Undergraduates

6. Elementary Spanish.—Pronunciation, grammar, composition, conversational drill. Text-books: Bassett, *Spanish Grammar*; Hills, *Spanish Tales*; Padre Isla, *Gil Blas de Santillana*; Ramos-Aza, *Zaragüeta*. M., W., F., 10:30-11:30. Assistant Professor Bassett.

9. Intermediate Spanish.—Selected texts since 1850. Valera, *Pepita Jiménez*; Pereda, *Pedro Sánchez*; Pérez Galdós, *Doña Perfecta*; Hartzenbusch, *La coja y el encogido*. M., W., F., 1:00-2:00.
Assistant Professor Bassett.

18. Spanish Composition.—Systematic practice in speaking and writing. Review of syntax. Business forms. Bassett, *Spanish Composition*; Román y Salamero, *El castellano actual*; Harrison, *Spanish Correspondence*. T., Th., 1:00-2:00.

Assistant Professor Bassett.

For Undergraduates and Graduates

8. Spanish Literature in the XVI and XVII Centuries.—Cervantes, *Don Quijote*; selected plays by Lope de Vega and Calderón. History of Spanish literature from the age of Juan II to the Bourbons. T., Th., 10:30-11:30. Assistant Professor Bassett.

Course 8 alternates with Course 22.

[22. The Picaroon Novel.] *Lazarillo de Tormes*; Alemán, *Guzmán de Alfarache* (Part I); Cervantes, *Novelas ejemplares* (selections); Espinel, *Marcos de Obregon*. T., Th., 10:30-11:30.

Assistant Professor Bassett.

Course 22 alternates with Course 8.

Omitted in 1913-14.

Evening Courses

31. Elementary Spanish.—Pronunciation, grammar, oral practice, and introductory reading. F., 7:30-9:30.

Assistant Professor Bassett.

32. Advanced Spanish.—Grammar review and written exercises, selected prose texts, business and letter forms, practice in speaking. T., 7:30-9:30.

Assistant Professor Bassett.

ITALIAN

For Undergraduates

7. Elementary Italian.—Grandgent, *Italian Grammar*; De Amicis, *Cuore*; Serao, *All' Erta, Sentinella*; Testa, *L'oro e l'orpello*; Giacosa, *Come le foglie*. M., W., F., 11:30-12:30.

Assistant Professor Bassett.

*DRAWING, MODELING, AND CARVING

By an arrangement with the Art Academy of Cincinnati (originally established as the McMicken School of Design in 1869, and a department of the University of Cincinnati from 1871 to 1884, when it was transferred to the Cincinnati Museum Association) students of the University may elect courses in Drawing, Modeling, and Carving at the Art Academy in 1913-14, and, upon presentation of the proper certificate from the Director of the School, may receive credit in the Registrar's office for such courses as part of the total number of "credits" required for the degree of Bachelor of Arts. On the payment of a fee of twenty-five dollars at the office of the Art Academy, the student is admitted to the several day classes (drawing, modeling, carving, and design). For the night classes the fee is five dollars. In the Summer Term of ten weeks no instruction is given at night. The Winter Term extends from September 22, 1913, to May 29, 1914, the Summer Term from the middle of June to the end of August.

The following courses of instruction are offered:

1. Free-hand Drawing.—From objects and casts. Day classes, M., W., F., 8:45-12:45, or M., W., 1:30-4:30, and S., 8:45-12:45. Night classes, T., Th., F., 7:15-9:15.

Miss Young, Miss Miller, Miss Lord,
Miss Wilson, and Mr. Wiessler.

Color work in oils, water colors, or pastels is also taught in the day classes, but not at night.

* For the teachers' training course in art, see announcement of the College for Teachers.

2. Drawing and Painting from Life.—Figure or head. Day classes, M., T., W., Th., F., S., 8:45-12:45, and M., T., W., Th., F., 2:00-4:00. Night classes, M., T., W., Th., F., 7:15-9:15.

Mr. Duveneck, Mr. Meakin, and Mr. Wessel.

Artistic Anatomy is a part of this course. The night classes draw the head or figure from life.

3. Modeling.—From casts. Day classes, T., Th., S., 8:45-12:45. Night classes, M., W., 7:15-9:15. Mr. Barnhorn.

4. Modeling. Advanced Course.—From life. Day classes, M., T., W., Th., F., S., 8:45-12:45. Night classes, M., T., W., Th., F., 7:15-9:15. Mr. Barnhorn.

5. Wood Carving.—M., W., F., 12:30-4:30, and S., 8:45-12:45. Mr. Fry.

6. Decorative Design.—The principles of design, preparation of decorative motives, and their application to metals, enamels, leather, porcelain, etc. T., W., Th., F., 1:30-4:30. Miss Riis.

From the courses above offered a student may elect not more than six hours in any one semester. Not more than twelve hours of work in the Art Academy will be credited for the degree of Bachelor of Arts.

EXTERNAL COURSES

ASTRONOMY

152. A critical study of the historical development of astronomy from the earliest period to modern times.—M., 4:00-5:00, at the Walnut Hills Branch Library. Professor Porter.

ENGLISH

154. English Romantic Poets.—A study of the great poets of the early nineteenth century—Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats—involving a discussion of their technic, art, growth of mind, general interpretation of life, and relation to their time. M., 4:00-5:00, at the University School.

Professor Chandler.

153. General Course in English Poetry from Chaucer to the Victorian Period.—W., 4:00-5:00, at the Newport High School.

Assistant Professor McVea.

4. Nineteenth Century Prose.—T., 3:30-4:30, at the College Hill School.

Assistant Professor Young.

GEOGRAPHY

155. General Principles of Physical Geography.—This course of illustrated lectures deals with the features of the earth's surface and the processes that are constantly changing them. T., 4:00-5:00, at the Guilford School. Professor Fenneman.

HISTORY

157. The Ohio Valley, the Old Northwest, and the Old Southwest.—An outline of events from the period of discovery to the Civil War, centering around the Ohio River as "the course of empire." M., 7:30-8:30 p. m., at the Walnut Hills Branch Library; M., 4:00-5:00, at the Covington Public Library.

Associate Professor Cox.

156. The Colonial Possessions of Great Britain.—This course will deal with the relation of English colonization to that of other nations, the classification of British dependencies and the extent of British dominions, British North America, the West Indies, the English in India, English colonization in Australia, English colonization in Cape Colony and South Africa, the Crown Colonies and Protectorates, and the Imperial Confederation. Th., 4:00-5:00, at the Twenty-second District School. Mr. Dilworth.

PHILOSOPHY

159. The Theory of the Moral Life.—This course deals with the laws of moral growth in the lives of individuals and peoples, the main types of ethical theory, and some of the practical moral issues of the economic, political, and educational life of America at the present time. T., 7:30-8:30 p. m., at the Public Library.

Professor Tawney.

SOCIOLOGY

160. Elementary Sociology.—A fundamental course in sociology designed to present a working theory of the nature of society, the prevailing types of social organizations, and the larger problems connected therewith. T., 4:00-5:00, at the Newport High School.

Assistant Professor Parker.

161. Modern Philanthropy.—M., 4:00-5:00, at the Washburn School. Assistant Professor Parker.

COLLEGE FOR TEACHERS

The College for Teachers is organized under the joint management of the Board of Directors of the University and the Board of Education of the city of Cincinnati.

COMMITTEE IN CHARGE

- CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
ARCH I. CARSON, M. D., Member of the Board of Directors of the University.
RANDALL JUDSON CONDON, A. M., Superintendent of Cincinnati Schools.
EMIL POLLAK Member of the Board of Education.

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
RANDALL JUDSON CONDON, A. M., Superintendent of Cincinnati Schools.
WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History and Principles of Education, and Dean of the College for Teachers.
JOHN WILLIAM HALL, A. M., Professor of Elementary Education.
HENRY SKINNER WEST, Ph. D., Professor of Secondary Education.
BURTIS BURR BREESE, Ph. D., Professor of Psychology.
NEVIN MELANCTHON FENNEMAN, Ph. D., Professor of Geology and Geography.
GUY ALLAN TAWNEY, Ph. D., Professor of Philosophy.
*HARRIS MILLER BENEDICT, A. M., Professor of Botany.
ISAAC JOSLIN COX, Ph. D., Associate Professor of History.
CYRUS DE WITT MEAD, A. M., Assistant Professor of Elementary Education.
J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
HENRY GOTTLIEB HARTMANN, Ph. D., Assistant Professor of Philosophy.
ABBIE LOUISE DAY, B. S., B. Di., Instructor in Elementary Education.
VERNON LANTIS, A. M., Instructor in Botany.
ANNETTE BRAUN, Ph. D., Instructor in Biology.
WALTER BUCHER, Ph. D., Instructor in Geology and Geography.
SCHACHNE ISAACS, A. M., Assistant in Psychology.

OTHER OFFICERS OF INSTRUCTION

Courses in special subjects are given by the following persons connected with the Cincinnati public schools:

- WALTER H. AIKEN Music.
WILLIAM H. VOGEL Art and Hand Work.

* Absent on leave, first semester, 1913-14.

CARL ZIEGLER, M. D.	Physical Training and Hygiene.
A. H. STEADMAN	Penmanship.
H. H. FICK	German.
JULIA S. BOTHWELL	Kindergarten.
MARY ELIZABETH HYDE	Art.
WILLIAM P. TEAL	Art.
JEANNETTE SWING	Art.

The technical instruction and training in kindergarten courses is given by the following persons on the teaching staff of the Cincinnati Kindergarten Training School:

LILLIAN H. STONE	Principal.
GRACE ANNA FRY	Supervisor.
JOSEPHINE SIMRALL	Instructor.
JOHN JEROME THOMPSON	Art.
MRS. W. E. LEWIS	Physical Training.
MARY CULBERTSON	Physical Training.

At the Art Academy of Cincinnati:

ELIZABETH KELLOGG	History of Art.
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GENERAL STATEMENT

The College for Teachers is the department of education of the University. It is organized under the joint management of the Board of Directors of the University and the Board of Education of the city of Cincinnati. It is primarily a professional school for the training of teachers under University auspices, in close touch with a cosmopolitan public school system which serves as a working laboratory for teachers and students of education. Affiliated with the college are the Cincinnati Kindergarten Training School, the Art Academy of Cincinnati, and the Cincinnati Public Schools.

GENERAL REGULATIONS

The conditions governing admission, graduation, prerequisites, privileges, etc., vary with the different professional programs offered, and are best indicated in connection therewith, as follows:

PROGRAM I. For those fitting, primarily, for positions in elementary schools.

ADMISSION.—This program is open to Seniors and graduates, and may be pursued during a single year.

Seniors must be prepared to fulfill all the requirements for graduation in the College of Liberal Arts without being compelled to carry more than three hours work per semester in addition to the courses in education indicated below.

PREREQUISITE COURSES.—Before entering upon this program students must have had, as a part of their college courses, and as suitable prerequisites to the courses in education, the equivalent of the following:

- Psychology, three hours per week for one year.
- Ethics, three hours per week for one-half year.
- Physiography, five hours per week for one year.
- American history, three hours per week for one year.

Those who have had a year's study in American history in high school shall be exempt from the requirement in this subject.

COURSES REQUIRED.—

Education 1	6 credits.
Education 2	6 “
Laboratory work (30 hours practice teaching in connection with Education 2)....	2 “
Education 4	2 “
Elected from the following	8 “
Education 14.....	4 credits.
Education 16.....	2 “
Education 20.....	2 “
Education 22.....	2 “
Total	24 credits.

GRADUATION AND PRIVILEGES.—Seniors who complete the above courses in education may count the same toward the A. B. degree in the McMicken College of Liberal Arts and receive a Teacher's Diploma from the College for Teachers. This diploma entitles the graduate to a place on the preferred list of those who are eligible to appointment in the Cincinnati schools without examination except in Theory and Practice of Teaching, after two months of successful practice teaching.

Graduate students, in addition to receiving a Teacher's Diploma, will be given opportunity to fulfill the required practice teaching in the public schools during this year of study, so that they may become eligible to appointment in the local schools at the end of the year. They will also be permitted, by doing satisfactory pieces of independent work in connection with the courses in Education 1 and Education 2, to count either or both of these courses toward the A. M. degree in the Graduate School. They will not, however, be permitted to register in other courses in the University without the approval of the Dean of the College for Teachers, and in no case will they be permitted to choose

work in any other department of the University in excess of three hours per semester.

All students pursuing this program have the further privilege of taking the brief courses in special subjects given by supervisors of the city schools on Saturday mornings (Education 32, 34, 36 and 38), in lieu of passing examinations in the teaching of these subjects.

PROGRAM II. For those fitting, primarily, for positions in secondary schools.

ADMISSION.—This program is open only to graduates, with the approval of the Dean of the College for Teachers, the Dean of the Graduate School, and the head or heads of the University departments in which the student wishes to pursue advanced study; it may be taken in a single year. Students must give satisfactory evidence that they are well qualified, personally and otherwise, to undertake the work of this program and to become teachers in secondary schools. Such students must be willing to give from 6 to 12 periods per week as assistants in high school departments in which they are preparing to teach. Before registration a student must also be accepted by the principal of the high school and the head of the high school department in which apprenticeship is to be served; and in no case while pursuing this program will a student be permitted to choose more than the maximum of hours indicated below.

PREREQUISITE COURSES.—Psychology and Ethics, as indicated in Program I.

COURSES REQUIRED.—

Education 1, as indicated in Program I.....	6 credits.
Education 3	4 “
Education 3p, Practical Work (high school assisting)	2 “
Graduate work in not more than two subjects which the student is best qualified to teach	12 “
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Total	24 credits.

GRADUATION AND PRIVILEGES.—Completion of this program does not entail any privilege as to preference in appointment to positions as teachers in the local high schools, as is the case with the completion of Program I in relation to the local elementary schools. Nor, under the law of this state, can it exempt the graduate from an examination for a teacher's high school certificate, as Program

I exempts a candidate for a teacher's elementary certificate from examination, except in Theory and Practice of Teaching.

This program, however, with the provision which it makes for practical touch with high school work, will entitle graduates who complete it in a satisfactory manner to favorable consideration for positions in accredited schools of the University and in high schools generally, both public and private. It is for meeting the demands upon the University for teachers of this class that this program is primarily intended.

Preference in appointment to positions in the local high schools is given to college graduates who have had successful experience as regular teachers in elementary or secondary schools, who have achieved high rank as students in subjects which they wish to teach, who have made a professional study of the principles and problems of secondary education, and who obtain satisfactory marks in the high school examination conducted by the local Board of Examiners.

College graduates teaching in local elementary schools who aspire to appointment in the high schools of Cincinnati should pursue advanced courses in subjects which they wish to teach and take Education 3. Provision for doing this will be arranged at hours which do not conflict with class room duties.

PROGRAM III. For those fitting, primarily, for positions in kindergartens.

ADMISSION.—This program is open to Seniors and graduates and may be pursued during a single year.

Seniors must have not less than ninety credits in the College of Liberal Arts, including all required courses in that college, and the prerequisite courses indicated below. Both Seniors and graduates may be permitted to carry Biology 36 or 37, but with this exception students shall give their time undividedly to this program.

PREREQUISITE COURSES.—

Psychology, as in Program I.

Ethics, as in Program I.

Education 1.

Biology 36 and 37. Students who have elected Zoology in fulfillment of the science requirement in the College of Liberal Arts may omit Biology 36; those who have elected Botany may omit Biology 37.

COURSES REQUIRED.—See list under Kindergarten Training, page 156.

GRADUATION AND PRIVILEGES.—Graduates who have completed the above program in a satisfactory manner may count the same toward the degree of Bachelor of Arts in Education conferred by the College of Liberal Arts and the College for Teachers jointly, and receive diplomas from the Cincinnati Kindergarten Training School certifying that they are qualified to be directors in kindergartens. They will also be eligible to appointment in the local public kindergartens without examination except in the Theory and Practice of Kindergartening.

PROGRAM IV. For those fitting, primarily, for positions as teachers of German in elementary schools.

ADMISSION.—This program is open to Seniors and graduates, and may be pursued during a single year.

Seniors must be prepared to fulfill all the requirements for graduation in the College of Liberal Arts, toward which this program will count to the extent of eighteen credits.

PREREQUISITE COURSES.—Before entering upon this program students must have had, as a part of their previous college courses, and as suitable prerequisites to courses in education, the equivalent of the following:

Psychology, as in Program I.

Ethics, as in Program I.

For those who have had no German in high school, the equivalent of German 1, 2, 3, 4, 21, 5 and 10 or 30.

For those who have had two years of German in high school, the equivalent of German 2, 3, 4, 21, 5 and 10 or 30.

For those who have had four years of German in high school, the equivalent of German 4, 21, 5 and 10 or 30.

In no case will students be permitted to enter upon this program without the ability to speak the German language readily and fluently.

COURSES REQUIRED.—

Education 1	6 credits.
Education 2	6 “
Education 4	2 “
Education 30, with fifteen hours practice per semester	4 “

Total18 credits.

GRADUATION AND PRIVILEGES.—The same as in Program I, with the following modifications:

The restrictions as to the amount of other work to be carried by students does not apply to those pursuing this program. They shall, however, submit their cards to the Dean of the College for Teachers for his approval before registration. They should also arrange, if possible, to take the courses given on Saturday mornings by the Supervisors of Drawing and Music in lieu of examinations in these subjects.

PROGRAM V. For those fitting for positions as instructors in education, supervisors, critic teachers, or administrators in educational positions requiring experience and advanced study.

For meeting the needs of this class of students appropriate opportunity is given in advanced courses in education, including seminar work, and such courses may be counted toward fulfilling requirements for the higher degrees conferred by the Graduate School. For further information see statements in connection with the description of various courses.

PROGRAM VI. For those fitting for positions as teachers or supervisors of art.

See pages 158-160.

SPECIAL COURSES

Special Courses are offered to teachers in Cincinnati and vicinity, and are given on Saturdays and at hours during the week which do not conflict with the duties of the class-room. Credit is given on the books of the Registrar for satisfactory work done in these courses.

For other courses open to teachers, see the announcement of the various departments of the McMicken College of Liberal Arts under the head "For Teachers."

REQUIREMENTS OF THE CINCINNATI BOARD OF EDUCATION

For the benefit of students who wish to become teachers in the schools of Cincinnati a Circular of Information has been prepared showing the method of appointment, salaries, and character of the examination for teachers who are candidates for positions in the Cincinnati Public Schools. A copy of this circular may be had upon application to the Superintendent of Schools or the Dean of the College for Teachers.

APPOINTMENT COMMITTEE

The Appointment Committee offers its services, without charge, to students seeking appointment to educational positions for which they are properly qualified. The Dean of the College as Chairman is assisted by other members of the faculty who are familiar with the student's work, and students who are candidates for appointment and who desire to avail themselves of the services of this committee are invited to register at the office of the Dean, on blanks provided for this purpose.

COURSES OF INSTRUCTION

The following is the list of courses offered for the year 1913-14. Certain of these courses are required of candidates for the first or preferred list of persons eligible to appointment in the Cincinnati schools. Others are intended to meet the needs of advanced students of education, as well as of teachers of experience. Courses which are prerequisite to the pursuit of the various professional programs for teachers are also included in this announcement, but with this exception only those which are primarily professional in character will be found here. All courses given in the University, many of which are semi-professional in character, are open to properly qualified students in the College for Teachers. (See the announcement of the McMicken College of Liberal Arts.)

 EDUCATION

Education 1. History and Principles of Education.—Lectures, required reading, and discussions. Beginning with primitive society, this course considers the various conceptions of education as they have arisen in the course of history. Special attention will be given to those conceptions which have been most instrumental in shaping current tendencies.

Open to Seniors and graduates. If counted for graduate credit, additional work must be done and a thesis submitted. This course is also a prerequisite for students taking Program III, and as such may be taken during the Junior year. (See page 147.) M., W., F., 10:30-11:30.

Professor Burriss.

Education 2. Theory and Practice of Teaching.—Lectures, discussions, practical work, and required readings. Development of the principles of method of the recitation and their application in the proper conduct of class exercises in the several subjects of the elementary schools. Three hours of class work and fifteen hours of practice per semester. Hours for practice work must be arranged with the instructor before registration. Open to Seniors and graduates. M., W., F., 9:30-10:30.

Professor Hall.

Education 3. Secondary Education.—Development of American secondary education; function of the secondary school; program of studies; educational values; theory of formal discipline; construction of curricula; method of secondary instruction; introduction to the pedagogy of typical high school subjects. Open to graduates and teachers; counting, under certain conditions, four credits. S., 9:30-11:30.
Professor West.

Education 4. School Economy.—Lectures, discussions, and required readings. This course will consider principles and practice of class-room management, including such problems as preventing the waste of time and energy, preserving hygienic conditions, discipline, grading, promotions, tests. Open to Seniors and graduates. This course may not be counted for the higher degrees. F., 11:30-12:30.
Miss Day.

Education 6. General Method.—This course is similar to Education 2 and is intended especially for appointees to positions in the public schools of Cincinnati who have not had a course in this subject. S., 8:30-9:30.
Professor Hall.

Education 7. Seminar.—Investigations and reports on special problems, chiefly in educational administration. Primarily for graduates, but open also to teachers of experience. W., 4:00-6:00.
Professor Burriss and Professor West.

Education 12. Seminar.—Investigations and reports on problems in the theory and practice of teaching. Actual school-room tests will be given to evaluate common methods and practice. Results will be tested in a statistical manner. Required readings, reports, and discussions on scientific contributions to education. Place of meeting to be arranged. For graduates of the College for Teachers and others properly qualified. T., 4:00-6:00.
Professor Hall and Assistant Professor Mead.

Education 13. History of Modern Education.—This course is arranged to meet the needs of students in the Cincinnati Kindergarten Training School and of those in the Course for Teachers of Art. *First semester*, M., W., F., 3:00-4:00.
Professor Burriss.

Education 14. The Teaching of English.—Lectures, discussions, and required readings. This course will consider the selection and organization of the subject matter and method of treatment in the grades of the following subjects: reading, spelling, literature, composition, and grammar. Open to Seniors and graduates; it may be counted toward the A. B. degree. M., W., 8:30-9:30.
Miss Day.

Education 16. The Teaching of History.—Lectures, discussions, readings, and reports. This course aims to cover the field of history as usually presented in elementary schools. Gathering material for lesson plans, its arrangement for presentation, the consideration of difficulties involved, and the method of overcoming the same will form the basis of the course. Open to Seniors and graduates; it may be counted toward the A. B. degree. F., 8:30-9:30.
Assistant Professor Mead.

Education 20. The Teaching of Mathematics.—Lectures, discussions, and required reading. This course will aim to work up portions of material for presentation in the various grades according to the course of study, with devices and methods for their use. The principles underlying the above will be developed. Open to Seniors and graduates; it may be counted toward the A. B. degree. *Second semester*, M., W., 11:30-12:30.

Assistant Professor Mead.

Education 21. Seat Work and School Room Devices.—Seat work based upon and related to the actual class work of the grades. The use of illustrative materials, devices, and games, and the principles underlying the same. For teachers of the first four grades. S., 9:30-10:30.
Miss Day.

Education 22. The Teaching of Geography.—Lectures, discussions, and required readings. This course will deal with the collection of suitable material for teaching geography in the grades and with the organization and method of presentation of this material. Open to Seniors and graduates; it may be counted toward the A. B. degree. *First semester*, M., W., 11:30-12:30.

Assistant Professor Mead.

Education 28b. Primary Teaching.—This course is for the purpose of acquainting prospective directors of kindergartens with the subject matter and method of the work done in primary grades, with special attention to the first year. Open to Seniors in the Cincinnati Kindergarten Training School. *Second semester*. Hour to be arranged.
Miss Day.

Education 30. The Teaching of German.—This course consists of instruction, observation and practice teaching, and is intended especially for the teachers of German in the elementary schools. For the conditions under which students may enter this course see Program IV, p. 148. Fifteen hours of practice per semester. M., 9:30-10:30.
Supervisor Fick.

Education 32. The Teaching of Art and Hand Work.—The aim of this course is to familiarize those intending to teach in the public schools with the art and hand work pursued in the elementary grades at the present time, and to place before them

the best methods for obtaining satisfactory results. This course prepares for the city examination in this subject. *First semester*, S., 8:30-11:30, for twelve weeks. Given at Hughes High School.
Supervisor Vogel.

Education 34. The Teaching of Music.—The purpose of the course is to give those who contemplate teaching in the public schools, or are at present teaching, a systematic and comprehensive training in the matter and method of school music. This course prepares for the city examination in this subject. *Second semester*, S., 8:30-9:30. Given at Hughes High School.
Supervisor Aiken.

Education 36. The Teaching of Physical Training and Hygiene.—This course is for those fitting for positions in elementary schools. It will not be considered sufficient preparation to qualify as a special teacher. The course will include theory and practice of physical exercise, gymnastic games for the school-room and play-ground, school sanitation, and methods of teaching physiology and hygiene in the grades. *Second semester*, S., 10:30-11:30. Given at Hughes High School.
Supervisor Ziegler.

Education 38. The Teaching of Penmanship.—This course will present the principles underlying the system of penmanship taught in the Cincinnati public schools, and will show the best methods of teaching it, accompanied by drills for the purpose of securing technique. The course prepares for the city examination in this subject. Given at Hughes High School. *Second semester*, S., 9:30-10:30.
Supervisor Steadman.

BIOLOGY

For a complete list of all the courses offered by the Department of Biology, see the announcement of the McMicken College of Liberal Arts.

38. Insect Life.—A course for beginners. Life histories of insects of importance and their relationships to man. Field trips and lectures. Two credits per semester. S., 8:30-12:30.
Dr. Braun.

GEOLOGY AND GEOGRAPHY

For a complete list of all the courses offered by the Department of Geology, see the announcement of the McMicken College of Liberal Arts.

1. An introductory study of minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean, followed by a brief study of the physiography of the

United States. Lectures, M., W., F., 8:30-9:30; Laboratory, T., Th., 2:00-4:30; M., W., 2:00-4:30; T., Th., 9:30-12:00; and T., Th., 1:00-3:30.

Professor Fenneman and Dr. Bucher.

This course is a prerequisite to the study of education as outlined in the professional program for elementary teachers on p. 144. It must be taken not later than the Junior year by those students who expect to enter upon this program during the Senior year. It may be taken as late as the Senior year by those students who wish to prepare for teaching in elementary schools after graduation from the College of Liberal Arts.

14. General Geology for Teachers.—Elements of dynamic, structural, and physiographic geology. Lecture, S., 8:30-10:30; field or laboratory, 10:30-12:50.

Professor Fenneman.

9. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure. Lecture, S., 8:30-10:30; field or laboratory, 10:30-12:50.

Assistant Professor Carman.

16. Advanced Physiography of the United States.—Course 1 or 14 and Course 9 are prerequisite. Lecture, W., 4:00-6:00; S., 10:30-11:30.

Professor Fenneman.

HISTORY

The following course in history is prerequisite to the study of education as outlined in the professional program for elementary teachers on p. 144 for all students who have not had a year's course in American history in high school. Those students who wish to complete this program during the Senior year should take this course in history not later than the Junior year. If the student wishes to defer preparation for teaching in the elementary schools till after receiving the A. B. degree, this course may be taken as late as the Senior year.

For a complete list of all the courses offered in the Department of History, see the announcement of the McMicken College of Liberal Arts.

History 15. General Course in American History.—This course, while open to all, is especially recommended for those who have not had American history in the high school and for those who contemplate taking work in the College for Teachers. The work covers the period from the earliest discoveries to the present time, and is based largely upon a text-book, supplemented by regular reports and occasional lectures. Special quiz sections and conference groups at other hours if necessary. M., W., F., 8:30-9:30.

Associate Professor Cox.

History 35. The Ohio Valley and the Old Northwest.—A survey of the discovery, exploration, and settlement of this locality, and of its development to the Civil War. Lectures and special reports. Open to teachers and advanced students. The course is suggested as preparatory to History 39 and for those who teach local history in the elementary schools. S., 9:30-10:30.

Associate Professor Cox.

PHILOSOPHY

For a complete list of all the courses offered by the Department of Philosophy, see announcement of the McMicken College of Liberal Arts.

7a. Ethics.—An introduction to the theory of morals. The course includes, beside the theory of morality, discussion of selected problems of present moral experience. Open to students who have completed two years of work in the University. *First semester*, M., W., F., in two sections, 10:30 and 1:00.

Professor Tawney and Assistant Professor Hartmann.

This course is prerequisite to entrance upon professional programs, I, II, III, and IV, outlined on pp. 144-149. It should be taken in the Junior year by those who pursue a professional program during the Senior year. It may be taken in the Senior year by those who expect to pursue a professional program after graduation from the College of Liberal Arts.

12. The History of Philosophy.—In the fall of 1913 this course began with the philosophy of Immanuel Kant, it being part of a cycle of courses dealing with the history of philosophy. One hour throughout the year. S., 9:30-10:30. Professor Tawney.

PSYCHOLOGY

For a complete list of all courses offered by the Department of Psychology, see the announcement of the McMicken College of Liberal Arts.

Psychology 1a. Introductory Psychology.—An analytical study of mental phenomena, with special reference to accurate observation and description. A general account of the subject matter of psychology. *First semester*, M., W., F., 11:30-12:30.

Professor Breese.

Psychology 1b. Section II. Educational Psychology.—The application of the principles of psychology to education. *Second semester*, M., W., F., 2:00-3:00.

Professor Breese.

Courses 1a and 1b are prerequisite to entrance upon the study of education, as indicated in professional programs for teachers outlined on pp. 144-149. Those who wish to pursue one of these

programs should take these courses in psychology not later than the Junior year. Those who wish to qualify for a teacher's diploma after graduation from the College of Liberal Arts may take these prerequisite courses in psychology during the Senior year.

[Psychology 6a. Educational Psychology.] The experimental and statistical methods in mental measurements. Intended for advanced students and teachers of experience. *First semester.* Hours to be arranged. Professor Breese.

Omitted in 1913-14.

[Psychology 5. Elements of Psychology.] A general account of the facts of mental life and their application to education. S., 11:30-12:30. Professor Breese.

Omitted in 1913-14.

For Teachers

Psychology 7b. Elements of Psychology.—Open to students of the Cincinnati Kindergarten Training School and to those in the Course for Teachers of Art. *Second semester, M., W., F.,* 3:00-4:00. Professor Breese.

Psychology 9. Mental and Physical Tests.—Laboratory methods. Three credits per semester. Hours to be arranged.

Professor Breese and Mr. Isaacs.

KINDERGARTEN TRAINING

The following courses in Kindergarten Training, not given at the University, may be taken at the Cincinnati Kindergarten Training School. The school is located at No. 6 Linton street, Vernonville. Registration day, Thursday, September 18, 1913. Work began on Friday, September 19.

For conditions governing college students who are fitting primarily for positions in kindergartens, see Program III, page 147.

The Cincinnati Kindergarten Training School issues a special announcement giving full information, a copy of which may be had upon application to the Registrar at the above address.

COURSES

Kgtn. 1. Gifts.—This course has for its aim a thorough knowledge of the kindergarten material, a comparative study of typical and original plays or lessons with the gifts, and a study of Froebel's underlying principles. Juniors. *First semester, M.,* 9:30-11:30. *Second semester,* two hours, to be arranged. Three credits. Miss Stone.

Kgtn. 2. Handwork.—This course includes both the old and new occupations with practice in each. Also the preparation of

simple courses adapted for use in the kindergarten. *First semester*, T., 9:00-11:00. *Second semester*, Th., 2:30-4:30. Four credits.

Miss Stone and Special Teachers.

Kgtn. 3. Rhythms, Songs, and Games.—Juniors and Seniors. T., 3:30-4:30, throughout the year. Three credits. Miss Fry.

Each of these courses includes theory and practice, and is intended to develop resourcefulness and originality in the student, as well as to give technical mastery of kindergarten instrumentalities.

Kgtn. 4. Theory.—This course includes an introductory study of Froebel's Mother Play as the basis for story, song, and game in kindergarten teaching. Also the study of Froebel's writings, for the purpose of discovering the educational laws which form the foundation for child development and personal culture. *First semester*, M., Th., 8:30-9:30. *Second semester*, W., 2:00-3:00. Six credits.

Miss Stone, Miss Fry.

Kgtn. 5. Stories.—This course includes lectures, discussions, and reference work concerning the literature of childhood, together with regular practice in the telling of stories. Juniors and Seniors. Th., 1:00-2:00; F., 2:00-3:00. One credit.

Miss Simrall.

Kgtn. 6. Program Construction.—A critical résumé of every division of kindergarten work and the educational principles involved. The careful planning of programs for definite periods of time and for meeting different conditions. Seniors, *First semester*, T., 1:50-3:30. *Second semester*, W., 1:30-3:30. Four credits.

Miss Bothwell.

Kgtn. 7. Observation.—Carefully supervised observation of the entire morning's work in kindergarten, followed by a discussion of the various activities and the educational principles involved. Juniors. *First semester*, hours to be arranged. Two credits.

Miss Stone, Miss Fry.

Kgtn. 8. Practice Teaching.—A minimum of one-half year (days to conform to the public school calendar) in private, mission, or public school kindergartens, under at least two directors. Opportunity for increasing responsibility under careful supervision. Additional practice may be required to demonstrate the student's ability to satisfactorily conduct every phase of kindergarten work. Juniors and Seniors. Ten credits.

Miss Stone, Miss Fry.

Kgtn. 9. Organization of Mothers' Meetings.—A series of lectures covering the essentials of parliamentary law and the general purpose and subject matter of mothers' meetings. Short talks suitable for different occasions are prepared and given by the stu-

dents. Seniors. *Second semester*. Two hours, to be arranged. Two credits.

Miss Laws and Miss Stone.

Kgtn. 10. Art.—Rapid sketching on blackboard; brush work in ink and water color; decorative design. Art in kindergarten—decoration, pictures, and children's work. Th., 9:30-11:30. One credit.

Mr. John J. Thompson.

give ease and grace of movement, a wise conservation and use of

Kgtn. 11. Music.—Study and criticism of kindergarten music, the child's voice, rhythm, and development of ear and tone. Attention to instrumental music with each student. Juniors and Seniors. *Second semester*, T., 1:30-2:30. One credit.

Supervisor Aiken.

Kgtn. 12. Hygiene and Physical Training.—This course includes lectures by specialists in each of these lines as well as class work in Physical Training. Its aim is to afford knowledge of sanitation, food, dress, exercise, rest, children's diseases, and emergencies. To energy, and to correlate with games played in the kindergarten such movements as are essential to the child's general development. Juniors and Seniors. Voice Training and Physical Training, Th., 2:00-3:00. One credit each year.

Kgtn. 13. Directors' Conference.—Lectures, discussions, suggestions in program work.

Occasional talks by prominent kindergartners and specialists in education from other cities. M., 2:00-4:00, throughout the year.

Miss Bothwell.

COURSES FOR TEACHERS OF ART

The purpose of this course is to prepare students for positions as teachers of art or supervisors of art instruction in public or private schools.

Admission presupposes (a) the satisfactory completion of an approved curriculum in a secondary school, and (b) an amount of work in art of approved quality equivalent to that represented by two years of study in the Art Academy of Cincinnati. It is understood, however, that all students are admitted upon a month's probation during which they must give satisfactory evidence of a high degree of capability in art and show that they are otherwise qualified to pursue the course.

The course is two years in length, during which the student's time is divided about equally between the professional program of the College for Teachers and studies in art at the Art Academy of Cincinnati. The satisfactory completion of the course leads to graduation and a diploma certifying that the holder is qualified to teach art or supervise art instruction in public or private elementary, secondary, and normal schools.

To students seeking a teacher's training course in art, Cincinnati offers exceptional opportunities. The Art Academy is a thoroughly equipped school for the training of artists. Adjacent to it is the Cincinnati Museum, containing large collections of paintings and sculpture, as well as of the applied arts. Each month, also, special exhibits of contemporary interest are arranged. The reference library of the Museum, relating especially to art, the Public Library, and the University Library are also available. In the University various lectures are open to students. For studies in natural history students have access to the Museum of the Society of Natural History, and the Cincinnati Zoological Garden. Among the local art industries the Rookwood Pottery is of especial interest.

The work of observation and practice teaching is done in the regular public elementary and high schools of Cincinnati. This phase of the course, therefore, is conducted under the ideal conditions necessary to give the student a truly professional preparation. In connection with this practice are wrought out lesson-plans and outlines of work for the various grades of the elementary and high schools, in harmony with the requirements of a well graded course of study based upon modern educational principles. In this way the ability of students to organize a progressive course in art instruction is thoroughly tested.

For fees in the course for teachers of art see p. 56.

COURSES

The following courses of instruction, when not otherwise specified, are given at Hughes High School.

First year students will take Courses 2, 3, 4, and 5 or 9. They will spend the forenoon of each week-day, excepting Saturday, in work at the Art Academy. They will also take Education 13, the first semester, and Psychology 7b, the second semester, at the University. (See pp. 151, 156.)

Second year students will take Courses 1, 6, 7, 8, and 5 or 9. On forenoons and afternoons, when not occupied with these courses they will continue work at the Art Academy. At the University they will take Education 6. (See p. 151.)

Art 1. Theory and Practice of Teaching Art.—Principles upon which art teaching is based. The function of art in general education. Consideration of courses of study. Making of lesson plans and outlines of work for elementary and secondary schools. Principles of criticism. Discussion of methods and devices. F., 1:00-3:00.

Miss Hyde.

Art 2. Water Colors and Crayons.—Landscape, nature products, pose and still life. Practice in arrangement of still life studies for the sake of good composition and harmony of color. Tu., 1:00-4:00.
Mr. Teal.

Art 3. Art Design and Applications.—Study of the principles of balance, rhythm and harmony, in line, dark and light, and color. Fitness of design in form, tone and color, in relation to various applications. Design applied to embroidery, stenciling, weaving, basketry, metal and leather work. W., 1:00-3:00. Miss Hyde.

Art 4. Art Construction and Clay Work.—Paper and cardboard construction. Weaving, stenciling, book binding, block printing, metal and leather work, basketry, pottery, and knife work. Th., 1:00-3:00. Miss Hyde.

Art 5. Pictorial Composition.—Critical study of landscape composition in black and white, in tones of middle gray, and in color. Figure compositions in color. Illustrated talks on the old masters and comparisons of their work with modern art. Instruction in blackboard illustration suited to the needs of teachers of regular subjects in elementary and secondary schools. Given in alternate years. M., 1:30-4:00. Mr. Teal.

Art 6. Design and Classic Ornament.—An advanced study of questions taken up in Art 3. Study of historic ornament. Adaptation of nature forms in design. Influence of materials on design. Theory of color. Designing of interiors with the study of original color schemes. W., 1:30-4:00. Mr. Teal.

Art 7. Observation and Practice Teaching.—Two half-days per week in the public elementary and secondary schools under critical supervision. Webster Public School on Th., 8:30-12:00, Miss Swing, critic. Hughes High School, Tuesday forenoon, Miss Hyde, critic.

Art 8. History of Art.—A study and amplification of Reinach's *Apollo* with the aid of photographs and plates in the Cincinnati Art Museum Library. Students required to make notes, outlines, and chronological tables. Instruction and practice as guides of visitors to the Art Museum. At the Art Museum. Tu., 2:00-4:00. Miss Kellogg.

Art 9. Mechanical Drawing.—Use and care of materials and instruments. Simple geometric problems. Lettering. Scale drawing. Isometric and orthographic projections. Intersections. Machine drawings. House plans and elevations. Tracing and blue printing. Given in alternate years in place of Art 5. M., 1:30-4:00. Supervisor Vogel.

COLLEGE OF ENGINEERING

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
BERMAIN GILDERSLEEVE PORTER, PH. D., Director of the Observatory
and Professor of Astronomy.
FREDERICK CHARLES HICKS, PH. D., Sinton Professor of Economics
and Commerce and Dean of the College of Commerce.
HARRIS HANCOCK, PH. D., D. SC., . . . Professor of Mathematics.
MAX POLL, PH. D., . . . Professor of the Germanic Languages.
MERRICK WHITCOMB, PH. D., . . . Professor of History.
LOUIS TRENCHARD MORE, PH. D., . . . Professor of Physics.
HERMAN SCHNEIDER, SC. D., William Thoms Professor of Civil
Engineering and Dean of the College of Engineering.
STEPHEN ELMER SLOCUM, PH. D., Professor of Applied Mathematics.
JOHN THEODORE FAIG, M. E., Professor of Mechanical Engineering.
NEVIN M. FENNEMAN, PH. D., Professor of Geology and Geography.
LAUDER WILLIAM JONES, PH. D., . . . Professor of Chemistry.
FRANK WADLEIGH CHANDLER, PH. D., Professor of English, Ropes
Professor of Comparative Literature, and Dean of the
McMicken College of Liberal Arts.
PHILLIP OGDEN, PH. D., . . . Professor of Romance Languages.
CURTIS C. MYERS, M. M. E., Professor in Charge of Co-ordination.
ALEXANDER MASSEY WILSON, M. E., Professor of Electrical En-
gineering.
* HARRIS MILLER BENEDICT, A. M., . . . Professor of Botany.
SELDEN GALE LOWRIE, PH. D., . . . Professor of Political Science.
_____, . . . Professor of Zoology.
HARRY SHIPLEY FRY, PH. D., Associate Professor of Chemistry.
ALEXANDER LEWIS JENKINS, M. E., Associate Professor of Mechan-
ical Engineering.
* FRED EUGENE AYER, C. E., Associate Professor of Civil Engineering.
SAMUEL JAMES MCINTOSH ALLEN, PH. D., Associate Professor of
Physics.
ISAAC JOSLIN COX, PH. D., . . . Associate Professor of History.
CHARLES NAPOLEON MOORE, PH. D., Assistant Professor of Mathe-
matics.
HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
Chemistry.

* Absent on leave, 1913-14.

** Absent on leave, first semester, 1913-14.

- BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Public Speaking and English.
- CLARENCE RAYMOND WYLIE, M. E., Assistant Professor of Electrical Engineering.
- J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
- LOUIS BRAND, A. M., . . . Assistant Professor of Mathematics.
- CLYDE WILLIAM PARK, A. M., . . Assistant Professor of English.
- JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
- G. M. BRAUNE, C. E., . Assistant Professor of Civil Engineering.
- CLARENCE D. STEVENS, A. M., . . Assistant Professor of English.
- ALFRED BRODBECK, Director of Physical Education.
- JOSEPH HENRY KINDLE, A. M., . . . Instructor in Mathematics.
- CHARLES ALBERT JOERGER, M. E., Instructor in Mechanical Engineering.
- JAMES FRANCIS DILWORTH, A. M., . Instructor in English History.
- HAROLD W. T. COLLINS, M. E., Instructor in Mechanical Engineering.
- MARTIN LUDWICH, M. E., . . Instructor in French and German.
- ROBERT E. CLYDE GOWDY, Ph. D., Instructor in Physics.
- MAX B. ROBINSON, M. E., Instructor in Co-ordination.
- CHARLES WATKINS BROWN, Mechanician and Instructor in Laboratory Arts.
- CLARENCE A. NASH, A. M., . . Instructor in Physical Chemistry.
- GEORGE R. MOORE, C. E., Instructor in Civil Engineering.
- EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.
- EDWARD SMITH, M. S., Instructor in Mathematics.
- RUSSELL B. WITTE, B. C. E., . . Instructor in Civil Engineering.

Other Appointments for the Academic Year 1913-14

- RALPH EDWARD OESPER, A. M., . Graduate Assistant in Chemistry.
- EDWARD J. LORENZ, A. M., Hanna Fellow in Physics.
- JAMES P. ANDREWS, Student Assistant in Chemistry.
- JOHN GERSTLE, Student Assistant in Chemistry.
- BENEDICT SALKOVER, Student Assistant in Chemistry.
- BENJAMIN E. SIVE, Student Assistant in Chemistry.
- WERNER JOHN SUER, Student Assistant in Chemistry.

REQUIREMENTS FOR ADMISSION TO THE COLLEGE OF ENGINEERING

Candidates for admission as undergraduates must be at least sixteen years of age. They must give evidence of having completed satisfactorily an amount of preparatory study represented by sixteen units, a unit being understood to mean one of the subjects in the following table pursued for one full year of five recitation periods each week. Of these sixteen units every candidate for admission to the College of Engineering must present the following:

ENGLISH.—Three units, in which there can be no “condition.”

MATHEMATICS.—One unit in Algebra and one unit in Plane Geometry, and one-half unit in Solid Geometry.

HISTORY.—One unit.

In addition to these fixed requirements, the candidates must offer a number of units selected from the list of subjects below, sufficient, with the units specified above, to amount to a total of sixteen. The number of units that may be offered in any subject is shown in the following table:

		NUMBER OF UNITS ACCEPTED FOR ADMISSION	
		Minimum	Maximum
English	3 required	.....	or..... 4
Latin	1	} Three units required, two of which must be in one language	..or 2 or 3 or 4
Greek	1		..or.....2 or 3
French	1		..or 2 or 3 or 4
German	1		..or 2 or 3 or 4
Spanish	1		..or..... 2
General or Medieval and Modern History.....	1		..or..... 1
Ancient	1/2	} One unit required	..... 1
English	1/2		..or..... 1
American	1/2		..or..... 1
American and Civics.....	1		..... 1
Algebra	1 required	.....	or...1 1/2 or 2
Geometry, Plane.....	1 required	.....	or..... 1
Geometry, Solid.....	1/2		..or..... 1/2
Trigonometry	1/2		..or..... 1
Civics	1/2		..... 1/2
Physics	1		..... 1
Chemistry	1		..... 1
*Zoology	1		..... 1
*Botany	1		..... 1
Physical Geography.....	1/2		..or..... 1
Astronomy	1/2		..... 1/2
Drawing	1		..... 2
Manual Training.....	1		..... 2

For further information regarding the procedure in connection with the entrance examinations, the schedule of these examinations, definitions of each unit or group of units, and admission on certificate from accredited schools, consult the paragraphs under those heads to be found in the section of this catalogue relating to the College of Liberal Arts.

ENTRANCE CONDITIONS AND ADMISSION TO ADVANCED STANDING

All students must satisfy the entrance requirements in mathematics. Students who are deficient in not more than two units of

* One-half unit will be allowed in Zoology and one-half unit in Botany when these two subjects are presented together as one unit in the same year.

the sixteen required for admission, excepting those required in mathematics, may be admitted conditionally to the College of Engineering. All such entrance conditions will be removed in case the student passes in all of his Freshman work; otherwise, he will be required to pass entrance examinations to satisfy said conditions before he will be allowed to register for his second year of work at the University.

On March 9th, 1912, the Faculty of the College of Engineering adopted the following Provisional Grade System:

1. ENTRANCE SUBJECTS—Students admitted on certificate will be expected to have a working knowledge of all subjects on which the Freshman subjects depend. Failing to show such working knowledge, any student, regardless of how he is admitted, may be conditioned in a subject by his instructor, and be required to show proficiency, to the satisfaction of the instructor, within a period not to exceed four weeks. Should he fail to acquire this working knowledge within the prescribed time, his case will be reported to the faculty, who may give him an entrance condition, which must be removed by examination before the Freshman subject can be repeated.

2. ADVANCED STANDING—Students who present credits from approved colleges will be admitted to advanced standing as heretofore, but if it becomes evident that a student's preparation in prerequisite studies is inadequate, he will be conditioned by his instructor for a period not exceeding four weeks. If at the end of this time, he still lacks a working knowledge of the subject, his case will be brought to the attention of the faculty, at the discretion of which he may be required to repeat, in class, the prerequisite course in which he is deficient.

3. DEGREES—By a ruling of the faculty March 9th, 1912, the words "satisfactory completion" of a course were given the following interpretation: Since the subjects in engineering courses are definitely prescribed and are nearly all graded in a series of prerequisite and advanced studies, students of all classes will be required to show a working knowledge of related subjects belonging to earlier years of their course. Any student who fails to show a working knowledge of prerequisite studies will be conditioned and required to prove to the satisfaction of the instructor—within a period not exceeding four weeks—that he has acquired the necessary working knowledge of the subject. Should he fail to do this, his case will be automatically reported to the faculty, at the discretion

of which he may be required to repeat the prerequisite course. This regulation affects all students from the date of its adoption.

All applications for advanced credit must be made within three weeks after matriculation to the heads of the departments in which advanced standing is desired. Students may be admitted to advanced standing either upon presentation of a certificate from a college of approved standing or by examination. All students applying for advanced standing must first have satisfied the entrance requirements, the same as regular students.

DEGREES

The technical degrees of Civil Engineer, Chemical Engineer, Electrical Engineer, Mechanical Engineer, and Metallurgical Engineer, are given to those students of the Co-operative Course who complete satisfactorily the work scheduled under the respective departments.

The degrees of Bachelor of Civil Engineering, Bachelor of Chemical Engineering, Bachelor of Electrical Engineering, and Bachelor of Mechanical Engineering, will be given to regular students who satisfactorily complete the work of the four-year course scheduled under the respective departments.

Candidates for the degrees specified above must spend their last year of study in residence in Cincinnati.

THE CO-OPERATIVE SYSTEM

PLAN OF INSTRUCTION

The College of Engineering of the University of Cincinnati offers two courses: a four-year theoretical course similar to that given in other engineering institutions, and a five-year co-operative course in which students spend alternate bi-weekly periods in practical engineering work, and at the University.

In the co-operative plan, the practice of engineering is taught in a shop or on a railroad under actual commercial conditions, and the science underlying the practice is taught in the University. The students are divided into two sections, which alternate every two weeks; that is to say, during one bi-weekly period, one-half of the students are at the University and one-half are in the factories; at the beginning of the next two-week period the sections are changed, and those who were at the University go to the shops, and those who were in the shops go to the University. Briefly, it is the aim of the co-operative course to give the student a thorough training in the theory and practice of engineering.

The co-operative course is of five years' duration, eleven months in the year, there being a vacation from the middle of August to the middle of September which is divided between two students of one pair.

Students desiring to enter the University are required to begin their work during the month of July preceding their entrance to the University. Their entrance is, in a measure, dependent upon the character of the work done during this probationary period which extends from July to the opening of the University in September.

Co-operative students are required to obey all regulations of the company with which they work, and are subject to all existing labor conditions and laws, including those pertaining to liability for accident.

The entrance requirements for this course are precisely the same as for the regular four-year course. The theoretical work at the University is as thorough as the work given in the regular four-year course. None of the courses is abridged and none is omitted.

The number of positions in the co-operative course is limited each year, and applications for positions should be filed with the Dean of the Engineering College prior to July 1, 1914.

Satisfactory board and lodging may be procured in the neighborhood of the University at prices ranging from \$4.50 to \$5.50 per week. The University recommends the boarding houses to the students.

WAGES OF CO-OPERATIVE STUDENTS

Co-operative students are paid for their work in the shops at the same rate as other employees. A new minimum wage scale, taking effect July 1, 1913, has been agreed upon by the co-operating firms. The new rate begins at 15 cents an hour, and increases 1 cent an hour every year. In some of the larger machine tool shops a modification of this rate is used, beginning at 12 cents an hour, and increasing 2 cents an hour every six months, making a final rate of 30 cents an hour. These rates are for students of no previous practical experience.

In railroad work, city work, and Traction Company work, students are paid at the prevailing rate of regularly employed men; thus the rate for beginners on track gang work is 16½ cents an hour; in bridge work, 22½ cents an hour; in switch and signal work, 22½ cents an hour; in street paving work, 20 cents an hour; in car barn work, 20 cents an hour, etc.

Students of previous experience are paid what their services are worth. The University makes no guarantee above the minimum scale agreed upon, but uses every effort to place students to their best financial and educational advantage. Students who begin at the

minimum rate are not held to this rate if their abilities are such that they can earn more. The wages are paid directly to the students by their employers for the actual time worked in the shops. Machine shops work 55 hours a week; foundries, traction companies, and railroads, 60 hours a week.

EXPENSES

The University expenses for tuition and laboratory fees during the five years of the course are about \$420.00, as follows:

First year.....	\$110.00
Second year.....	85.00
Third year.....	75.00
Fourth year.....	75.00
Fifth year.....	75.00

SHOP WORK

In all cases, the Dean of the Engineering College and the Professor of Civil, Electrical, Mechanical, Chemical, or Metallurgical Engineering, as the case may be, confer with the employers in planning the course in shop work, so that the students get a logically and carefully arranged shop training.

The work of the shop is co-ordinated with the work of the University by a Department of Co-ordination. The shop co-ordinator is a college graduate acquainted with shop or field practice. He spends every morning at the University and every afternoon in the shops. His function is to make as direct co-ordination as possible of the work of the shop with the theory of the University. One afternoon, for example, he may be at the shops of a local manufacturing company, where he will observe the student apprentices at work. He will know what they are turning out, their speeds, their feeds and cuts, the angle of the tool, how the batch of work is ticketed, how the work is set up, the power drive, everything important in connection with the operation. The next week these young men will be grouped together with their classmates for two periods in class, when he will explain the functions of the particular articles, on which the students were working, in the machine which the local manufacturing company builds. He will take up all questions of speeds, feeds, cuts, accuracy, etc. Figuratively speaking, he will take from the student apprentices the blinders which would restrict their vision except for this explanatory work. Ultimately, all problems of shop organization, shop accounting, cost keeping, shop planning, power transmission, heating, lighting, etc., are discussed during the course. It will be seen, then, that out of the student's own experience is drawn much of his course in mechanism, thermodynamics, machine design, strength of materials, shop economics, etc.

A similar system is followed in railroad work, construction work, and in all the other co-operative fields.

COURSES OFFERED

Co-operative courses are offered in Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, and Metallurgical Engineering.

THE SUMMER TERM

The summer term begins immediately after Commencement in June, and continues for twelve weeks, the students working in bi-weekly periods as in the winter term.

COURSES OF INSTRUCTION

CHEMICAL ENGINEERING

The purpose of the course of study in Chemical Engineering is to provide the young engineer with a broad and well-founded knowledge of chemistry and of mechanical engineering, so that he may be prepared to take up the work of assisting in the design and erection of chemical machinery, in the arrangement of plants, and the working out and improvement of manufacturing processes dependent wholly or in part upon chemistry or metallurgy; further, it aims to equip him so that he may be able to consider propositions, processes, and plans from the combined viewpoint of the chemist and engineer. The chemical engineer naturally begins his professional career as analyst, draughtsman, or assistant engineer; he is much better prepared for the duties of superintendent of a chemical or metallurgical establishment than either chemist or mechanical engineer.

The chemical engineer is essentially a modern product, and the demand for men with this special training is constantly increasing. Indeed, the necessity for the efficient control of plants and processes, the economical utilization of power, the conversion of factory by-products into marketable commodities, and the adaptation and design of mechanical appliances to carry out chemical reaction on a large scale, all demand that the technical chemist should be an engineer. Graduates from this department of the University are now filling positions as superintendents and chemical engineers at blast furnaces, steel works, electrolytic establishments, coal tar distillation, and paper works, and factories making heavy chemicals, dry colors, printing inks, soaps, etc.

Students who elect this course should be in good physical condition and well prepared, since the work is both extensive and intensive, and almost all the hours of the day not spent in the class-room are occupied with work in the laboratory or in the draughting room.

FOUR-YEAR COURSE IN CHEMICAL ENGINEERING

Students who choose the four-year course in Chemical Engineering will be required to spend at least two summers in chemical plants or in machine shops; this work will be substituted for the customary shop work of an engineering course.

CO-OPERATIVE COURSE IN CHEMICAL ENGINEERING

The studies during the five years of the co-operative course are practically identical with those taken by the four-year student in the College of Engineering. In some cases slight changes in the order have been made to meet the requirements set by the practical needs of the students working in the shops.

During the first two years of the course, a large part of the student's time is devoted to subjects fundamental to an engineering course in chemistry. With the exception of general inorganic chemistry, an elementary course in metallurgy, and an introduction to qualitative analysis, the special courses in chemistry are postponed until the second summer and the years following.

CHEMICAL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. CH. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Gen'l Inorganic Chemistry...	Ch. E. 1a, 2a, 3b, 4b.	5	5
Algebra and Trigonometry...	Math. 1.....	5	
Analytical Geometry.....	Math. 1.....		5
English	English 1.....	3	3
Elementary German } or French	{ French 1..... } { German 1..... }	3	3
Descriptive Geometry	M. E. 3.....		2
Machine Drawing	M. E. 1.....	2	
Gymnasium	Phys. Educ. 1.....	2	2
Summer work in outside shops.			

SOPHOMORE YEAR

Qualitative Analysis.....	Ch. E. 5a, 6a.....	6	1
Quantitative Analysis.....	Ch. E. 7b.....		3
Differential and Integral Calculus	} Math. 5.....	4	4
Physics .....				Phys. 1a, 2a, 21b, 22b.	5	5
German or French.....	} German 2.....	3	3
Gymnasium	Phys. Educ. 2.....	2	2
Summer work in outside shops.			

JUNIOR YEAR

Elementary Organic Chem....	Ch. E. 8a, 9a.....	5	
Physical Chemistry	Ch. E. 12.....	3	
Physical Chemistry, Labo- ratory	} Ch. E. 13b.....	2	
Electrochemistry .....				Ch. E. 32.....	3
Electrochemistry Laboratory..	Ch. E. 33.....		2
Metallurgy	Ch. E. 14a.....		5
Technical Analysis.....	Ch. E. 17.....	2	3
Strength of Materials.....	Ap. Math. 2.....	3	
Mechanics of Engineering.....	Ap. Math. 1, 3.....		3
Steam Engineering	M. E. 11.....	2½	2½
Summer work, Land Surv'g..	C. E. 3.....	4 weeks	

SENIOR YEAR

Technical Inorganic Chem....	Ch. E. 16a.....	3	
Technical Organic Chem.....	Ch. E. 18b.....		3
Chemical Engineering Lab....	Ch. E. 36b.....	3	
Non-Ferrous Metallurgy.....	Met. Eng. 6a.....	3	
Testing of Materials.....	M. E. 18.....	1	
Direct Current Machinery....	E. E. 1.....	2½	
Elec. Engineering Lab.....	E. E. 5.....	1	1
Alternating Current Mach....	E. E. 12.....		2½
Thesis	Ch. E. 23b.....		4

Electives (Six hours throughout Senior Year).

Adv'd Organic Chemistry...	Ch. E. 20.....		5
Laboratory	Ch. E. 21.....	2	2
Adv'd Inorganic Chem.....	Ch. E. 10b.....	2	
Laboratory	Ch. E. 11b.....		2
Metallurgy of Iron and Steel..	Met. Eng. 4.....	3	
Assaying	Ch. E. 15b.....		1
Gas Engineering.....	M. E. 23.....	2	
Compressed Air and Re- frigeration.....	} M. E. 31.....		2
Geology, Mineralogy.....					5	5
Economics	Economics 1.....	2	2
Sanitary Biology.....	Biology 11.....	2	2

CHEMICAL ENGINEERING

CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF CH. E.

SUBJECT	COURSE	Exercises	
		Per Alternate Week	II Sem.
FIRST YEAR			
FRESHMAN			
Algebra and Trigonometry	Math. 1.....	6	6
Analytical Geometry.....			
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	3
Co-ordination	C. 3.....	2	2
History		4	4
Geology 15.....		2	2
FIRST SUMMER TERM			
Problem Work in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
Elements of Engineering.....	M. E. 4.....	5	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	2
Metallurgy	Met. E. 1a.....	5	3
Metallurgy, Laboratory.....			
Qualitative Analysis.....	Ch. E. 5, 6.....	6	
English		6	6
Co-ordination	C. 4.....	2	2
SECOND SUMMER TERM			
Qualitative Analysis.....	Ch. E. 5, 6.....	5	
Elementary Organic.....	Ch. E. 8a, 9a.....		11
THIRD YEAR			
PRE-JUNIOR			
Quantitative Analysis.....	Ch. E. 7b.....	3	5
Steam Engineering.....	M. E. 11.....	5	5
Mechanical Laboratory.....	M. E. 18.....	2	
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics			6
* Modern Language.....		6	6
THIRD SUMMER TERM			
Technical Analysis.....	Ch. E. 17.....	6	
Metallography	Met. E. 2.....	5	
FOURTH YEAR			
JUNIOR			
Technical Analysis.....	Ch. E. 17.....	2	
Physical Chemistry.....	Ch. E. 12a.....	5	

* Students who have a reading knowledge of German may elect French. In other cases, German must be taken first.

Physical Chemistry Lab.....	Ch. E. 13a.....	2	
Electro-chemistry	Ch. E. 32b.....		5
Electro-chemistry Lab.....	Ch. E. 33b.....		2
Metallurgy of Iron and Steel...	Met. E. 4b.....		5
Electrical Machinery.....	E. E. 1, 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2
Modern Language.....	German or French....	6	6
Co-ordination	C. 8.....	3	3

FOURTH SUMMER TERM

Chemical Investigation and Thesis.
Engineering Design.

FIFTH YEAR

SENIOR

Technical Chemistry.....	Ch. E. 16a, 18.....	5	5
Technical Chemistry Lab.....	Ch. E. 36b.....		
Economics		6	6
Thesis		5	5

Electives:

Gas Engineering.....	M. E. 23.....	
Organic Chemistry.....	Ch. E. 20.....	
Inorganic Preparations.....	Chem. 11.....	
Non-Ferrous Metallurgy.....	Met. Eng. 6.....	

CHEMICAL ENGINEERING

COURSES IN DETAIL

LAUDER WILLIAM JONES, PH. D., . . . Professor of Chemistry.
HARRY SHIPLEY FRY, PH. D., . Associate Professor of Chemistry.
HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
Chemistry.

JAMES ASTON, Ch. E., . . . Assistant Professor of Metallurgy.
CLARENCE A. NASH, A. M., . . Instructor in Physical Chemistry.
EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.
RALPH EDWARD OESPER, A. M., Graduate Assistant in Chemistry.

STUDENT ASSISTANTS: James P. Andrews, John Gerstle, Benedict Salkover, Benjamin E. Sive, Werner John Suer.

1a. General Inorganic Chemistry.—The non-metals. This course gives a definite idea of the fundamental laws of general chemistry and furnishes a survey of the important facts concerning the chemistry of the non-metals and their compounds. Lectures, recitations, and quizzes illustrated by experiments, charts, and specimens. Course 2a forms an integral part of, and must accompany Course 1a. Assistant Professor Goettsch and Assistants.

2a. General Inorganic Chemistry, Laboratory.—Three laboratory exercises per week. *First semester.* Experiments complementary to the subject-matter of Course 1a. M., T., W., 1:00-4:00.

Assistant Professor Goettsch and Assistants.

3b. General Inorganic Chemistry.—The metals. Continuation of Course 1a. The properties of the metals and their compounds. Five hours per week. *Second semester*. Students who have completed Courses 1a and 2a are eligible for this course. It must be accompanied by Course 4b.

Assistant Professor Goettsch and Assistants.

4b. General Inorganic Chemistry, Laboratory.—Three laboratory exercises per week. *Second semester*. Experiments complementary to the subject-matter of Course 3b.

Assistant Professor Goettsch and Assistants.

10a. Advanced Inorganic Chemistry.—Two exercises a week. *First semester*. The less familiar elements and their compounds, and the more recent theories of inorganic chemistry.

Prerequisite: Courses 5a, 6, and 7b. Associate Professor Fry.

11a. Inorganic Preparations.—Three laboratory exercises a week. *First semester*. Associate Professor Fry.

Prerequisite: Course 7b.

5a. Qualitative Analysis.—Lectures and recitations on the principles and practice of qualitative analysis. Considerable emphasis is laid upon the application of the laws of chemical equilibrium and the theories of solutions and of electrolytic dissociation to the practical problems of the analyst. Three exercises a week for one semester. Mr. Nash.

Prerequisite: Courses 3b and 4b.

6. Qualitative Analysis, Laboratory.—To accompany Course 5. During the first few weeks the student will perform the most important tests commonly used in the processes of analytical chemistry. The later work of the course will furnish training in the qualitative examination of salts, minerals, alloys, etc. Two exercises a week, *first semester*. Two laboratory periods and one quiz period, *second semester*. Mr. Nash and Mr. Esslinger.

7. Quantitative Analysis.—An introductory laboratory course in gravimetric and volumetric analysis. Occasional conferences will be held at which analytical methods and calculations will be discussed, and at which reports will be submitted covering assigned reading. Three exercises a week. *Second semester*. Given during first semester for co-operative engineers. Mr. Esslinger.

Prerequisite: Courses 5a and 6 (first semester).

17. Technical Analysis.—Analyses of typical industrial products. Gravimetric, volumetric, gasometric, electrolytic and colorimetric processes, involving the use of such instruments as polariscopes,

refractometers, colorimeters, specific gravity balances, calorimeters, pyrometers, and other apparatus for rapid determinations by physical means. The aim is to study typical methods of analysis. Some of the topics covered in the past have been analyses of fuel, cement, ores, iron and steel, water, gas, fertilizers, soaps, and food.

Assistant Professor Goettsch and Mr. Esslinger.

Prerequisite: Course 7b.

8a. Elementary Organic Chemistry.—Quizzes and lectures which are experimental covering the chief classes of organic compounds of both the aliphatic and the aromatic series. Arranged to meet the needs of those who intend to specialize in chemistry, in medicine, in biology, or in engineering, and serves as a general introduction for those who intend to go deeper into the study of organic chemistry.

Professor Jones.

Prerequisite: Courses 3b and 4b.

9a. Organic Reactions and Preparations.—Laboratory practice, consisting of two exercises a week to accompany the lectures of Course 8a.

Professor Jones and Assistant Professor Reemelin.

Professor Jones and Assistant Professor Reemelin.

Prerequisite: Courses 3b and 4b.

20. Advanced Organic Chemistry.—Lectures, embracing a systematic study of the principles and practices of organic chemistry, and treating of the modes of formation, properties, and constitutional formulae of typical members of the most important classes of organic compounds. Three exercises a week throughout the year.

Professor Jones.

Prerequisite: Courses 5a, 6, 7b, 8a, 9a, and a reading knowledge of German and French.

21. Advanced Organic Chemistry, Laboratory.—Practice in the preparation of a number of typical organic compounds. Two or three exercises a week throughout the year.

Professor Jones.

12a. Physical Chemistry.—Lectures and recitations. Three exercises a week. *First semester.* An introductory course which considers the general properties of gases, liquids, solids, and solutions, as well as the principles determining reaction velocity and the equilibria in homogeneous and heterogeneous systems.

Prerequisite: Chemistry 5a, 6a and 7b, Physics 26a and 27b, Mathematics 5.

Mr. Nash.

13a. Physical Chemistry, Laboratory.—Two exercises a week. *First semester.* Designed to illustrate the principles developed in

Course 12a, and to provide a working knowledge of the common methods used in physical-chemical measurements. This course must accompany Course 12a. Mr. Nash.

32b. Electrochemistry.—Lectures and recitations. Three exercises a week. *Second semester.* A general consideration of the electrical properties of matter with special reference to the theory of aqueous solutions. Mr. Nash.

Prerequisite: 12a.

33b. Electrochemistry, Laboratory.—Two exercises a week. *Second semester.* Determination of conductivity with its application, transference numbers, electromotive force, dielectric constant, etc. Must accompany Course 32b. Mr. Nash.

[34a. Thermodynamics Applied to Chemistry.] Two exercises a week. *First semester.* Devoted to an elementary consideration of the principles of thermodynamics and their application to physical-chemical problems. The work will be illustrated by the solution of numerous numerical examples. Mr. Nash.

Prerequisite: 12a and 32b.

Omitted in 1913-14.

41a. Phase Rule.—Lectures and recitations. The phase rule and its applications. Two exercises a week. Hours to be arranged. Prerequisite: Course 12a. Mr. Nash.

14b. Metallurgy.—Five periods a week. *Second semester.* A study of fuels, refractories, ferrous and non-ferrous metallurgy, and practice in metallurgical calculations. Especial emphasis is laid upon foundry and steel works processes, and excursions are made to metallurgical establishments in Cincinnati and vicinity.

Assistant Professor Aston.

Prerequisite: Course 5a and Physics 1.

15b. Assaying.—One afternoon a week. *Second semester.* Laboratory practice in the fire assay of ores and base metals for gold, silver and lead. Assistant Professor Aston.

Prerequisite: Course 7b.

[16a. Technical Inorganic Chemistry.] Three periods a week. *First semester.* Lectures and recitations upon important inorganic chemical industries. Especial attention is paid to plant equipment and costs. Assistant Professor Goettsch.

Prerequisite: Courses 5a and 6.

Omitted in 1913-14.

18b. Technical Organic Chemistry.—Three periods a week. *Second semester.* Lectures and recitations upon selected organic chemical industries. Especial attention is directed to plant equipment and costs. Assistant Professor Goettsch.

Prerequisite: Courses 8a and 16a.

36b. Technical Chemistry, Laboratory.—It is not intended that the course should consist of the preparation of a prescribed list of chemical compounds, but rather of a number of independent problems considering the technical manufacture of important inorganic and organic chemicals. The work will include the testing of raw material and finished product; the preparation of cost sheets, showing prices of material used and time spent; a consideration of the possibility of utilizing any by-products; and, in some cases, the design of a factory calculated for a certain output.

Assistant Professor Goettsch and Assistant.

[29a. Practical Photography.] Laboratory work in the exposure and development of plates predominates, followed by a study of various printing methods. Some time is devoted to copying, enlarging and the making of lantern slides. One lecture and one laboratory exercise per week. *First semester.*

Assistant Professor Goettsch.

Prerequisite: General Inorganic Chemistry (1a, 2a, 3b, 4b).

Omitted in 1913-14.

26. Summer Work (Sophomore).—A memoir, illustrated by drawings, descriptive of some subject of technical interest. An account of work done during the summer in an industrial laboratory or works will, if satisfactory, be accepted as an equivalent of the memoir.

Summer work reports and memoirs must be handed in by November 1st.

27. Summer Work (Junior).—A memoir, illustrated by drawings, descriptive of some manufacturing industry. The memoir should be accompanied by a report of work performed in the laboratory or works.

Summer work reports and memoirs must be handed in by November 1st.

23b Thesis, Laboratory.—Four laboratory periods a week devoted to the solution of some problem in technical chemistry or metallurgy, including collateral reading and practice in bibliography. This course is designed for Senior students who are required to prepare a thesis for graduation.

Professor Jones, Assistant Professor Goettsch,
Assistant Professor Aston, Mr. Nash.

CIVIL ENGINEERING

The purpose of this course is to give a broad education in those subjects which form the basis of all branches of technical education, and a special training in those subjects comprised under the term "Civil Engineering." Its aim is to prepare the young engineer to take up the work of assisting in the design and construction of bridges, steel mills, and high steel buildings; to aid in the location and construction of steam and electric railways, sewerage and water supply systems; and to undertake, intelligently, supervision of work in the allied fields of mining, architectural and electrical engineering and general contracting.

CIVIL ENGINEERING CO-OPERATIVE PLAN

The Civil Engineering Department co-operates with railroads, structural steel shops, reinforced concrete construction companies, general contractors, and the Engineering Department of the city of Cincinnati.

Students employed on railroad work start as laborers in a section gang. This work includes main line, yard, and extra gang work. In the bridge and building department, experience is gained in the repair of bridges, the building of culverts, and other construction work done by this department. The signal department affords opportunity for the student to become familiar with the installation, operation, and maintenance of the various signal systems. One summer is spent in a steel fabrication plant and one summer in a frog switch and signal factory. In the last year of the course, the student is assigned to minor supervisory work in connection with heavy construction. As opportunity permits and the ability of the student warrants, he acts as assistant foreman and timekeeper in the various departments.

Students desiring municipal work start as laborers in the street repair department of the city or with contractors doing city work. After sufficient experience, they are appointed as rodmen and inspectors in the engineering department of the city.

In structural work, the student spends the first year in a structural steel shop familiarizing himself with structural steel fabrication. This is followed by work in reinforced concrete construction and general contracting work.

The outside work in civil engineering aims first, to give students actual experience in the doing of work, and second, to train them to supervise work that is done by others. While there is a definite plan outlined and agreed to by each employer, promotion is dependent upon the ability and application of the student.

CIVIL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. C. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Trigonometry and Algebra.....	Math. 1.....	4	
Analytical Geometry.....	Math. 1.....		4
Chemistry	Ch. E. 1a, 2a, 3b, 4b...	5	5
Descriptive Geometry.....	C. E. 1.....		3
Mechanical Drawing.....	M. E. 1.....	3	
English	English 1.....	3	3
French or German.....	{ French 1..... } { German 1..... }	3	3
Physical Education.....	Phys. Educ. 1.....	2	2

SUMMER TERM

Land Surveying.....C. E. 3.. Not given in summer of 1912.

SOPHOMORE YEAR

Calculus	Math. 5.....	4	4
Physics	Physics 1a, 21b.....	3	3
Physics Laboratory.....	Physics 2a, 22b.....	2	2
Construction Drawing.....	C. E. 4.....	2	2
Cement, Theory and Lab.....	C. E. 5.....		3
Mechanics of Engineering.....	Ap. Math. 2.....		4
Metallurgy	Met. E. 1a.....		3
English	English 2.....	2	
French or German.....	{ French 2..... } { German 2..... }	3	3
Physical Education.....	Phys. Educ. 2.....	2	2

JUNIOR YEAR

Dynamics	Ap. Math. 3.....	2½	3
Roofs and Bridges.....	C. E. 9.....	3	
Railroad Construction.....	C. E. 10.....	3	
Railroad Surveying.....	C. E. 11.....		3
Hydraulics	C. E. 13.....	3	
Hydraulic Machinery.....	M. E. 27.....		3
Economics	Economics 1.....	2	2
Geology and Physiography....	See Geol. Announcem't	5	5
Materials Laboratory.....	M. E. 16.....	1	

SENIOR YEAR

Astronomy	Astronomy 2a, 3b.....	1	1
Bridge Design.....	C. E. 14.....	3	3
Bridges, Higher Structures...	C. E. 15.....		3
Sanitary Engineering.....	C. E. 18.....	3	3
Sanitary Biology.....	Biol. 9.....	1	1
Elements of Electrical En- gineering	{ E. E. 12..... }	4	4
Practical Problems.....	C. E. 17.....	4	4

CIVIL ENGINEERING—CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF C. E.

SUBJECT	COURSE	Exercises	
		Per Alternate I Sem.	Weeks II Sem.
FIRST YEAR			
FRESHMAN			
Trigonometry and Algebra....	Math. 1.....	6	
Analytical Geometry.....	Math. 1.....		6
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	
Descriptive Geometry.....	C. E. 1.....		3
Co-ordination	C. 5.....	2	2
Elements of Engineering.....		3	3
Physical Education.....		2	2
FIRST SUMMER TERM.			
Elements of Engineering.....	C. E. 20.....	6	
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....	C. E. 2.....	5	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics	Physics 1a, 21b.....	6	6
Physics, Laboratory.....	Physics 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a.....		} 4
Metallurgy, Laboratory.....				3
English			5
Construction Drawing.....	C. E. 4.....	3	
Co-ordination	C. 6.....	2	2
Physical Education.....		2	2
SECOND SUMMER TERM			
Hydraulics.....	C. E. 13.....		
Plane and Topographic Sur- veying	C. E. 3.....	11	
THIRD YEAR			
PRE-JUNIOR			
Electrical Machinery.....	E. E. 1, 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics	Ap. Math. 1.....		6
Cement Theory and Lab.....	C. E. 5.....		3
Railroad Surveying.....	C. E. 10, 11.....	3	
Modern Language.....		6	6
FOURTH YEAR			
JUNIOR			
Steam Engineering.....	M. E. 11.....	6	
Mechanical Laboratory.....	M. E. 18.....	2	
Roofs and Bridges.....	C. E. 9.....	8	8
Structural Design.....	C. E. 14.....		8
Co-ordination	C. 8.....	3	3
Modern Language.....		6	6

FIFTH YEAR	SENIOR		
Engineering Design.....	C. E. 14.....	6	6
Economics		5	5
Geology		7	7
Engineering Design.....	C. E. 17.....	3	3
Engineering Design.....	C. E. 18.....	5	5

CIVIL ENGINEERING

COURSES IN DETAIL

HERMAN SCHNEIDER, Sc. D., William Thoms Professor of Civil Engineering.

* FRED EUGENE AYER, C. E., Associate Professor of Civil Engineering.

G. M. BRAUNE, C. E., . . . Assistant Professor of Civil Engineering.

GEORGE R. MOORE, C. E., Instructor in Civil Engineering.

RUSSELL BENNETT WITTE, B. C. E., Instructor in Civil Engineering.

1. Descriptive Geometry.—Projections of lines, planes, and solids, with practical applications. Isometric and perspective drawing. Free-hand drawing. Mr. Witte.

2. Descriptive Geometry, Practical Applications.—Summer term. Assistant Professor Braune.

3. Land Surveying.—The theory and use of the transit and level. The theory of land surveying with practical problems. The surveying of areas in city and country, and computations of the same, together with maps and profiles.—Summer term.

Assistant Professor Braune and Mr. Moore.

20. Elements of Engineering.—The solution of problems by the triangle of forces; stresses in simple structural parts and beams. Design of beams.—Summer term.

Assistant Professor Braune and Mr. Moore.

4. Construction Drawing.—Stereotomy, dams, piers, culverts, trestles. Practical applications of descriptive geometry to sewer details, pipe intersections, arch construction, etc.

Assistant Professor Braune and Mr. Moore.

5. Cement.—Theory and manufacture. Analysis of raw materials. Calculation of mix. Standard laboratory tests on cement, mortar and concrete.

Assistant Professor Goettsch and Mr. Moore.

9. Roofs and Bridges.—Calculation of stresses in framed structures under static and moving loads by both graphic and analytic methods.

Assistant Professor Braune.

* Absent on leave, 1913-14.

10. Railroad Construction.—The construction of subgrade, roadbed, trestles, tunnels, and drains; maintenance of way and organization. Rolling stock. Mr. Witte.

11. Railroad Surveying.—The reconnaissance, preliminary and location methods, with theory of tangents, curves, crossovers, and turnouts. Field work exemplifying practical application of theory. Mr. Witte.

13. Hydraulics.—Theory of the flow of water through orifices, tubes, pipes, and channels. River and sewer hydraulics and naval hydro-mechanics, stream gauging and hydrographic surveying.—Summer term. Assistant Professor Braune.

14. Structural Design.—Contracts and office work. Shops and shop practice. Design of roof truss, plate girder, and pin connected span, including the important details. Specifications. Inspection trips. Assistant Professor Braune.

15. Higher Structures.—Cantilever, draw, suspension, and arched structures. Assistant Professor Braune.

17. Engineering Design, Practical Problems.—Design of sewerage and water supply systems, and reinforced concrete structures. Higher structures. Professor Schneider, Assistant Professor Braune, Mr. Moore.

18. Sanitary Engineering.—Sewage collection and disposal. Sewer details. Water purification and supply. Design of a sewerage and water supply system. Mr. Moore.

ELECTRICAL ENGINEERING

The Department of Electrical Engineering offers courses on two distinct plans. The first is called the regular course and is completed in four years, the student working in the University each week during the college year and in the shops during the summer. The second is called the co-operative course and is completed in five years, the student working alternately in the College of Engineering one week and in a city shop the next. A description of the co-operative plan is given elsewhere in this catalogue.

During the first two years, the work in the University is chiefly in history, mathematics, physics, chemistry, and drafting, and forms a basis for more specialized work in later years. Beginning with the third and junior years, specialized work is taken up. Inasmuch as the professional electrical engineer needs a comprehensive knowledge of mechanical engineering, many of the technical subjects of the Me-

chanical Department are included in the Electrical Course. Thus steam engineering and machine design with laboratory work and drafting, together with applied mathematics, are studied during the third year.

In addition to the purely technical subjects, many cultural subjects are introduced throughout the course, subjects which every man of education should know; for a professional engineer should be a broadly educated man, capable of filling the highest positions in active life.

The curricula and details of the courses are given below :

ELECTRICAL ENGINEERING

CO-OPERATIVE PLAN

The co-operative students of electrical engineering follow many diverse lines of practical experience. It is hardly possible to discuss these activities in detail. But there is a general method underlying all forms of practical work, so that practically the same degree of progressive development is obtained.

All Freshmen spend a year in some foundry or machine shop, for the purpose of becoming familiar with general shop practice and the conditions of labor. Those who take up manufacturing work, such as is offered by the Bullock Electric Company or the Triumph Electric Company, spend practically the second and third years in the machine, controller, winding, and assembling departments. In this way, they become thoroughly familiar with the varied processes involved in the manufacture of electrical machinery, and with the details of shop organization. The fourth year is usually spent in testing direct current machinery, and the fifth year in the testing of alternating current machinery.

During the past year, arrangements have been made with the Cincinnati Traction Company, so that a number of our students spend at least the second and third years in the car barns. The work includes the inspection, repair, and testing of the various types of equipment used by the Traction Company.

At present, a number of students are employed in telephone work. Their practical experience depends upon the operating conditions, and involves both inside and outside inspection, repair, testing, and construction.

Students of electrical engineering are also engaged in co-operative work with the Pennsylvania Railroad Company. The practical experience with this company is of a varied character, and depends largely upon the ability of the students.

The Warner Elevator Company employs a number of students in the co-operative course in electrical engineering. This work furnishes the very best opportunities for the observation of the mechanical and electrical details of modern elevator practice.

ELECTRICAL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. E. E.

SUBJECT	COURSE	Exercises	Per Week
		I Sem.	II Sem.
FRESHMAN YEAR			
Algebra and Trigonometry....	Math. 1.....	5	
Analytical Geometry.....	Math. 1.....		5
Chemistry	Ch. E. 1a, 2a, 3b, 4b...	5	5
Descriptive Geometry.....	M. E. 3.....	3	
Freehand Drawing.....		1	1
Machine Drawing.....	M. E. 1.....		2
German or French.....	{ German 1..... } { French 1..... }	3	3
English	English 1.....	3	3
Physical Education.....	Phys. Educ. 1.....	2	2
Summer work in shops.			
SOPHOMORE YEAR			
Calculus	Math. 5.....	3	3
Physics	Physics 1a, 21b.....	3	3
Experimental Physics.....	Physics 2a, 22b.....	2	2
Mechanism	M. E. 6.....	2	
Drawing and Sketching.....	M. E. 7.....	1	1
Steam Engineering.....	M. E. 11.....	3	3
Mechanical Laboratory.....	M. E. 18.....	1	1
Machine Drawing.....	M. E. 9.....	2	
Metallurgy	Met. E. 1a.....	4	
Metallurgical Laboratory.....		1.5	0
History		1	1
English	Eng. 2.....		2.5
German or French.....	{ German 2..... } { French 2..... }	3	3
Physical Education.....	Phys. Educ. 2.....	2	2
Summer work in shops.			5
Electrical Engineering.....	E. E. 12.....		3
			(Alt. weeks)
JUNIOR YEAR			
Elementary Design.....			3
Elementary Problems.....	E. E. 12.....	3	
Electrical Machinery.....	E. E. 1, 9.....	3	3
Electrical Laboratory.....	E. E. 5.....	1	1
			(Alt. weeks)
Mechanics of Engineering....	Ap. Math. 1, 3.....	5	5
Physics	Physics 5, 13.....	3	2
Machine Design.....	M. E. 13, 14, 19.....	5	2
Graphics of Mechanics.....	M. E. 17.....		2
Summer Term, Land Surv'g..	C. E. 3.....	4 weeks	

SENIOR YEAR

Alternating Current Mach.....	E. E. 3.....	3	3
Advanced Design.....	E. E. 15.....	3	3
Elec. Power Transmission.....	E. E. 4.....	3	
Advanced E. E. Laboratory.....	E. E. 7.....	3	3
Electric Power Stations.....	E. E. 11.....		0
Gas Engineering.....	M. E. 23.....	3	1
Advanced Mechan. Lab.....	M. E. 25.....	1	1
Mechanical Power Stations.....	M. E. 29.....		1
Advanced Integral Calculus.....	Math. 8a.....	3	
Differential Equations.....	Math. 9b.....		3
Thesis.....	E. E. 8.....	3	3

Electives

Telegraphy and Telephony.....	E. E. 13.....	3	
Illumination.....	E. E. 10.....	2	
Advanced Physics.....		3	3
Railroad Construction.....	C. E. 10.....	3	
Steam Turbines.....	M. E. 24.....	2	
Economics.....	Economics 1.....	2	2
Heating and Ventilation.....	M. E. 30.....		2
Geology.....	Geol. 2.....	5	5
Electric Railways.....			3
Thermodynamics.....	M. E. 21.....		3

ELECTRICAL ENGINEERING CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF E. E.

SUBJECT	COURSE	Exercises	
		Per Alternate Week I Sem.	II Sem.
FIRST YEAR	FRESHMAN		
Algebra and Trigonometry..	} Math. 1.....	6	6
Analytical Geometry.....			
Chemistry.....	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	2	
Co-ordination.....	C. 1.....	2	2
Physical Education.....		2	2
Elements of Engineering.....	M. E. 4.....	3	3
FIRST SUMMER TERM—Five weeks.			
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
Elements of Engineering.....	M. E. 4.....	6	
SECOND YEAR	SOPHOMORE		
Calculus.....	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	3
Metallurgy.....	Met. E. 1a.....	4	
Metallurgical Laboratory.....		3	
Drawing and Sketching.....	M. E. 7.....		2
Co-ordination.....	C. 2.....	2	2
Physical Education.....		2	2
English.....			5

SECOND SUMMER TERM.

Mechanical Laboratory.....	M. E. 18.....	4	
Mechanism	M. E. 6.....	6	
Drawing and Sketching.....	M. E. 7.....	7	

THIRD YEAR PRE-JUNIOR

Physics, Laboratory.....	Phys. 13.....		2
Modern Language.....		5	5
Steam Engineering.....	M. E. 11.....	6	6
Mechanical Laboratory.....	M. E. 18.....	2	2
Strength of Materials.....	Ap. Math. 2.....	6	6
Mathematics		4	
Inspection Trips.....		1	1

THIRD SUMMER TERM

English		6	
Elementary Problems.....	E. E. 12.....	4	
Elementary Laboratory and Reports.....	E. E. 13.....	7	

FOURTH YEAR JUNIOR

Electrical Machinery.....	E. E. 1, 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2
Machine Design.....	M. E. 13.....	5	
Machine Drawing and Shop Inspection.....	} M. E. 14.....	3	
Modern Language.....		6	6
Co-ordination	C. 8.....	3	3
Hydraulic Mach.....	M. E. 27.....		5
Electrical Design.....	E. E. 2.....		3

FOURTH SUMMER TERM

App. Math. in Elec. Eng.....		6	
Special Problems.....		4	
Elec. Design.....	E. E. 2.....	3	
Elec. Lab.....	E. E. 7.....	4	

FIFTH YEAR SENIOR

Alternating Current Ma- chinery	} E. E. 3.....	4	4
Electrical Laboratory and Visits		} E. E. 7.....	3	2
Electrical Design adv.....	E. E. 15.....		2
Gas Engineering.....	M. E. 23.....	5	
Production Engineering.....	C. 9.....	5	
Economics		6	6
Thesis	E. E. 8.....		5

Electives

Telegraphy and Telephony....	E. E. 13.....	5	
Illumination	E. E. 10.....	4	
Electric Railways.....	E. E. 6.....		5
Advanced Integral Calculus....	Math. 8a.....	5	
Differential Equations.....	Math. 9b.....		5

No time is provided in the co-operative schedule for these electives. They are offered only to those who may have credits in any of the regularly scheduled subjects, and consist of individual reading and laboratory work, with occasional consultations.

ELECTRICAL ENGINEERING

COURSES IN DETAIL

ALEXANDER MASSEY WILSON, M. E., Professor of Electrical Engineering.
 CLARENCE RAYMOND WYLIE, M. E., Assistant Professor of Electrical Engineering.

1. Direct Current Machinery.—Fundamental principles of direct current machinery; characteristics, construction and operation of dynamos, motors and instruments. Assistant Professor Wylie.

9. Alternating Currents.—Alternating electromotive force and current; resistance, inductance, and capacity in alternating current circuits, graphical and analytical treatment; theory of the alternating current generator; polyphase currents.

Assistant Professor Wylie.

5. Electrical Engineering, Laboratory.—Use and care of electrical instruments; characteristics of electric circuits; study of magnetic properties of iron and steel; operation of direct current dynamos and motors, with tests for characteristics, efficiency and losses.

Assistant Professor Wylie.

2. Electrical Design.—Principles and methods employed in the design of direct current machinery.

Professor Wilson.

3. Alternating Current Machinery.—Theory, characteristics, and performance of alternators, synchronous motors, rotary converters, transformers, frequency converters, induction motors, and commutator motors. Analytical and graphical treatment of alternating current circuits.

Professor Wilson.

4. Electric Power Transmission.—Electric conductors; distributing systems; interior wiring; long-distance transmission; economy in the design of circuits; line construction.

Assistant Professor Wylie.

6. Electric Railways.—The railway motor; controllers; rolling stock and equipment; train performance; power distribution; interurban electric railways.

Assistant Professor Wylie.

7. Advanced Electrical Engineering, Laboratory.—Measurement of power in alternating current circuits; experimental study of characteristics of alternators, transformers; single and polyphase induction motors; rotary converters, etc.

Assistant Professor Wylie.

10. Illumination.—Principles of photometry; light sources—flame, illuminants, electric incandescent lamps, electric arc lamps; shades and reflectors; domestic illumination; lighting of large interiors; street lighting; decorative illumination.

Professor Wilson.

11. Electric Power Stations.—The central power station, location and general arrangement; selection of generating units; switch gear; station wiring; storage battery. The substation.

Professor Wilson.

8. Thesis.—Special assignments.

15. Electrical Design (Advanced).—A continuation of Course 2, attention being given especially to the construction of alternating current machinery and installations.

Professor Wilson.

16. Alternating Currents (Advanced).—The course deals with the more complex problems in alternating current theory as applied to inductive machinery and long-distance power transmission.

Professor Wilson.

12. Elementary Problems.—For students during third summer.

13. Elementary Laboratory.—For students during third summer. Miscellaneous laboratory in connection with problems.

MECHANICAL ENGINEERING

The University of Cincinnati is situated in the very heart of the manufacturing district of the Middle States, and is surrounded on all sides, within easy reach, by manufacturing communities, whose reputation is international. The students, therefore, have exceptional opportunities for visiting and studying many kinds of factories, and may see carried out in practice what is discussed in the class-room and laboratory. These extensive and varied manufacturing plants are, as it were, a great laboratory where machines, tools, and motors of every kind are made and tested. This is a rare condition of things, indeed, and offers to the student advantages quite superior to those provided by the largest engineering laboratory. The managers of these plants afford every opportunity to the students for study and tests.

Again, these large and diversified manufacturing interests surround the student with the proper engineering atmosphere, and bring him into almost daily contact with work and men in his chosen field. Naturally there is a great demand for young and trained engineers in such surroundings. Graduates are actively and successfully engaged in the different branches of mechanical engineering.

MECHANICAL ENGINEERING

CO-OPERATIVE PLAN

The student of mechanical engineering finds at Cincinnati a wide field from which to select work fitted to his ability and temperament. Besides the power plants and railroad and car shops that are to be found in its vicinity, there are many factories which work up raw materials into a wide variety of machines. One group of factories is composed of machine tool builders; another group manufactures steam and air machinery, refrigerating plants, valves and fittings, pipe coverings, and insulating materials.

Co-operative students in mechanical engineering spend half of their time working in the factories, some of which are the largest of their kinds in the world, and thus obtain the training that will make it possible for them to hold responsible positions as production engineers, superintendents, assistant superintendents, mechanical engineers, and designers. Co-operative students are at present working in foundries, steel works, machine tool shops, engine-building shops, drawing rooms, and time-setting and planning departments. About half of the graduates secure positions in the factories in which they have worked.

The training given at the University covers the work of the usual four-year course in mechanical engineering. Shop practice courses and purely descriptive matter have been eliminated, since this experience is gained in the factories of the city. The University work and the work in the factories are complementary, and the courses within the University have been carefully co-ordinated. The mechanical engineering laboratory is new and modern, and is fitted for experimental work in the testing of materials, machine tools, turbines, steam engines, producers, gas engines, and air machinery. Tests on refrigerating machinery are made in a plant of full size near the University. The University power plant of 900 H. P. has been arranged particularly for the testing of boilers.

MECHANICAL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. M. E.

SUBJECT	COURSE	Exercises						
		I Sem.	Per Week II Sem.					
FRESHMAN YEAR								
Algebra and Trigonometry	Math. 1	5						
Analytical Geometry	Math. 1		5					
English	English 1	3	3					
Chemistry	Ch. E. 1a, 2a, 3b, 4b	5	5					
Descriptive Geometry	C. E. 1		3					
German or French	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="font-size: 2em; vertical-align: middle;">}</td> <td>German 1</td> <td rowspan="2" style="font-size: 2em; vertical-align: middle;">}</td> </tr> <tr> <td></td> <td>French 1</td> </tr> </table>	}	German 1	}		French 1	3	3
}	German 1	}						
	French 1							
Machine Drawing	M. E. 1	3						
Elements of Engineering	M. E. 4	2	2					
Physical Education	Phys. Educ. 1	2	2					
Summer work in shops.								
SOPHOMORE YEAR								
Calculus	Math. 5	4	4					
Physics	Physics 1a, 21b, 2a, 22b	4	4½					
Steam Engineering	M. E. 11	3	3					
Machine Drawing	M. E. 9	1	2½					
Metallurgy	Met. E. 1a	4						
German or French	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="font-size: 2em; vertical-align: middle;">}</td> <td>German 2</td> <td rowspan="2" style="font-size: 2em; vertical-align: middle;">}</td> </tr> <tr> <td></td> <td>French 2</td> </tr> </table>	}	German 2	}		French 2	3	3
}	German 2	}						
	French 2							
Physical Education	Phys. Educ. 2	2	2					
M. E. Laboratory	M. E. 18	1	1					
Graphics	M. E. 12		1					
Elements of Engineering	M. E. 4	2	2					
Summer work in shops.								
JUNIOR YEAR								
Mechanics of Engineering	Ap. Math. 2, 1	3	3					
Machine Design	M. E. 13	2½						
Machine Design	M. E. 14, 19	2	2					
Physics	Physics 13	2	1					
Electrical Machinery	E. E. 1, 9	3	3					
Electrical Laboratory	E. E. 5	2	2					
Economics		2½	2½					
Mathematics		1						
Hydraulic Machinery	M. E. 27		2½					
English			2½					
Summer work, Land Surv'g	C. E. 3	4 weeks						
SENIOR YEAR								
Thermodynamics	M. E. 21		2½					
Valve Gears	M. E. 22	5						
Gas Engineering	M. E. 23	2½						
Steam Turbines	M. E. 24		2					
Mechanical Laboratory	M. E. 25	2	2					
Engineering Design	M. E. 28	4	3					
Heating and Ventilating	M. E. 30		2					
Production Engineering		2½						
Machine Shop Tools	M. E. 15		1½					
Thesis	M. E. 39							

Electives:

Astronomy	Astronomy 2a, 3b.....	1	1
Electric Power Trans- mission	} E. E. 4.....	3	
Geology .....				5	5
Alternating Current Mach'y.....	E. E. 3.....	5	5
Electrical Laboratory.....	E. E. 7.....	2	2

MECHANICAL ENGINEERING CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF M. E.

SUBJECT	COURSE	Exercises	
		Per Alternate I Sem.	Week II Sem.
FIRST YEAR	FRESHMAN		
Algebra and Trigonometry. }	Math. 1.....	6	6
Analytical Geometry..... }			
General Inorganic Chemistry..	Ch. E. 1a, 3b.....	5	5
General Inorganic Chemistry } Laboratory	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	
Descriptive Geometry.....	C. E. 1.....		3
Co-ordination	C. 1.....	2	2
Elements of Engineering.....	M. E. 4.....	3	3
FIRST SUMMER TERM			
Elements of Engineering.....	M. E. 4.....	6	
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
SECOND YEAR	SOPHOMORE		
Differential and Integral Calculus	} Math. 5.....	6	6
Physics (General).....				Physics 1a, 21b.....	6	6
Experimental Physics.....	Physics 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a..... }		5
Metallurgy, Laboratory..... }					3
English	English	5	
Drawing	M. E. 9.....	2	
Co-ordination	C. 2.....	2	2
SECOND SUMMER TERM			
Mechanism	M. E. 6.....	6	
Drawing and Sketching.....	M. E. 7.....	7	
Mechanical Laboratory.....	M. E. 18.....	4	
THIRD YEAR	PRE-JUNIOR		
Mathematics	Math.	2	
Steam Engineering.....	M. E. 11.....	6	6
Physics, Laboratory.....	Physics 13.....		3
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics	Ap. Math. 1.....		6
Mechanical Laboratory.....	M. E. 18.....	2	2
Modern Language.....		5	5

THIRD SUMMER TERM

Electrical Engineering.....	7	
Graphics.....M. E. 17.....	5	
Steam Engineering.....M. E. 11.....	5	

FOURTH YEAR

JUNIOR

Modern Language.....	6	6
Machine Design.....M. E. 13.....	5	
Machine Design.....M. E. 14, 19.....	4	4
Electrical Machinery.....E. E. 1, 9.....	6	6
Electrical Laboratory.....E. E. 5.....	2	2
Co-ordination.....C. 8.....	3	3
Hydraulic Machinery.....M. E. 27.....		5

FOURTH SUMMER TERM

Engineering Design.....M. E. 28.....	12	
Experimental Engineering.....M. E. 25.....	5	

FIFTH YEAR

SENIOR

Gas Engineering.....M. E. 23.....	5	
Machine Shop Tools.....M. E. 15.....		3
Experimental Engineering.....M. E. 25.....	2	
Economics.....	5	5
Thermodynamics.....M. E. 21.....	2	5
Engineering Design.....M. E. 28.....	4	2
Production Engineering.....C.....	5	
Thesis.....		5

MECHANICAL ENGINEERING

COURSES IN DETAIL

JOHN THEODORE FAIG, M. E., Professor of Mechanical Engineering.

ALEXANDER LEWIS JENKINS, M. E., Associate Professor of
Mechanical Engineering.

HAROLD W. T. COLLINS, M. E., Instructor in Mechanical Engineering.

CHARLES ALBERT JOERGER, M. E., Instructor in Mechanical Engineering.

1. Machine Drawing.—Details of standard machine parts, bolts, nuts, screws, etc. Methods of detailing pulleys, gears, shafting, and machine elements. Elementary descriptive geometry.

Mr. Joerger and Mr. Moore.

4. Elements of Engineering.—The solution of problems by the triangle of forces; stresses in simple structural parts and beams.

Professor Faig and Mr. Joerger.

6. Mechanism.—A study of the transformation and modification of motion by means of toothed wheels, cams, screws, links, belts and chains. Kinematics of cone pulleys, speed boxes, back-gears and complete trains of mechanism; feeds and speeds on machine tools; curves of velocity and acceleration for shapers, engines, riveters and other linkages; proportions for spur, bevel, worm and spiral gears; advantages of the various standard proportions for gear teeth.

Associate Professor Jenkins.

7. Drawing and Sketching.—Graphic representation of various methods of transmitting and modifying motions by means of mechanical devices. Cams, links, and toothed wheels.

Associate Professor Jenkins.

9. Machine Drawing.—Detail drawings from measurements of machines. Assembled drawings of machines. Mr. ———.

11. Steam Engineering.—Elements and economy of simple and complete steam plants. Fuels, combustion, boilers, furnaces, stokers, smoke prevention, superheaters, coal and ash handling, chimneys, mechanical draft, steam engines, turbines, condensers.

Professor Faig and Mr. Collins.

13. Machine Design.—Rational and empirical formulae for the design of fastenings, links, shafts, couplings, clutches, belting, chains, and toothed wheels. Design of frames for engines, machine tools, and cranes.

Associate Professor Jenkins.

14. Machine Design.—Design of a punching and shearing machine. Development of rational and empirical formulae for determining the size of each element. Assembled and detailed drawings and complete calculations for a given machine are required of each student.

Associate Professor Jenkins.

15. Machine Shop Tools.—A study of the forces, power and speed required to remove metal by turning, drilling, milling, and planing; the change in the efficiency and durability of tools produced by varying the angles, feeds, and speeds; feeds and speeds of various metal cutting machines compared with experimental laws based on authoritative tests.

Associate Professor Jenkins.

17. Graphics of Mechanism.—A study of the forces involved in mechanisms, their direction and magnitude, and of the mechanical efficiencies of various combinations of elements.

Associate Professor Jenkins.

18. Engineering Laboratory.—Tensile, compressive, and torsional tests of materials of construction, including iron, brass, steel, wood, brick, stone, leather belting, and concrete. Standardization of instruments; indicating; brake tests of steam engines, hot-air engines, and gas engines. Tests of machine tools. Tests of bearing metals and oils.

Mr. Collins, Mr. ———.

19. Machine Design.—A definite problem involving the design of a complete machine, to be presented in the form of working drawings, with written description and calculation of parts. Catalogues, text-books, and engineering journals are freely consulted.

Associate Professor Jenkins.

21. Thermodynamics.—Elastic media as heat carriers. Thermodynamics of gases, saturated vapors, and superheated steam. Temperature-entropy diagrams of the various cycles. Application

of thermodynamics to steam and gas engines, air compressors, and refrigerating machines.
Professor Faig.

22. Valve Gears.—Analytical and graphical analysis of valve mechanisms. Methods of laying out the various forms of valve gears, link motions and reversing gears for the economical distribution of steam. Design of valves and governors for prime movers.
Professor Faig.

23. Gas Engineering.—Gas and oil engines. Power and efficiency. Frictional and valvular losses. Design, based upon an assumed card. Gas characteristics. Producer gas equipments and gas distribution.
Professor Faig.

24. Steam Turbines.—Historical development. Modern types. Critical study of the turbine as a heat motor and as a machine. Comparison with the most approved types of reciprocating engines.
Professor Faig.

25. Experimental Engineering.—Characteristics and economy of heat motors and their variation with conditions of operation. Analysis and full accounting of power losses. Experimental study of the forces acting on metal cutting tools. The efficiencies of machine tools. Determination of highest cutting speed of tools.
Professor Faig and Mr. Collins.

27. Hydraulic Machinery.—A study of the various types of hydrostatic presses, elevators, motors, turbines, accumulators, intensifiers, jacks, and tools. Hydraulic transmission of power and accessories; high pressure control; various types of pumps, their efficiencies and uses.
Associate Professor Jenkins.

28. Engineering Design.—A definite problem in the design or investigation of a machine, prime mover, auxiliary or plant. Free reference to machines and plants in the city bearing on the problem and to the library.
Professor Faig.

[29. Power Plants.] Lectures on the mechanical engineering of power plants.
Professor Faig.

Omitted in 1913-14.

30. Heating and Ventilation.—Methods of heating buildings by hot air, steam, and water. Motors, blowers, and mechanisms used in ventilating.
Professor Faig.

[31. Compressed Air and Refrigeration.] Air compressors, motors and tools. Air storage and power transmission. Refrigeration.
Professor Faig.

Omitted in 1913-14.

39. Thesis.—Modified research or original design. Hours to be arranged.
Professor Faig, Associate Professor Jenkins, Mr. Collins and Mr. Joerger.

METALLURGICAL ENGINEERING

Students who select this course will receive shop training in foundries, steel works and other similar establishments. It is contemplated to make the experience cover not only the purely metallurgical department, but also the related machine shop and mechanical departments. The entire course, including shop experience and university work, is arranged with a view to training men for executive positions in metallurgical works.

The first two years of the course will be identical with those of the co-operative course in Chemical Engineering. During the remaining years, courses in chemistry and other engineering subjects will form part of the curriculum, but special attention will be paid to metallurgy.

METALLURGICAL ENGINEERING

CO-OPERATIVE PLAN

The aim of the Co-operative Course in metallurgical engineering is to train men for executive positions in metallurgical industries; and since Cincinnati is in the center of an iron manufacturing district, and since also this branch is the predominant one of the metallurgical industries of the Central States, the attention of the course has been centered upon the problems in the metallurgy of iron and steel.

The practice of metallurgy is in large part the application of general engineering principles, and the course is built upon a foundation of mathematics and sciences which are generally recognized as fundamental to a sound engineering training; in addition, considerable time is devoted to the study of applied subjects in mechanical and electrical engineering. But metallurgy as a specialized branch of engineering practice is primarily dependent upon chemistry, and this subject occupies a prominent place in the earlier years of the course.

Direct instruction in metallurgy is given by means of class-room and laboratory work in the general principles of the art, and their application to the manufacture and treatment of iron and steel, and to the recovery of the more common metals other than iron. Considerable attention is given to the rapidly expanding field of utility of the electric current in the production of high temperatures for metallurgical operations. And the greatest emphasis is placed upon the application of the various metals and alloys to engineering construction; this training being gained by the study of the constitution of alloys, by chemical and physical tests of these materials, and by metallographic examination with the microscope and pyrometer.

The laboratories are equipped with the necessary furnaces, pyrometers, microscopes, and other accessory apparatus for the instruction work involved in the general subjects, and for the more advanced study of a specialized and investigative nature, which occupies a prominent place in the later years of the course.

Students in metallurgical engineering are placed in direct contact with the work and problems of this profession through co-operation with the industries of Cincinnati and vicinity. The first year is usually spent in the foundry, and the second in the machine shop. After this preliminary stage, more direct specialization is obtained by placing the men in foundries, coke ovens, blast furnaces, steel works and rolling mills, forge works, heat treatment departments, and industries of like metallurgical interest.

During the whole of the student's course, the shop work is planned and supervised by the University shop co-ordinators, and the problems encountered are discussed in special classes at the University which are arranged for this purpose.

METALLURGICAL ENGINEERING CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF MET. E.

SUBJECT	COURSE	Exercises	
		Per Alternate I Sem.	Week II Sem.
FIRST YEAR			
FRESHMAN			
Algebra and Trigonometry..	} Math. 1.....	6	6
Analytical Geometry.....			
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	3
Co-ordination	C. 3.....	2	2
History		6	6
FIRST SUMMER TERM			
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
Elements of Engineering.....		6	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a..... {	5	
Metallurgy, Laboratory.....			
Qualitative Analysis.....	Ch. E. 5, 6.....		5
English			6
Co-ordination	C. 4.....	2	2

SECOND SUMMER TERM

Qualitative Analysis.....	Ch. E. 5, 6.....	} 12
Quantitative Analysis.....	Ch. E. 7.....	

THIRD YEAR

PRE-JUNIOR

Quantitative Analysis.....	Ch. E. 7.....	3	
Physical Chemistry.....	Ch. E. 12a.....	5	
Physical Chemistry, Lab.....	Ch. E. 13a.....	2	
Electro Chemistry.....	Ch. E. 32b.....		5
Electro Chemistry, Lab.....	Ch. E. 33b.....		2
Steam Engineering.....	M. E. 11.....	6	6
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics			6
Modern Language.....		6	6
Testing Laboratory.....	M. E. 18.....		2

THIRD SUMMER TERM

Metallography.....	} Met. E. 2.....	} 5
Metallography Lab.....			3
Technical Analysis.....	Ch. E. 17.....	5

FOURTH YEAR

JUNIOR

Metallurgical Calculations.....	Met. E. 3a.....	5	
Metallurgy of Iron and Steel..	Met. E. 4b.....		5
Geology	Geology	5	5
Electrical Machinery.....	E. E. 1 and 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2
Modern Language.....		6	6
Co-ordination		3	3

FOURTH SUMMER TERM

Metallurgical Investigation....	Met. E. 5.....	5
Engineering Design.....		5
Conference	Met. E. 9.....	2

FIFTH YEAR

SENIOR

Non-Ferrous Metallurgy.....	Met. E. 6a.....	5	
Electro-Metallurgy	} Met. E. 7b.....	} 4	
Electro-Metallurgy, Lab.....			2
Thesis	Met. E. 8.....	2	4
Economics		6	6
Conference	Met. E. 9.....	2	2

Electives:

Hydraulic Machinery.....	M. E. 27.....
Gas Engineering.....	M. E. 23.....
Experimental Engineering.....	M. E. 25.....
Technical Chemistry.....	Ch. E. 16a.....

METALLURGY AND METALLURGICAL ENGINEERING

COURSES IN DETAIL

LAUDER WILLIAM JONES, Ph. D., Professor of Chemistry.
HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial
Chemistry.
JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
CLARENCE A. NASH, A. M., . . . Instructor in Physical Chemistry.

COURSES IN CHEMISTRY: A detailed description of the courses in Chemistry which form a part of the work required of the student in Metallurgical Engineering will be found under "Courses in Detail, Chemical Engineering," pp. 172-176.

General Inorganic Chemistry, p. 172.

Qualitative Analysis, p. 173.

Quantitative Analysis, p. 173.

Physical Chemistry, p. 174.

Electro-Chemistry, p. 175.

Technical Analysis, p. 173.

The following courses in Metallurgy and related subjects constitute the special training of students pursuing the course in Metallurgical Engineering.

1a. Engineering Metallurgy.—Lecture and laboratory course dealing with general principles in the metallurgy of constructive materials. Fuels, fluxes, slags, and refractory materials. Furnace types, efficiencies, and control. The extraction of iron, copper, lead, and zinc. Properties of industrial metals and alloys.

2. Metallography.—Lectures and laboratory work in the theory of the constitution of alloys. Pyrometry and the interpretation of cooling curves and freezing point diagrams. Microscopic examination of alloys and the relations of structure and physical properties. The heat treatment of steel.

3a. Metallurgical Calculations.—Class room study in the use of physical and chemical data in the calculation of metallurgical problems. Thermal reactions and their application to the efficiency of apparatus and processes.

4b. Metallurgy of Iron and Steel.—Lectures on the ores of iron and their treatment. Furnaces and materials of service in the iron industry. The manufacture of pig iron and steel. Rolling mill and casting methods. The properties of iron and steel.

5. Metallurgical Investigation.—Individual problems in advanced metallurgical research. Pyrometry, microscopic examination, heat treatment, slags, refractory materials, and study of special steels and industrial alloys.

6a. Non-Ferrous Metallurgy.—Lectures on the more common metals other than iron. The ores and their treatment, and the processes for the recovery of copper, lead, zinc, and some of the minor metals.

7b. Electro-Metallurgy.—Lectures and laboratory work on the principles of the generation of heat by means of the electric current. Types of furnaces and development in special industries. The electrometallurgy of iron and steel.

8. Thesis.—A special metallurgical problem of experiment or design.

9. Conference.—A weekly meeting for the discussion of specific problems or details of processes or operations which cannot consistently be covered in the regular classes. A clearing house for the consideration of scattered topics of interest to the metallurgical engineer.

CO-ORDINATION

CURTIS C. MYERS, M. M. E., Professor in Charge of Co-ordination.

* FRED EUGENE AYER, C. E., Associate Professor of Civil Engineering.

JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.

MAX B. ROBINSON, M. E., Instructor in Co-ordination.

C. 1, 3, 5. FOR FIRST YEAR STUDENTS. (FRESHMEN).

Discussion of questions arising in students' work. Shop visits and lectures showing the scope of the engineering professions. Illustrations showing efficient methods of performing simple operations.

C. 2, 4, 6. FOR SECOND YEAR STUDENTS.

Discussion of questions arising in students' work. Shop visits and lectures with detailed reports and problems continuing the work begun in the first year. Time study and efficiency data.

C. 1 and 2 for mechanical and electrical engineers. Professor Myers and Mr. Robinson.

C. 3 and 4 for metallurgical engineers. Assistant Professor Aston.

C. 5 and 6 for civil engineers.

Assistant Professor Braune and Mr. Moore.

* Absent on leave, 1913-14.

COURSES 8, 9 FOR ALL CO-OPERATIVE ENGINEERS.

C. 8. Production Engineering.—Lectures and recitations. Factory organization and cost accounting. Routing of work. Labor and time-saving machinery. Power economy. Inspection and testing. Contracts and patents. For fourth year students.

C. 9. Production Engineering.—Lectures and recitations.—Relation between capital and labor. Fatigue and incentive. Sales organization. Process efficiency. Business economy. Special problems. For fifth year students.

C. 10. Shop Processes and Tools.—Jigs and fixtures. Punches and dies. Labor saving devices. Processes in the shop. Analysis of necessary tools which enter into the manufacture of various machine parts on an interchangeable basis.

SPECIAL COURSES IN ENGINEERING

Special courses for young men who have had practical experience in some branch of Engineering and who desire to become more efficient in the advanced theory of their work, will be arranged by the Dean of the College of Engineering, and every facility will be offered to enable such men to obtain the special work which they desire without their being candidates for the engineering degrees.

GENERAL COURSES

APPLIED MATHEMATICS

1. Technical Mechanics.—Slocum, *Theory and Practice of Mechanics*; Sanborn, *Mechanics Problems*. A course in applied mechanics, comprising kinematics, kinetics, statics, and dynamics, with technical applications. *Second semester*, Sec. I, 9:30-10:30, Sec. II, 11:30-12:30, daily. Professor Slocum.

2. Strength of Materials.—Slocum and Hancock, *Strength of Materials*; Shepard, *Problems in the Strength of Materials*. An introductory course in the mechanics of materials, including the fundamental relations between stress and deformation, tensile, compressive and shearing stresses, Hooke's law and Young's modulus, Poisson's ratio, modulus of rigidity, theory of beams, elastic curve, shear and bending moment diagrams, columns, torsion, combined bending and torsion, curved pieces, elements of graphical statics, arches and arched ribs, retaining walls and foundations, with numerous practical applications. *First semester*, Sec. I, 9:30-10:30, Sec. II, 11:30-12:30, daily. Professor Slocum.

[16a. Theoretical Mechanics.] *First semester*, M., 4:00-6:00;
W., 4:00-5:00. Professor Slocum.

Omitted in 1913-14.

[16b. The Mathematical Theory of Elasticity.] *Second semester*, M., 4:00-6:00; W., 4:00-5:00. Professor Slocum.

Omitted in 1913-14.

10a. Theory of Errors and Method of Least Squares.—*First semester*, M., 4:00-5:00; W., 4:00-3:00. Professor Slocum.

11b. Fourier's Series and Spherical Harmonics.—*Second semester*, M., 4:00-5:00; Th., 4:00-6:00. Professor Slocum.

[26. The History and Teaching of Mathematics.] M., 4:00-6:00.
Throughout the year. Professor Slocum.

Omitted in 1913-14.

30. Seminary.—Hours by special arrangement.

Professor Slocum.

For detailed description of Courses 16a, 16b, 10a, 11b, 26, and 30, see Mathematics, College of Liberal Arts.

ASTRONOMY

2a. General Astronomy.—Text-book: *Young's Manual of Astronomy*. Professor Porter.

3b. General Astronomy.—Text-book: *Young's Manual of Astronomy*. Professor Porter.

For Courses 2a and 3b, Trigonometry, Analytical Geometry and Calculus will be required. Course 3b is open only to those who have taken Course 2a.

4a. Celestial Mechanics.—Investigation of the fundamental equations of motion and of the formulae for determining the positions of bodies revolving about the sun. Text-book: *Watson's Theoretical Astronomy*. Professor Porter.

5b. Computation of a parabolic orbit from three observations and of an elliptic orbit with perturbations. Text-book: *Watson's Theoretical Astronomy*. Professor Porter.

Courses 4a and 5b are given at the Observatory.

BIOLOGY

[9. Sanitary Biology.] Lectures on the biological principles involved in sanitary engineering, designed to enable the engineer to solve local problems in sanitation and to appreciate the significance of specialists' reports. Professor Benedict.

Omitted in 1913-14.

ECONOMICS

(The Sinton Professorship)

1. Economics.—This course is intended to give the student a general view of the subject. It includes the study of (1) the elements of economics: wealth, value, price, competition, monopolization, production, and distribution; (2) the evolution of industry from local organization and control during the Middle Ages, through nationalism and the industrial revolution, to modern conditions, and (3) the leading economic problems of to-day. M., T., W., Th., F., 8:30-9:30.
Dr. Magee.

ENGLISH

1. English Composition.—This course presents a general survey of the principles of English composition and endeavors to enforce them by practice in writing. A certain amount of reading in English literature is also required. (For regular students only.)

Assistant Professors McVea, Young, Van Wye,
Park, Stevens.

2a. Argumentation.—(For regular students only.) *First semester*, T., Th., 8:30-9:30. Assistant Professor Van Wye.

2c. Advanced English Composition.—This course includes practice in the writing and criticism of expository and argumentative compositions. Models for class exercises are taken from current issues of a standard technical journal. The collection and use of bibliography for long themes is an important part of the work. Some time is devoted to the study of literary types. (For second year co-operative students only.) *First semester*, M., T., W., Th., F., 10:30-11:30.
Assistant Professor Park.

In the following courses for co-operative students, inspection-trip, laboratory, and special reports are written under the direction of the English Department. One hour of credit is given for the work of each semester and for that of each summer term. Written criticism of reports is supplemented by conferences, and, in the first year, by lectures on the principles of English Composition. Conference hours to be arranged.

41. First-Year Reports and Conferences.—Three credits.

42. Second-Year Reports and Conferences.—Two credits.
(Omitted during the first semester.)

43. Third-Year Reports and Conferences.—Three credits.

44. Fourth-Year Reports and Conferences.—Three credits.

45. Fifth-Year Reports and Conferences.—Two credits. The work of this year includes the preparation of a thesis.

Assistant Professor Park, Mr. _____.

GEOLOGY AND GEOGRAPHY

1. An introductory study of minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean; followed by a brief study of the physiography of the United States. Lectures, M., W., F., 8:30-9:30. Laboratory sections meet as follows:

M., W., 2:00-4:30.

T., Th., 9:30-12:00.

T., Th., 2:00-4:30.

T., Th., 1:00-3:30. Professor Fenneman and Dr. Bucher.

2. General Geology.—This course is primarily for co-operative engineering students, but Liberal Arts students will also be admitted. An introductory study of minerals and rocks, dynamic geology and topography, followed in the second semester by stratigraphic, structural, and economic geology. Three hours. Lectures, M., T., 9:30-10:30; Laboratory, W., 9:30-11:30.

Assistant Professor Carman.

5b. Field Geology and Survey Methods.—The study and mapping of assigned areas in the vicinity of Cincinnati. Students work singly or in parties of two, and submit typewritten reports with topographic and geologic maps. *Second semester.* Hours to be arranged by agreement with each party. Credit according to number of hours elected. Course 1 is prerequisite.

Assistant Professor Carman.

9. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure; special attention given to the economic deposits of each period. Frequent local (half-day) excursions noting fossils, stratigraphy, physiography, and economic relations. Lectures, T., Th., 8:30-9:30; Laboratory, M., 2:00-4:30. Course 1 is prerequisite.

Assistant Professor Carman.

[15. An Introductory Course in Geology for First-Year Co-operative Engineers.] Lecture, M., T., 9:30-10:30.

Omitted in 1913-14.

Assistant Professor Carman.

GERMAN, FRENCH, OR SPANISH

40. Elementary German, French, or Spanish, for Co-operative Students.—Grammar, translation from German, French, or Spanish, into English, and elementary exercises in translating into German, French, or Spanish. Conversation in the foreign tongue.

Mr. Ludwich.

41. Second Year German, French, or Spanish, for Co-operative Students.—Translation from German, French, or Spanish, into English, with special emphasis on scientific and commercial German, French, or Spanish. This course is given wholly in the foreign tongue.
Mr. Ludwich.

MATHEMATICS

1. Algebra — Trigonometry — Analytical Geometry. — Selected portions of algebra and the elementary theory of equations. Rietz and Crathorne, *College Algebra*. Trigonometry: Munay, *Trigonometry*.

Analytical Geometry of Two Dimensions treated from the Cartesian standpoint. Riggs, *Analytical Geometry*.

Sec. I, Mr. Kindle, 8:30-9:30, daily.

Sec. II, Mr. Smith, 8:30-9:30, daily.

Sec. III, Assistant Professor Brand, 8:30-9:30, daily.

Sec. IV, Assistant Professor Moore, 9:30-10:30, M., T., W., Th., F. (For regular Freshmen.)

5. Calculus, Differential and Integral.—Osborne, *Calculus*; Davis, *Calculus*.

Sec. I, Professor Hancock, 10:30-11:30, M., T., Th., F.

Sec. II, Assistant Professor Brand, 9:30-10:30, daily.

Sec. III, Mr. Kindle, 9:30-10:30, daily.

Sec. IV, Mr. Smith, 9:30-10:30, daily.

35. Colloquium.—Calculus; applications.

Sec. I, Assistant Professor Brand.

Sec. II, Mr. Kindle.

Sec. III, Mr. Smith.

} W., Th., 1:00-5:00.

[6a. Advanced Analytical Geometry of Two Dimensions.] C. Smith, *Conic Sections*. Lectures. Mr. Kindle.

Course 6a is open to those who have passed in Course 5.

Omitted in 1913-14.

[7b. Analytical Geometry of Three Dimensions.] The plane, straight line, and quadric surfaces; theory of surfaces and curves. C. Smith, *Solid Geometry*. Lectures. Mr. Kindle.

Course 7b is open to those who have passed in Course 5.

Omitted in 1913-14.

8a. Advanced Integral Calculus.—Byerly, *Integral Calculus*. Lectures. Professor Hancock.

PHYSICAL EDUCATION

Physical Training.—All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: Three hours per week for all members of the Freshman class (lectures on hygiene, one hour; work in the gymnasium, two hours), and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed under exceptional conditions only, for which special permission must be secured from the Dean in advance.

A physical examination is required of each student of the two lower classes upon entrance and upon completion of the required work. Appointments for the examination should be made with the Physical Director at the beginning of the first semester.

Credit: One credit will be given for each semester's work.
Mr. Brodbeck.

PHYSICS

1a. General Physics.—Lectures and recitations on Heat and Mechanics, illustrated with experimental demonstrations. M., T., W., Th., F., S., 8:30-9:30. Associate Professor Allen.

21b. General Physics.—Lectures and recitations on Light, Electricity, and Magnetism, illustrated with experimental demonstrations. M., T., W., Th., F., S., 8:30-9:30. Associate Professor Allen.

2a. Experimental Physics.—Laboratory work arranged to accompany Course 1a. M., F., 1:00-4:00. Associate Professor Allen and Dr. Gowdy.

22b. Experimental Physics.—Laboratory work arranged to accompany Course 21b. W., F., 1:00-4:00; S., 10:30-1:00. Associate Professor Allen and Dr. Gowdy.

13b. Electrical Measurements.—Laboratory exercises with instruments of precision. W., Th., 1:00-5:00. Associate Professor Allen.

COLLEGE OF MEDICINE

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
CHRISTIAN R. HOLMES, M. D., Professor of Otolaryngology and Dean of the
8 E. Eighth St. College of Medicine.
FRANK B. CROSS, M. D., Assistant Clinical Instructor in Ophthalmology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
J. C. MACKENZIE, M. D., Clinical Professor of Medicine, Emeritus.
624 W. Eighth St.
CHAUNCEY D. PALMER, M. D., Professor of Obstetrics and Gynecology, Emeritus.
Reading Rd. and Forest Ave., Avondale.
BYRON STANTON, M. D., Professor of Diseases of Women and Children, Emeritus.
Savannah Ave., College Hill.
ALEXANDER GREER DRURY, A. M., M. D., Professor of Hygiene, Emeritus.
836 Lincoln Ave.
STEPHEN COOPER AYRES, A. M., M. D., Professor of Ophthalmology, Emeritus.
4 W. Seventh St.
PHILIP ZENNER, A. M., M. D., Professor of Neurology, Emeritus.
14 Glenn Building.
E. W. WALKER, M. D., Professor of Clinical Surgery, Emeritus.
30 W. Eighth St.

The names of the teaching staff are arranged by departments:

- HENRY McELDERRY KNOWER, Ph. D., . . . Professor of Anatomy.
3436 Middleton Ave., Clifton.
EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.
The Maplewood, Clifton.
ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and Comparative Anatomy.
345 Thrall Ave., Clifton.
_____, . . . Assistant in Histology and Embryology.
MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.
The Maplewood, Clifton.
EDMUND M. BAEHR, M. D., Assistant Professor of Physiology.
Fourth and Sycamore Sts.
LAUDER W. JONES, Ph. D., . . . Professor of Chemistry.
3457 Whitfield Ave., Clifton.
HARRY SHIPLEY FRY, Ph. D., Associate Professor of Chemistry.
2269 Washington Ave., Norwood.
EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Chemistry and of Physiological Chemistry.
3471 Cheviot Ave., Westwood.

- PAUL GERHARDT WOOLLEY, B. S., M. D., . . . Professor of Pathology.
343 Bryant Ave., Clifton.
- WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor of
The Cumberland, Avondale. Bacteriology.
- CHARLES GOOSMANN, M. D., Instructor in Pathology.
1203 Walnut St.
- GILBERT MOMBACH, M. D., Instructor in Pathology.
22 W. Seventh St.
-

- JULIUS H. EICHBERG, Ph. G., Ph. D., M. D., Professor of Materia
55 Groton Building. Medica, Pharmacology, and Therapeutics.
- _____, Associate Professor of Pharmacology.
- C. C. FIHE, M. D., Lecturer in Dietetics and Instructor in Thera-
19 W. Seventh St. (32) peutics.
- RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Thera-
Fountain Ave., Glendale. peutics.
- WILLIAM C. HERMAN, Ph. G., M. D., Instructor in Pharmacology.
19 W. Seventh St.
- SIDNEY LANGE, A. B., M. D., Lecturer and Demonstrator of Radiology.
5 Garfield Pl.
- H. KENNON DUNHAM, M. D., Lecturer and Demonstrator of Elec-
McMillan St. and Auburn Ave., Mt. Auburn. trotherapeutics.
- LOUIS G. SCHRICKEL, Ph. G., M. D., Instructor in Pharmacy and
1635 Walnut St. Pharmacist to Dispensary.
-

- EDWIN W. MITCHELL, A. B., M. D., . . . Professor of Medicine.
4 W. Seventh St.
- GEORGE A. FACKLER, M. D., . . . Professor of Clinical Medicine.
19 W. Seventh St.
- OLIVER P. HOLT, M. D., Clinical Professor of Medicine.
134 W. Ninth St.
- JOHN ERNEST GREIWE, A. M., M. D., Associate Professor of Medicine.
32 Garfield Pl.
- MARK A. BROWN, M. D., . . . Associate Professor of Medicine.
628 Elm St.
- HENRY WALD BETTMANN, B. L., M. D., Adjunct Professor of Medicine.
4 W. Seventh St.
- ALLAN RAMSEY, B. S., M. D., . Assistant Professor of Medicine.
19 W. Seventh St.
- OSCAR BERGHAUSEN, A. B., M. D., Assistant Professor of Medicine.
19 W. Seventh St.
- CHARLES SUMNER ROCKHILL, M. D., Clinical Instructor in Medicine.
705 Livingston Building.
- C. C. FIHE, M. D., Clinical Instructor in Medicine.
19 W. Seventh St.
- LOUIS G. HEYN, M. D., Clinical Instructor in Medicine.
22 W. Seventh St.

- OTTO J. SEIBERT, M. D., Clinical Instructor in Medicine.
913 Dayton St.
- CHARLES P. KENNEDY, M. D., . . Clinical Instructor in Medicine.
3329 Gilbert Ave., Walnut Hills.
- JOHN S. GRISARD, M. D., Clinical Instructor in Medicine.
3870 Ivanhoe Ave., Norwood, O.
- J. D. SPELMAN, M. D., Clinical Instructor in Medicine.
1828 Freeman Ave.
- JULIUS G. STAMMEL, M. D., . . Clinical Instructor in Medicine.
3477 Montgomery Ave., Evanston.
- MARCUS E. WILSON, M. D., . . Clinical Instructor in Medicine.
248 Pike St.
- HENRY LYNDE WOODWARD, M. D., Demonstrator of Clinical
Melrose Building, Walnut Hills. Microscopy in Medicine.
-
- B. K. RACHFORD, M. D., Professor of Paediatrics.
323 Broadway.
- ALFRED FRIEDLANDER, A. B., M. D., Associate Professor of Paediatrics.
4 W. Seventh St.
- FRANK H. LAMB, A. M., M. D., Assistant Clinical Professor of
940 E. McMillan St. Paediatrics.
- MAX DREYFOOS, M. D., Clinical Instructor in Paediatrics.
19 W. Seventh St.
- EDWARD A. WAGNER, M. D., . . Clinical Instructor in Paediatrics.
3104 Jefferson Ave., Clifton.
- EDWARD D. ALLGAIER, A. B., M. D., Clinical Instructor in Paediatrics.
3001 Epworth Ave., Westwood.
- JOHN T. BATTE, M. D., Clinical Instructor in Paediatrics.
19 W. Seventh St.
- CHARLES K. ERVIN, M. D., . . Clinical Instructor in Paediatrics.
2 Klinckhamer Building.
- E. I. FOGEL, M. D., Clinical Instructor in Paediatrics.
723 W. Eighth St.
- WILLIAM J. GRAF, M. D., . . . Clinical Instructor in Paediatrics.
Melrose Building, Walnut Hills.
- GEORGES RASETTI, M. D., . . . Clinical Instructor in Paediatrics.
16 Garfield Pl.
- IDA M. WESTLAKE, M. D., . . . Clinical Instructor in Paediatrics.
Y. W. C. A., 20 E. Eighth St.
- JAMES M. BENTLEY, M. D., . . Clinical Instructor in Paediatrics.
705 Livingston Building.
- FRANK W. CASE, M. D., Clinical Instructor in Paediatrics.
2807 Erie Ave.
- ERIC R. TWACHTMAN, A. B., M. D., Clinical Instructor in Paediatrics.
Seventh and Race Sts.
- CHARLES A. STAMMEL, JR., M. D., Clinical Instructor in Paediatrics.
1202 Vine St.

- FRANK WARREN LANGDON, M. D., . . . Professor of Psychiatry.
4003 Rose Hill Ave.
- HERMAN HENRY HOPPE, A. M., M. D., . Professor of Neurology.
19 W. Seventh St.
- DAVID I. WOLFSTEIN, M. D., Assistant Clinical Professor of Nervous
22 W. Seventh St. Diseases.
- EDMUND M. BAEHR, M. D., Assistant Clinical Professor of Nervous
Fourth and Sycamore Sts. Diseases.
- ROBERT INGRAM, M. D., Clinical Instructor in Psychiatry.
510 Clark St.
- CHARLES E. KIELY, A. B., M. D., Clinical Instructor in Neurology.
City Hospital.

-
- MEYER L. HEIDINGSFELD, Ph. B., M. D., Professor of Dermatology
19 W. Seventh St. and Syphilology.
- AUGUSTUS RAVOGLI, A. M., M. D., Clinical Professor of Dermatology
5 Garfield Pl. and Syphilology.
- ELMORE B. TAUBER, M. D., Clinical Instructor in Dermatology and
19 W. Seventh St. Syphilology.
- JAMES W. MILLER, M. D., Clinical Instructor in Dermatology and
Seventh and Race Sts. Syphilology.
- MOSES SCHOLTZ, M. D., Clinical Instructor in Dermatology and
22 W. Seventh St. Syphilology.

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- JOSEPH RANSOHOFF, M. D., F. R. C. S. (Eng.), Professor of Surgery.
19 W. Seventh St.
- JOHN CHADWICK OLIVER, M. D., . Professor of Clinical Surgery.
Berkshire Building.
- CHARLES EDWARD CALDWELL, A. M., M. D., Associate Professor of
Surgical Anatomy and Clinical Professor of Surgery.
4 W. Seventh St.
- E. OTIS SMITH, M. D., Adjunct Professor of Genito-Urinary Dis-
19 W. Seventh St. eases.
- FRANK FEE, M. D., Clinical Professor of Surgery.
22 W. Seventh St.
- CARL HILLER, M. D., . . Assistant Clinical Professor of Surgery.
19 W. Seventh St.
- HARRY HAYES HINES, M. D., Assistant Clinical Professor of Surgery.
34 W. Eighth St.
- GOODRICH BARBOUR RHODES, A. B., M. D., Assistant Clinical Professor
4 W. Seventh St. of Surgery.
- DUDLEY WHITE PALMER, B. S., M. D., Assistant Clinical Professor of
4 W. Seventh St. Surgery.
- CHARLES A. LANGDALE, M. D., Assistant Clinical Professor of Surgery.
5 Garfield Pl.
- CASPER F. HEGNER, M. D., . . . Assistant Professor of Surgery.
Berkshire Building.

- JOHN A. CALDWELL, M. D., . . . Clinical Instructor in Surgery.
350 Ludlow Ave., Clifton.
- DUDLEY WEBB, M. D., Clinical Instructor in Genito-Urinary Surgery.
409 Broadway.
- WILLIAM A. LUCAS, M. D., . . . Clinical Instructor in Surgery.
351 Bryant Ave., Clifton.
- J. EDWARD PIRRUNG, M. D., . . . Clinical Instructor in Surgery.
1218 Walnut St.
- CARLETON G. CRISLER, M. D., . Assistant Demonstrator in Surgery.
Groton Building.
- RALPH STALEY, M. D., Clinical Instructor in Genito-Urinary Surgery.
421 Clark St.
- CHARLES T. SOUTHER, M. D., . . . Clinical Instructor in Surgery.
Berkshire Building.
- GUY GIFFEN, M. D., Clinical Instructor in Surgery.
5 Garfield Pl.
-
- SIMON PENDLETON KRAMER, M. D., Professor of Clinical Surgery.
22 W Seventh St.
-
- ALBERT HENRY FREIBERG, M. D., Professor of Orthopedic Surgery.
19 W. Seventh St.
- ROBERT CAROTHERS, M. D., Clinical Professor of Orthopedic Surgery.
409 Broadway.
- ROBERT DANIEL MADDOX, M. D., Clinical Instructor in Orthopedic
4 W. Seventh St. Surgery.
- R. B. COFIELD, M. D., Assistant Clinical Instructor in Orthopedic
19 W. Seventh St. Surgery.
-
- E. GUSTAV ZINKE, M. D., Professor of Obstetrics.
4 W. Seventh St.
- WILLIAM D. PORTER, A. M., M. D., Clinical Professor of Obstetrics.
Melrose Building, Walnut Hills.
- GEORGE M. ALLEN, M. D., . . . Clinical Professor of Obstetrics.
2404 Auburn Ave.
- JAMES WILLIAM ROWE, A. B., M. D., Assistant Professor of Ob-
20 W. Ninth St. stetrics.
- HENRY LYNDE WOODWARD, M. D., . . . Instructor in Obstetrics.
Melrose Building, Walnut Hills.
-
- CHARLES LYBRAND BONIFIELD, M. D., . Professor of Gynecology.
409 Broadway.
- CHARLES ALFRED LEE REED, A. M., M. D., Professor of Clinical
60 Groton Building. Gynecology.
- JOHN M. WITHROW, A. M., M. D., Professor of Clinical Gynecology.
22 W. Seventh St.
- RUFUS BARTLETT HALL, A. M., M. D., Professor of Clinical
19 Berkshire Building. Gynecology.
- SIGMAR STARK, M. D., Professor of Clinical Gynecology.
11½ E. Eighth St.

- JOHN D. MILLER, M. D., . . . Clinical Instructor in Gynecology.
Cor. Eighth and Elm Sts.
- JOSEPH A. HALL, M. D., . . . Clinical Instructor in Gynecology.
19 Berkshire Building.
- BENJAMIN W. GAINES, M. D., . . . Clinical Instructor in Gynecology.
409 Broadway.
- JOHN E. STEMLER, M. D., . . . Clinical Instructor in Gynecology.
103 W. McMillan St.
- JOSEPH S. PODESTA, M. D., . . . Clinical Instructor in Gynecology.
428 Broadway.
- PHILIP DORGER, M. D., . . . Clinical Instructor in Gynecology.
Berkshire Building.
- WALTER R. GRIESS, M. D., . . . Clinical Instructor in Gynecology.
21 Garfield Pl.

-
- ROBERT SATTLER, M. D., Professor of Ophthalmology.
30 Groton Building.
- DERRICK T. VAIL, M. D., . . . Clinical Professor of Ophthalmology.
24 E. Eighth St.
- WALTER FORCHHEIMER, A. B., M. D., Clinical Professor of Ophthalmology.
Fourth and Sycamore Sts.
- CHARLES W. TANGEMAN, M. D., Clinical Professor of Ophthalmology.
20 W. Ninth St.
- VICTOR RAY, M. D., Assistant Clinical Professor of Ophthalmology.
30 Groton Building.
- WYLIE McLEAN AYRES, A. B., M. D., Assistant Clinical Professor of
4 W. Seventh St. Ophthalmology.
- JOHN RANLY, M. D., . . . Clinical Instructor in Ophthalmology.
936 Clark St.
- FRANK B. CROSS, M. D., Assistant Clinical Instructor in Ophthalmology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
- CLARENCE J. KING, M. D., Assistant Clinical Instructor in Ophthalmology.
Groton Building.
- K. L. STOLL, M. D., Assistant Clinical Instructor in Ophthalmology.
19 W. Seventh St.
- HORACE F. TANGEMAN, M. D., Assistant Clinical Instructor in
20 W. Ninth St. Ophthalmology.
- FRANK U. SWING, M. D., Assistant Clinical Instructor in Ophthalmology.
705-06 Livingston Building.

-
- CHRISTIAN R. HOLMES, M. D., Professor of Otology and Dean of the
8 E. Eighth St. College of Medicine.
- JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryngology.
Berkshire Building, 628 Elm St.
- JOHN WESLEY MURPHY, A. M., M. D., Clinical Professor of Laryngology and Otology.
4 W. Seventh St.

- SAMUEL IGLAUER, B. S., M. D., . Associate Professor of Otology.
22 W. Seventh St.
- WALTER E. MURPHY, M. D., Associate Professor of Laryngology and
Clinical Instructor in Rhinology, Laryngology, and Otology.
Berkshire Building.
- WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- W. J. THOMASSON, M. D., Clinical Instructor in Rhinology,
942 York St., Newport, Ky. Laryngology, and Otology.
- ROBERT W. BLEDSOE, M. D., Clinical Instructor in Laryngology and
1005 Madison Ave., Covington, Ky. Otology.
- S. BERTHA DAUCH, M. D., Assistant Clinical Instructor in Rhinology,
2924 Vaughn St., Mt. Auburn. Laryngology, and Otology.
- CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- GEORGE L. KRIEGER, M. D., Assistant Clinical Instructor in Laryngology
4804 Central Ave., Madisonville. and Otology.
- ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryngology
22 W. Seventh St. and Otology.
-
- JOHN HOWARD LANDIS, M. D., Professor of Hygiene.
City Hall.

LECTURER ON SPECIAL TOPICS

- HON. JAMES B. SWING, Medical Jurisprudence.
Union Trust Building.

OTHER OFFICERS

- J. DEWITT SCHONWALD, M. D., Director of Dispensary.
5654 Hamilton Ave., College Hill.
- L. M. PRINCE, Optician.
108 W. Fourth St.
- FRANK B. CROSS, M. D., Secretary of the Medical Faculty.
4 W. Seventh St.
- DANIEL LAURENCE, B. S., Secretary of the University.
Office, 6 McMicken Hall, Burnet Woods.
- FRANCES CURRIE, Secretary and Librarian of the Medical College.
111 E. Auburn Ave.
- ANNA L. HOOK, Secretary to the Dean of the Medical College.
2123 Sinton Ave.

TECHNICAL ASSISTANTS

- HENRY LOUHIER, Anatomy.
McMicken Cottage.
- DAISY CLARK, Pathology.
320 Broadway.
- JOSEPH KUPKA, Physiology.
2221 Victor St.

THE COLLEGE DISPENSARY

Director of Dispensary: J. DEWITT SCHONWALD, M. D.

Physician-in-Chief: GEORGE A. FACKLER, M. D.

Surgeon-in-Chief: JOHN C. OLIVER, M. D.

Gynecologist-in-Chief: CHARLES L. BONIFIELD, M. D.

DEPARTMENT OF MEDICINE**A. GENERAL MEDICINE**

Physician-in-Chief: GEORGE A. FACKLER, M. D.

Assistant Physicians:

OSCAR BERGHAUSEN, M. D.	JOHN S. GRISARD, M. D.
OTTO J. SEIBERT, M. D.	J. D. SPELMAN, M. D.
CHARLES P. KENNEDY, M. D.	MARCUS E. WILSON, M. D.
JULIUS G. STAMMEL, M. D.	

B. NEUROLOGY

Neurologist: H. H. HOPPE, M. D.

Assistant Neurologist: CHARLES E. KIELY, A. B., M. D.

C. PAEDIATRICS

Paediatrician: B. K. RACHFORD, M. D.

Assistant Paediatricians:

MAX DREYFOOS, M. D.	WILLIAM J. GRAF, M. D.
EDWARD A. WAGNER, M. D.	GEORGES RASETTI, M. D.
EDWARD D. ALLGAIER, M. D.	IDA M. WESTLAKE, M. D.
JOHN T. BATTE, M. D.	JAMES M. BENTLEY, M. D.
CHARLES K. ERVIN, M. D.	FRANK W. CASE, M. D.
E. I. FOGEL, M. D.	ERIC R. TWACHTMAN, A. B., M. D.
CHARLES A. STAMMEL, JR., M. D.	

DEPARTMENT OF SURGERY**A. GENERAL SURGERY**

Surgeon: JOHN C. OLIVER, M. D.

Assistant Surgeons:

GOODRICH B. RHODES, M. D.	W. A. LUCAS, M. D.
JOHN A. CALDWELL, M. D.	C. G. CRISLER, M. D.
DUDLEY W. PALMER, M. D.	J. E. PIRRUNG, M. D.
GUY GIFFEN, M. D.	

B. OPHTHALMOLOGY

Ophthalmologist: CHARLES W. TANGEMAN, M. D.

Assistant Ophthalmologists:

WALTER FORCHHEIMER, M. D.	JOHN RANLY, M. D.
CHARLES W. TANGEMAN, M. D.	FRANK B. CROSS, M. D.
VICTOR RAY, M. D.	CLARENCE J. KING, M. D.
WYLIE McL. AYERS, M. D.	HORACE F. TANGEMAN, M. D.
FRANK U. SWING, M. D.	

C. OTO-LARYNGOLOGY

Oto-laryngologist: WALTER E. MURPHY, M. D.

Assistant Oto-laryngologists:

WADE THRASHER, M. D.	W. T. THOMASSON, M. D.
CHARLES JONES, M. D.	SOPHIA DAUCH, M. D.
WILLIAM MITHOEFER, M. D.	ROBERT W. BLEDSOE, M. D.

D. GENITO-URINARY SURGERY

Genito-Urinary Surgeon: E. O. SMITH, M. D.

Assistant Genito-Urinary Surgeons:

DUDLEY WEBB, M. D.	RALPH STALEY, M. D.
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E. DERMATOLOGY

Dermatologist: MEYER L. HEIDINGSFELD, M. D.

Assistant Dermatologists:

ELMORE B. TAUBER, M. D.	JAMES W. MILLER, M. D.
MOSES SCHOLTZ, M. D.	

F. ORTHOPEDIC SURGERY

Orthopedic Surgeon: ALBERT FREIBERG, M. D.

Assistant Orthopedic Surgeons: ROBERT D. MADDOX, M. D.

R. B. COFIELD, M. D.

DEPARTMENT OF GYNECOLOGY AND OBSTETRICS

A. GYNECOLOGY

Gynecologist: CHARLES L. BONIFIELD, M. D.

Assistant Gynecologists:

JOHN D. MILLER, M. D.	JOHN E. STEMLER, M. D.
BENJAMIN W. GAINES, M. D.	JOSEPH S. PODESTA, M. D.
JOSEPH A. HALL, M. D.	WALTER R. GRIESS, M. D.
PHILIP DORGER, M. D.	

B. OBSTETRICS

Obstetrician: E. GUSTAV ZINKE, M. D.

Assistant Obstetrician: HENRY LYNDE WOODWARD, M. D.

Physicians of the Maternity Society

J. H. CALDWELL, M. D.	G. RASETTI, M. D.
GILBERT MOMBACH, M. D.	IDA M. WESTLAKE, M. D.
R. A. VAN VOAST, M. D.	JAMES M. BENTLEY, M. D.
GRACE M. BOSWELL, M. D.	J. D. SCHONWALD, M. D.
W. J. GRAF, M. D.	ROBERT REID, M. D.

C. A. S. WILLIAMS, M. D.

EQUIPMENT

BUILDINGS

The College is located on the McMicken homestead lot, between McMicken and Clifton Avenues, at the head of Elm Street. The lot has a frontage of three hundred feet between these avenues, the college building being nearer Clifton Avenue, and the dispensary building on McMicken Avenue. The college building contains lecture, recitation, and laboratory rooms. It is a four-story structure, of brick and cut stone, with iron stairways and internal finish of substantial character.

On the basement floor are the laboratories of anatomy, and a locker-room. On the first floor are the Dean's office, museum, and the library and reading-room. The second floor provides accommodations for the laboratories of bacteriology, pathology, and experimental surgery. On the third floor are two large lecture rooms, furnished with opera chairs with tablet arms. The fourth floor is occupied by the pharmacological laboratory.

The dispensary building is a one-story brick structure, 123 by 50 feet, and contains fourteen rooms, a dispensing drug-room, and a room for the necessary chemical microscopical investigation of cases presenting themselves for treatment.

MUSEUMS

The museum contains a large number of anatomical and pathological specimens, including the Mussey and the Shotwell collections. Both of these valuable collections illustrate the effects of diseases and injuries of bone and joints. The former was the gift of the late Dr. Nathaniel Pendleton Dandridge. The museum also contains a number of anatomical specimens, wet and dry, including a collection of skeletons for student use, and models and charts illustrating the anatomy of the organs of the special senses.

In the laboratories of anatomy and pathology there are also fairly complete collections of specimens which are used for teaching and demonstration. The laboratory of anatomy has a large number of well preserved specimens of the central nervous system and several series of sections of the human body, beside preparations to illustrate the structure of the various organs. The laboratory of pathology possesses a very good collection of Kaiserling specimens illustrating pathological changes in the different organs of the body. Students of pathology also have access to the excellent museum of the Cincinnati Hospital, which contains hundreds of specimens, many of them rare or unusual. Most of the specimens in this museum are wet, but there is a large collection of dry osteological specimens, and a hundred or more gelatine preparations.

MEDICAL LIBRARIES

The library facilities of the College of Medicine are large. In 1911 Miss Lena Dandridge presented to the college the library and library furniture of the late Dr. N. P. Dandridge, and, in addition to this gift, Miss Dandridge gives annually, a sum of money for the equipment and endowment of the surgical library, which is known as the Dandridge Memorial. The Whittaker Medical Library, bequeathed by the late Professor James T. Whittaker, comprises 1,547 volumes and 538 pamphlets. The Seely Library, of the late Professor W. W. Seely, given to the college by Mrs. Seely, contains over a thousand volumes and many pamphlets. Mrs. Eichberg has recently presented to the college the library of the late Dr. Joseph Eichberg, and the Library Association of Cincinnati has given to the college its very valuable collection of books. The library of the Cincinnati Hospital contains about 20,000 volumes, consisting largely of complete files of the most important medical periodicals of the world. Students of this college have access therefore to a very complete literary material, which covers every branch of the medical and related sciences.

CURRENT LITERATURE IN THE UNIVERSITY LIBRARY

American Chemical Journal, American Journal of Anatomy, American Journal of Physiology, American Journal of Psychology, American Naturalist, Anatomical Record, Anatomische Anzeiger, Annalen der Chemie (Liebig), Annalen der Physik mit Beiblätter, Annales de Chimie et de Physique, L'année Psychologique, Archiv für Entwicklungsmechanik der Organismen, Archiv für mikroskopische Anatomie und Entwicklungsgeschichte, Berichte der deutschen chemischen Gesellschaft, Biological Bulletin, British Journal of Psychology, Bulletin de la Société Chimique de France, Chemisches Centralblatt, Comptes rendus des sciences, Health, Journal of Abnormal Psychology, Journal of Comparative Neurology and Physiology, Journal of Experimental Zoology, Journal of Morphology, Journal of Philosophy, Psychology and Scientific Methods, Journal of Physical Chemistry, Journal of the Chemical Society (London), Journal of the Royal Microscopical Society, Philosophical Transactions of the Royal Society (London) B. Biological, Popular Science Monthly, Psychological Bulletin, Quarterly Journal of Microscopical Science, Science, Science Abstracts (both series), Survey, Zeitschrift für physikalische Chemie, Zeitschrift für Psychologie und Physiologie der Sinnesorgane.

CURRENT LITERATURE IN THE CINCINNATI HOSPITAL
LIBRARY

Albany Medical Annals, American Journal of Anatomy, American Journal of Insanity, American Journal of the Medical Sciences, American Journal of Obstetrics, American Journal of Physiology, American Journal of Psychology, Annales Gynecologiques, Annales de l'Institute Pasteur, Annales des Maladies des Organes Génito-Urinaires, Annals Medico-Psychologiques, Annals of Surgery, Archiv für Anatomie und Physiologie (Anat. Abth.), Archives de Médecine expérimentale et d'Anatomie, Archiv für pathologische Anatomie (Virchow), Archiv für klinische Chirurgie, Archiv für Hygiene, Archives Internationales Laryngologique, Archiv für Laryngologie und Rhinologie, Archives Générales de Médecine, Archiv für Ohrenheilkunde, Archiv für Ophthalmologie (von Graefe), Archiv für experimentale Pathologie und Pharmakologie, Archives of Pediatrics, Archiv für Psychiatrie, Archives of the Roentgen Ray, Beiträge für pathologische Anatomie (Ziegler), Beiträge zur Klinik der Tuberkulose, Berliner Klinik, Berliner klinische Wochenschrift, Biochemische Zeitschrift, Boston Medical and Surgical Journal, Brain, Bristol Medico-Chirurgical Journal, British Medical Journal, Bulletin of the Johns Hopkins Hospital, Bulletin de la Société Anatomique de Paris, Canada Lancet, Centralblatt für Bakteriologie (Originale und Referate), Centralblatt für die medicinischen Wissenschaften, Centralblatt für allgemeine Pathologie (Ziegler), Comptes rendus de la Société de Biologie de Paris, Dermatologisches Centralblatt, Deutsche Zeitschrift für Chirurgie, Deutsches Archiv für klinische Medizin, Deutsche medicinische Wochenschrift, Deutsche Zeitschrift für Nervenheilkunde, Dublin Journal of Medical Science, Edinburgh Medical Journal, Fortschritte der Medizin.

Heart, Index Medicus, Internationales Centralblatt für Ohrenheilkunde, Interstate Medical Journal, Jahresbericht über die Fortschritte der gesamten Medizin, Jahrbücher für Psychiatrie und Neurologie, Janus, Journal of the American Medical Association, Journal of Anatomy and Physiology, Journal of Biological Chemistry, Journal of Cutaneous Diseases, Journal of Infectious Diseases, Journal of Laryngology and Rhinology, Journal of Medical Research, Journal of Experimental Medicine, Journal de Médecine et de Chirurgie pratique, Journal of Mental Science, Journal of Nervous and Mental Diseases, Journal of Comparative Neurology and Psychology, Journal of Pathology and Bacteriology, Journal of Pharmacology and Experimental Therapeutics, Journal of Physiology, Klinische Monatsblätter für Augenheilkunde, Lancet, Lancet-Clinic, Medical Press and Circular.

Medical Record, Medizinische Klinik, Military Surgeon, Monatschrift für Geburtshilfe und Gynäkologie, Münchener medicinische

Wochenschrift, Neurologisches Centralblatt, New Orleans Medical and Surgical Journal, Philippine Journal of Science (Medical Section), Practitioner, Public Health, Revue de Chirurgie, Revue de Medicine, St. Paul Medical Journal, Sammlung klinischer Vorträge, Schmidts Jahrbücher, Therapeutic Gazette, Therapeutische Monatschrift, Wiener klinische Wochenschrift, Wiener medicinische Wochenschrift, Zentralblatt für Chirurgie, Zentralblatt für Gynäkologie, Zentralblatt für innere Medicin, Zeitschrift für orthopädische Chirurgie, Zeitschrift für Hygiene, Zeitschrift für Krebsforschung, Zeitschrift für klinische Medicin, Zeitschrift für Immunitätsforschung und experimentelle Therapie.

CURRENT LITERATURE IN THE MEDICAL COLLEGE LIBRARY

The American Journal of the Medical Sciences, The American Journal of Obstetrics and Diseases of Women and Children, The American Journal of Orthopedic Surgery, Annals of Surgery, Archives Internationales de Chirurgie, The Boston Medical and Surgical Journal, Journal de Chirurgie, The Lancet, Surgery, Gynecology, and Obstetrics, American Journal of Anatomy, Anatomical Record, Anatomischer Anzeiger, Archiv f. mikroskopische Anatomie, Archiv f. Entwicklungsmechanik (Roux), Ergebnisse der Anatomie und Entwicklungsgeschichte (Merkel und Bonnet), Le Nevraxe, Monatsschrift f. Psychiatrie und Neurologie, Trabajos del Laboratorio d. Investig. Biolog. Madrid, Journal f. Psychologie u. Neurologie, Arbeiten a. d. Hirnanatomischen Institut in Zurich, Arbeiten a. d. Neurologischen Institut in Wien.

LABORATORIES

The laboratories of chemistry, physiology, histology, and embryology, are located in the University buildings; the laboratories of pharmacology, pathology, bacteriology, surgery, and practical anatomy, are located in the Medical College building; the laboratory of clinical microscopy is in the City Hospital.

REQUIREMENTS FOR ADMISSION

The candidate for admission must obtain the medical student's entrance certificate issued by the examiner for the Ohio State Board. The regulations for securing this certificate may be obtained from Professor K. D. Swartzel, secretary of the Ohio State Medical Board, Columbus, Ohio.

The candidate must present satisfactory evidence of having completed, in addition to a first grade high school course (four

years' work representing sixteen credits), the requirements stated in the pre-medical college course as outlined on page 223; or he will be required to take an examination in these subjects or satisfy the admission committee of this institution that the courses which he offers to cover this ground are equivalent to those specified in our pre-medical course. Candidates are advised to obtain from the general University catalogue the detailed description of the contents of the course in order to understand the scope of this work.

CONDITIONAL ENTRANCE

Candidates who lack a part of the requirements for admission to this College may be admitted conditionally to the first year's medical work, provided the admission committee can be convinced that such conditions are not too excessive to interfere with the regular work. Conditional entrance will only be permitted to those who evidently can remove such conditions before the beginning of the second year. Candidates shall communicate with the College in advance, but must meet the admission committee in September at the time scheduled for entrance examinations.

The candidate must present a certificate of moral character, signed by two physicians of good standing in the state in which he last resided.

The certificate issued by the examiner has two uses:

(1) It certifies that the holder has satisfied the minimum educational requirements, as fixed by law, for admission to medical colleges. It is therefore a prerequisite for matriculation in any medical college of the state. An applicant for admission to a medical college having entrance requirements that are higher than the requirements for this certificate must: (a) secure this certificate, and (b) satisfy the registrar of that college with reference to all additional requirements.

(2) It, together with the medical diploma, must be submitted to the secretary of the State Medical Board by an applicant for admission to the examinations required of all who wish to practice medicine in the State of Ohio. It is also required of practitioners of other states who wish to take advantage of a reciprocity agreement.

ADVANCED STANDING, GRADUATION, AND OTHER INFORMATION

CREDIT FOR COURSES IN COLLEGES OF LIBERAL ARTS

The Ohio State Medical Board has ruled that advanced time credit to liberal arts college graduates can only be recognized

when the candidate has done, during his academic course, the science work comprised in the first year of the medical course. This ruling prevents the giving of advanced standing, except to graduates of colleges maintaining a definitely organized premedical course, including human anatomy.

The Federation of Examining and Reciprocating Boards has also ruled that it will not recognize advanced time standing given for work in colleges of liberal arts unless the college gives one or more years of the regular medical course and holds itself open to inspection by medical boards. No advanced standing can thus be allowed on account of any ordinary literary or scientific degree whatever.

Students who have taken, in colleges of liberal arts recognized by this University, courses the full equivalent of similar courses offered in this Medical College, and produce certificates of this fact, need not repeat these courses here. Such credits do not entitle the student to advanced time standing; for, according to the rulings above cited, such subject credits for work not taken at a medical college can not shorten the required residence to less than four years.

CREDIT FOR WORK IN MEDICAL COLLEGES

Students from accredited medical colleges may be admitted to advanced standing under the following rules:

1. They must present satisfactory evidence that they have met our requirements for admission to a medical college. They must present evidence that they have satisfactorily completed courses of the same scope and extent as the courses for which they seek credit.

2. They must present credentials from the registrar or corresponding officer of the medical college attended, showing that they have been registered medical students in residence for the time for which credit is sought.

3. In order to obtain credit for a whole or any part of a course, the student must file with the Dean, before the opening of the college year, a credit application blank, in duplicate, showing where the work was done, the names of the professors, dates of the beginning and the end of the course, the number of hours per week and weeks in the course, the total number of lectures or quizzes of laboratory or clinical work, and the grades received in it. This application should be accompanied by certificates, supporting the above facts, from the registrar of the college or the professor under whom the work was done, by the catalogue or schedule of the

institution, and by note-books of the student in laboratory courses. In the absence of satisfactory certificates, an informal examination may be required on the whole or a part of the subject. This application, with the supporting evidence, will be submitted to the professors in charge, who will decide what credits are recommended. This recommendation must then be approved by the Committee on Advanced Standing, and returned to the Dean, in duplicate. One copy will be filed and one returned to the student.

4. Any course or part of a course required by this college which has not been sufficiently covered by the previous work of the students must be taken in a manner satisfactory to the professor in charge of the department.

GRADUATES IN MEDICINE

A graduate from another medical college may obtain a diploma from this college only under the following conditions:

1. He must comply with the conditions for admission to this college, submit the required time and subject credits from the college from which he graduated, as required above, together with his diploma.

2. He must be in residence at this college one full college year, and take all the courses not covered by his subject credits, repeating such courses of the fourth year as the faculty may require. When this has been done, he may elect such additional courses as he may choose.

3. The total of all courses taken in this college must not be less than required of the fourth-year class.

4. He must pass examinations in all the courses in which he has been found deficient and all the regular examinations of the fourth year, and conform to all other requirements for graduation applying to the students of this college.

SPECIAL STUDENTS

Graduates of medicine or others desiring to take courses not leading to graduation may be registered as special students and be admitted to such courses as they are fitted to undertake without preliminary examinations, but only by permission of the professor in charge of the course and upon payment of the fees required. The work so done may be accepted for credit later, under the rules of "Credit for Work in Medical Colleges," above stated.

REQUIREMENTS FOR COMPLETION OF A COURSE

The satisfactory completion of a course shall be determined by the professor in charge, through examinations, records of attendance, and the work of the student. To pass in a course the student must comply with the following:

1. He must have attended 80 per cent of the scheduled lectures, recitations, quizzes, laboratory periods, and clinical or other appointments in the course.
2. He must have received a grade of 75 per cent.

A student who has failed in a course may be required, at the discretion of his professor, to repeat his attendance upon a part or the whole of the course, or he may only be re-examined after a suitable period of study. Attendance on vacation courses or private instruction will only be accepted by the faculty on recommendation of the professor in charge.

PROMOTIONS

Promotions from one class to another will be made by the Committee on Advanced Standing and Promotion after the last examination of the session, and the student will be advised of his standing within thirty days. Students will not be permitted to enter a higher class until they have shown their fitness to carry on the work of the lower class.

Candidates for graduation failing in any subjects may be required to repeat their attendance in such courses as the faculty directs. Those who have failed in three courses or more must repeat their attendance on all the courses in which they have failed and such others as the faculty may direct. When these conditions of attendance have been satisfied, re-examination will be granted in one subject in September or October; in two subjects in January.

REQUIREMENTS FOR GRADUATION

To receive a diploma from this college the student must comply with the following conditions:

1. The regulations of the Ohio State Medical Board in regard to registration as a medical student and admission to the college (as above explained).
2. He must have been in residence in a medical college recognized by this University for at least four years, and his last year of residence must have been in this college.
3. He must have attended at least 80 per cent of all the scheduled appointments of the courses, and have attained to a satisfactory standing in all the required courses.

4. He must have passed all courses of the first three years before beginning his Senior year.
5. He must have discharged all his financial obligations.
6. Diplomas will only be granted at the regular examinations of this college, when they will be conferred upon the candidates in person by the President of the University.

OHIO STATE MEDICAL BOARD EXAMINATIONS

Examinations for license to practice medicine and surgery in the State of Ohio are given twice each year by the State Medical Board. The dates are usually announced six months in advance. They usually occur in June and December, about the 10th of the month. Conditions for entrance to these examinations may be summed up as follows:

1. The candidate must have a preliminary training equivalent to graduation from a first-class high school having a four-year course.

2. He must have registered with the Board of Ohio or some other state at least three years previous to the time of examination.

3. Except in cases of men with the bachelor's degree who have completed in an undergraduate liberal arts college all the scientific work of the first medical year, the period of residence in medical colleges must have been four years.

4. He must present a diploma of a medical college recognized by the Ohio Board.

5. He must pay an examination fee of twenty-five dollars to the Board, which will be returned to him in case he is not admitted to examination, but is not returned if he is admitted or fails.

Licensure by the Ohio State Board carries with it the privilege of registering for practice in certain other states, *provided, in certain states, that a definite premedical course has been followed.* As the regulations governing medical education and licensure to practice in Ohio, are high, the permission to practice is likely to be effected in all the states in which the laws permit reciprocity in these matters. Details in regard to the conditions in any particular state may be learned by addressing the Secretary of the Ohio State Medical Board, The State House, Columbus, Ohio.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF ENGLAND

The Ohio-Miami Medical College has been officially notified by the Conjoint Examining Boards of the Royal Colleges of Physicians and Surgeons of England that "it has been added to the

list of schools recognized by this Board, whose graduates may be admitted to the final examination, on producing the required certificates of professional training and of having passed a recognized preliminary examination in general education."

SIX-YEAR COMBINED COLLEGIATE AND MEDICAL COURSE

(Leads to the degrees B. S., M. D.)

The entrance requirements to this course will be those of the College of Liberal Arts of the University of Cincinnati. (See p. 72.) The first year of the course will consist of the following courses, which are described in the Announcement of the College of Liberal Arts under the corresponding numbers. *It should be noted that five hours of credit for a laboratory course includes three lecture hours and two laboratory periods of three hours each.*

FIRST YEAR

Chemistry—5 hours: First semester, Courses 1 and 2; second semester, Courses 3 and 4. If a student enters with advanced credits in chemistry, he shall take physical chemistry.

Physics—5 hours: Lecture Courses 26 and 27; Laboratory Courses 2 and 22.

English—3 hours: Course 1.

German—3 hours, Course 1; or French—3 hours, Course 1.

Physical Education—1 hour.

The one-year college course in German is equivalent to two years in the High School, and in addition to this, as will be seen, there will be required, in the second year, a course in Scientific German, aimed to give the student a reading knowledge of German. Students who present on entrance an equivalent of German 1, and a reading knowledge of German, are required to take French 1 in their first year, and may substitute an elective for Scientific German in the second year; or those who present only the equivalent of German 1 will be obliged to take the Scientific German of the second year schedule in their first year. In this case French may be taken in the second year in place of German.

SECOND YEAR

Chemistry—5 hours: First semester, Courses 5 and 6 which have been formed by abbreviating and combining courses formerly described as 5, 6, and 7. Second semester, organic chemistry.

Biology—5 *hours*: First semester, Courses 1 and 2; second semester, Courses 3 and 4. In addition to this, students are recommended to take a summer course in Biology at the Marine Biological Laboratory, Woods Hole, Mass.

Scientific German—3 *hours* (see paragraph on French and German under "First Year").

Elective—3 *hours*.

The third, fourth, fifth, and sixth years of this combined course are the regular years of the Medical College.

ATHLETICS

Athletics are so controlled in the University that they play an important part in the college life of the student without seriously interfering with his interest in class-room work.

A large part of the work is done out of doors during good weather, and such games as football, baseball, basketball, tennis, and track athletics are a part of the students' training. Lessons in boxing and fencing are also given to students interested in this form of exercise.

The new gymnasium with its modern equipment—cork-covered running track, white-tiled swimming pool, and spacious locker rooms—is the most complete institution of its kind in the West.

An athletic field has recently been provided, and its equipment is now complete. It contains a baseball diamond, a football gridiron, and a quarter-mile cinder track, with a one hundred and twenty-four straight-away extending in front of the grandstand. The proximity of this field to the gymnasium makes it a particularly valuable addition to the athletic equipment of the University.

All athletics and gymnastics are in charge of the Director of Physical Education and his assistants.

HOW TO REACH THE COLLEGE

The buildings are most conveniently reached by the Clifton-Ludlow street car line.

COURSES OF INSTRUCTION

ANATOMY

HENRY McELDERRY KNOWER, Ph. D., . . . Professor of Anatomy.

EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.

ROBERT CHAMBERS, JR., A. M., Ph. D., Assistant Professor of
Histology and Comparative Anatomy.

———, Assistant in Histology and Embryology.

1. Embryology.—Given by the Department of Zoology. (See catalogue of the College of Liberal Arts, Courses 19a and 20a.) An elementary course of lectures and laboratory work to review the essentials of the history of the germ cells, germ-layers, embryo formation, and the origin and early stages of the organs. *Ninety-six hours. Two credit hours.

Assistant Professor Chambers and Mr. ———.

Required of Freshmen who have not had embryology. Those who have had an equivalent and do not need to supplement their work in Zoology, are advised to elect further work in Human Embryology, foetal membranes, etc., or special Histology in the Department of Anatomy.

2. Histology and Organology.—This course is planned to emphasize the view that the subject is merely a further microscopic analysis of the gross structure of the body. The course is concerned with the anatomy of functional units and their combinations. The structure of tissues and organs is studied by approved methods and the best technical procedures are taught. Embryology is constantly referred to. The material is human wherever possible. A laboratory course with supplemental lectures. Two hundred hours. Three credit hours. Assistant Professor Chambers and Mr. ———.

Required of Freshmen.

3. Gross Human Anatomy.—Practical study of the human body in the dissecting room, where the students' work demonstrates all aspects of the gross structure of the body. The laboratory work is accompanied by frequent lectures and informal conferences aimed to make clear the correct principles of the analysis and reconstruction of the body. Osteology is included in this course, and embryological relations are constantly insisted upon. The anatomy of parts is studied in close correlation with their physiology. Seven credit hours (330 hours for Freshmen; 200 hours for Sophomores).

Professor Knower, Assistant Professor Malone.

Required of Freshmen and Sophomores.

* Values in terms of credit hours are given for those courses which may be elected by students of the Graduate School or of the College of Liberal Arts.

4. *Topographical Anatomy.*—Regional relations reviewed with the aid of sections of the body, special preparations, and models. The main facts of the embryological history of topographical relations are reviewed in connection with this work. Thirty-six hours. One and one-half credit hours. Professor Knowler.

To be elected by Sophomores who have completed the required work by April 20.

5. *Advanced Anatomy.*—A number of advanced students are availing themselves of the opportunities for special work offered by this department. October to June. Professor Knowler.

6a. *Neurological Anatomy.*—A.—Gross and Microscopic Anatomy of the Central Nervous System.—This course consists of laboratory exercises, lectures, and lantern demonstrations. The nervous system is studied from two points of view: (1) The gross and microscopic structure, and (2) the connections of different portions of the nervous system to form the mechanisms which underlie its various functions. Forty-five hours. One credit hour.

Required of Freshmen. Assistant Professor Malone.

6b. *Neurological Anatomy.*—B.—Correlational Anatomy.—This course is planned to furnish the student with a valuable review of anatomy from a novel point of view. The relations of the nervous system to the various activities of the entire body are studied. This presupposes a knowledge of the gross and microscopic structure of the body. The student must necessarily bring together, in considering each system, all of his knowledge of the anatomy and physiology previously learned piecemeal. He learns to correlate the various functional mechanisms of the human nervous system with those of the rest of the body. The mechanisms involved in the heart beat, respiration, speech, mastication, voluntary and visceral movements, secretion, etc., will be considered with reference to the actual anatomical structure and relations of those portions of the body which co-operate to carry on such activities. Forty-eight hours. One credit hour. Assistant Professor Malone.

Required of Sophomores, who must have already finished dissection and have taken Course A or an equivalent.

7. *Advanced Neurology.*—Open to two or three persons who have had the necessary preliminary training. Neuro-histological technique, experimental pathological histology, studies in the finer histology, the comparative anatomy of the vertebrate nervous system, or the construction of models may be selected. There are available very extensive series of the brain of man and the higher vertebrates, and of human embryos of various stages of development. October to June. Assistant Professor Malone.

Any of the above courses are open to undergraduate or graduate

students of the University who can show the necessary preliminary preparation, and desire credits in these subjects toward degrees other than the Medical Degree. As special rulings giving the conditions under which such work may be undertaken have been passed by the faculties of both the College of Liberal Arts and the Graduate School, applicants should first consult the Deans of those faculties. Those interested in research or other special work in Anatomy are requested to apply to the Professor of Anatomy.

8. **Surgical Anatomy.**—Lectures with demonstrations are given in this subject, in the Junior year, by a member of the Surgical Staff. (See page 237.)

PHYSIOLOGY

(The Joseph Eichberg Chair of Physiology)

MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.
EDMUND M. BAEHR, M. D., . . . Assistant Professor of Physiology.

For the coming academic year only such courses in physiology will be given under the direction of this department as are required for graduation in medicine, and such as are necessary to meet the desires of graduate or special students and practitioners of medicine. The courses will be given in the buildings of the University in Burnet Woods and, in part, in the Ohio-Miami Medical College Building. Courses in physiology for general science students are offered by the Department of Biology; courses in physiological chemistry for general science and medical students, by the Department of Chemistry.

FRESHMAN YEAR

1. **Medical Physiology.**—The general physiology of the cell; the physiology of the blood and the circulation; the physiology of respiration; the physiology of muscle and nerve. A lecture and conference course. Fifty hours. Three credit hours.

Professor Fischer.

2. **Medical Physiology.**—The physiology of alimentation; the physiology of absorption and secretion; the physiology of animal heat. A lecture and conference course. Fifty hours. Three credit hours.

Professor Fischer.

3. **Medical Physiology.**—A laboratory course designed to illustrate the classical experiments upon which our present knowledge of the subject rests. The work is arranged to parallel, as nearly as possible, the didactic work of Courses 1 and 2. One hundred hours. Two credit hours.

Professor Fischer and Assistant Professor Baehr.

SOPHOMORE YEAR

4. Medical Physiology.—The physiology of metabolism; the physiology of the ductless glands; the physiology of the spinal cord. A lecture and conference course. Forty-five hours.

Professor Fischer.

5. Medical Physiology.—The physiology of the brain and the special senses. A lecture and conference course. Forty-five hours. Three credit hours.

Assistant Professor Baehr.

6. Medical Physiology.—A laboratory course in the physiology of the central nervous system and the special senses. This course parallels Course 5. Eighty hours. Three credit hours.

Professor Baehr.

RESEARCH

7. Research.—Open to any qualified person after consultation with the head of the department.

CHEMISTRY

LAUDER W. JONES, PH. D., Professor of Chemistry.

HARRY SHIPLEY FRY, PH. D., Associate Professor of Chemistry.

EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Chemistry and of Physiological Chemistry.

During the year 1913-14 the courses in chemistry will be given at the University. The courses announced below will be taken by Freshmen.

Students who have received full credit for general inorganic chemistry and for organic chemistry may elect work at the University in analytical chemistry (Courses 5a, 6, 7) or in physical chemistry (Courses 12 and 13). These courses are entirely optional, but students who can arrange to take them are strongly urged to do so.

For premedical courses in general inorganic chemistry see Chemistry, College of Liberal Arts (Courses 1a, 2a, 3b, 4b).

8a. Elementary Organic Chemistry.—The course comprises quizzes and lectures which are experimental to a certain extent, and deals with the chief classes of organic compounds of both the aliphatic and the aromatic series. *First semester*, forty-five hours. Three credit hours. To be accompanied by laboratory course 9a.

Professor Jones and Dr. Reemelin.

9a. Organic Reactions and Preparations.—A course of laboratory practice arranged to accompany the lectures of Course 8a. A

number of simple organic substances will be made with the view to furnishing, by the fewest illustrations possible, the largest variety of typical reactions and manipulations. *First semester*, ninety hours. Two credit hours.

Professor Jones and Assistant Professor Reemelin.

22b. Bio-Chemistry.—Among other subjects the course will take up for discussion the nature of carbohydrates, fats, and proteid substances; the facts and theories relating to the processes of digestion and metabolism; the chemical composition of the body tissues, secretions, and excretions, including the methods employed in their analysis. *Second semester*, forty-five hours. Three credit hours.

Assistant Professor Reemelin.

22b. Bio-Chemistry, Laboratory.—Laboratory exercises arranged to accompany the lectures, and to acquaint the student with the distinctive reactions of carbohydrates, fats, and proteid substances. The student will be expected to learn the application of these tests to the qualitative detection of, and the quantitative estimation of, these substances in body tissues, secretions, and excretions. Digestion, the analysis of gastric and fecal matter, and of urine will be considered from the chemical point of view. *Second semester*, 135 hours. Three credit hours.

Assistant Professor Reemelin.

PATHOLOGY AND BACTERIOLOGY

(——— Chair of Pathology)

PAUL GERHARDT WOOLLEY, B. S., M. D., Professor of Pathology.

WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor
of Bacteriology.

CHARLES GOOSMANN, M. D., Instructor in Pathology.

GILBERT MOMBACH, M. D., Instructor in Pathology.

The work of the Department of Pathology and Bacteriology is progressive. Commencing with bacteriology and with lectures and conferences in general pathology in the fall semester, it is continued, after January first, by a laboratory course in parasitology. This is followed by a systematic course in special pathology, which extends through the second semester. Also during the second semester a course in serum reactions (see Medicine 3) is given which forms a connecting link between general pathology and clinical medicine. In the Junior year, students see a considerable amount of animal pathology in the course of their work in the slaughter house and meat inspections. In the Senior year, students are given demonstrations in gross pathology with informal discussions on systemic pathology.

1. Infection and Immunity.—Lectures on infection and immunity, together with recitations covering the ground gone over by the students in their laboratory work, and the special text-book assignments. The course must be taken in conjunction with Course 2. *First semester*, twenty-five hours. One and one-half credit hours.

Associate Professor Wherry.

Course 1 is open only to those students who have qualified in inorganic and organic chemistry, biology, and histology.

2. Bacteriology.—The course is designed to give the student a general survey of the subject. In the laboratory the student prepares his own culture media, thus gaining an intimate acquaintance with the principles of sterilization. Representative types of the non-pathogenic and the important pathogenic organisms are studied. Pathologic material from the City Hospital gives the student a first-hand acquaintance with many of the organisms which are pathogenic for man, and with the methods of isolating and identifying them. Some of the more pathogenic protozoa are demonstrated. *First semester*, one hundred and forty-eight hours. Three credit hours.

Associate Professor Wherry.

3. General Pathology.—Lectures in general pathology, with especial reference to inflammation, progressive and regressive cellular changes, tumors and the causes of disease, and recitations covering the ground gone over in the lectures and laboratory work. Thirty hours.

Professor Woolley.

Course 3 must be taken in conjunction with Course 4 and must be preceded by Courses 1 and 2.

4. General and Special Pathology.—The basis of the work is a laboratory course in which microscopic work is combined with a study of fresh gross and museum specimens. Sections of diseased tissues are stained and mounted by the student, who records a description of each and makes drawings of them. All of the tissues of the body are studied in this way, and the various lesions are discussed from cellular, organic, and systemic standpoints. *Second semester*, one hundred and thirty-five hours. Three credit hours.

Professor Woolley and Dr. Goosmann.

5. Post-Mortem Demonstrations.—The course consists of the demonstration of fresh gross material and of materials preserved on ice. Autopsies are witnessed by the students of the Junior and Senior years who are required to assist in making them and to take notes and record them in protocols. Sixty hours.

Professor Woolley and Assistants.

6. Parasitology.—Lectures on the more important parasites of man. Illustrated by gross and microscopic specimens. Thirty-six hours.

Professor Wherry.

7. Conferences.—Special topics are studied by individual students and presented before the instructor and class for discussion.

Professor Woolley, Associate Professor Wherry.

8. Research.—Open to any qualified person after consultation with the head of the department.

9. Gynecologic Pathology.—Lectures and demonstrations illustrating the abnormal physiologic and anatomic changes connected with the female pelvic organs. Senior year, 16 hours.

Dr. Mombach.

10. Surgical Pathology.—Lectures and demonstrations illustrating certain processes connected with pathologic diagnosis of specimens removed at surgical operations. Senior year, 16 hours.

MATERIA MEDICA, PHARMACOLOGY, AND THERAPEUTICS

JULIUS H. EICHBERG, Ph. G., Ph. D., M. D., Professor of Materia Medica, Pharmacology, and Therapeutics.

—————, Associate Professor of Pharmacology.

RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Therapeutics.

C. C. FIFE, M. D., Instructor in Dietetics.

WILLIAM C. HERMAN, Ph. G., M. D., Instructor in Pharmacology.

SIDNEY LANGE, A. B., M. D., Lecturer and Demonstrator of Radiology.

H. KENNON DUNHAM, M. D., Lecturer and Demonstrator of Electrotherapeutics.

LOUIS G. SCHRICKEL, Ph. G., M. D., Instructor in Pharmacy.

The work of the Department of Pharmacology, Materia Medica, and Therapeutics is carried on in the lecture rooms of the College, in the dispensary clinics, and in the wards and laboratories of the Cincinnati Hospital.

1. Pharmacology.—A lecture course, supplemented by Course 3, in which the physiological action of drugs is presented, and which is intended to give the student a clear idea of the general principles of drug therapy. Continued in Course 4. Professor Eichberg.

2. Pharmacology and Metrology.—Recitations in pharmacology and instruction in metrology, incompatibilities, and prescription writing. Thirty hours. Dr. Herman.

3. Pharmacology, Laboratory.—The work will consist of exercises in gross pharmacognosy; plant histology; general reaction of plant constituents; metrology; pharmaceutic methods and prepara-

tions; dispensing; incompatibilities; isolation of alkaloids; study of changes in urine induced by drugs; the action of drugs on hemoglobin, and on red corpuscles; chemic antidotes; and experiments which the students will conduct for themselves illustrating the physiological and toxicological action of the more important drugs.

4. Therapeutics.—Lectures on the specific indications, as well as the general principles, of treatment. Professor Eichberg.

5. Therapeutics.—Lectures in the methods of treatment without drugs, including higher therapy, etc., and recitations in general therapeutics. Assistant Professor Southworth.

6. Dietetics.—A lecture course on the composition and effects of diet, including the methods of preparation. Dr. Fihe.

7. Electrotherapeutics.—Lectures on the principles of magnetism and electricity; units and measurements of electricity, both dynamic and static; induced electricity; applications of electricity to diagnosis; electrical apparatus, coils, interruptors, etc. Fifteen hours. Dr. Dunham.

8. Radiology.—Lectures on radiology; considerations on the physics of the X-Ray; effect of the X-Ray upon the tissues of the body; radio-diagnosis and radio-therapeutics. Fifteen hours.

Dr. Lange.

9. Radiology and Electrotherapeutics.—A practical course in the electrotherapeutic laboratory of the College, in the radiographic department of the Cincinnati Hospital and at the Tuberculosis Hospital. Forty hours. Drs. Dunham and Lange.

10. Therapeutic Clinics.—These clinics are all in connection with the dispensary medical clinics and the Hospital.

MEDICINE

EDWIN W. MITCHELL, A. B., M. D., . . . Professor of Medicine.
 GEORGE A. FACKLER, M. D., . . . Professor of Clinical Medicine.
 OLIVER P. HOLT, M. D., Clinical Professor of Medicine.
 JOHN ERNEST GREIWE, M. D., . Associate Professor of Medicine.
 MARK A. BROWN, M. D., . . . Associate Professor of Medicine.
 HENRY WALD BETTMANN, B. L., M. D., Adjunct Professor of Medicine.
 ALLAN RAMSEY, B. S., M. D., . Assistant Professor of Medicine.
 OSCAR BERGHAUSEN, A. B., M. D., Assistant Professor of Medicine.
 CHARLES SUMNER ROCKHILL, M. D., Clinical Instructor in Medicine.
 C. C. FIHE, M. D., Clinical Instructor in Medicine.
 LOUIS G. HEYN, M. D., Clinical Instructor in Medicine.
 HENRY LYNDE WOODWARD, M. D., . . . Demonstrator of Clinical
 Microscopy.

OTTO J. SEIBERT, M. D.,	Clinical Instructor in Medicine.
CHARLES P. KENNEDY, M. D., . .	Clinical Instructor in Medicine.
JOHN S. GRISARD, M. D.,	Clinical Instructor in Medicine.
J. D. SPELMAN, M. D.,	Clinical Instructor in Medicine.
MARCUS E. WILSON, M. D., . . .	Clinical Instructor in Medicine.
JULIUS G. STAMMEL, M. D., . . .	Clinical Instructor in Medicine.

The work of the Department of Medicine is carried on in the lecture rooms of the College building, in the College Dispensary, in the wards, laboratories, and amphitheatres of the Good Samaritan and the Cincinnati Hospitals, and in the wards of the Contagious Disease Hospital.

1. Physical Diagnosis.—Lectures, demonstrations, and practical exercises illustrating the methods of physical exploration of the body. Associate Professor Greiwe.

2. Clinical Microscopy.—A practical laboratory course in the methods of examining blood, sputum, urine, gastric contents, feces, cerebro-spinal fluid, exudates, and transudates. Dr. Woodward.

3. Serum Reactions in the Infectious Diseases.—A conference and laboratory course illustrating the methods of investigating the serum reactions in various infectious diseases. It includes the application of the Wassermann and Noguchi methods and other useful diagnostic and curative procedures.

Assistant Professor Berghausen.

3a. Serum Diagnosis and Therapeutics.—A lecture and conference course with practical demonstrations in immunology and immuno-diagnostics, including the preparation and administration of vaccines, sera, etc. Sophomore year, — hours.

Assistant Professor Berghausen.

3b. Infectious Diseases.—A lecture-conference course on the infectious diseases which are not taken up in the Department of Paediatrics. Junior year, — hours.

Assistant Professor Berghausen.

4. The Diseases of the Stomach, Intestines and Liver.—A series of lectures on the diagnosis and treatment of disorders of the gastro-intestine tract.

Adjunct Professor Bettmann.

5. The Diseases of the Heart and Lungs.—A series of lectures on the diagnosis and treatment of disorders of the cardiac and respiratory systems.

Professor Mitchell and Assistant Professor Ramsey.

6. Constitutional Diseases and Diseases of the Blood and Ductless Glands.—A series of lectures on the diagnosis and treatment of these diseases.

Associate Professor Brown.

7. **Dispensary Clinics.**—Each member of the Junior class spends two hours daily throughout half the year in the medical clinic, where he has practical experience and instruction in history taking, physical examination, diagnosis, and treatment of medical cases.

Assistant Professor Berghausen, Drs. Seibert, Kennedy, Grisard, Spelman, Stammel, and Wilson.

8. **Hospital Ward Classes.**—Each member of the Senior class spends two hours daily for two months in the medical wards of the Cincinnati Hospital. During this time he serves as a clinical clerk in taking histories, making clinical examinations, etc., becoming thoroughly acquainted in the wards with the methods of examining and caring for hospital patients. Part of this time is spent in making rounds with the staff officers under whose direction he is working.

Professors Mitchell, Fackler, Holt, Eichberg;
Associate Professors Greiwe and Brown;
Dr. Bell and Assistants.

9. **Clinical Lectures.**—Clinical lectures on selected topics are delivered daily throughout the year in the amphitheatre of the Cincinnati Hospital and of the Good Samaritan Hospital. These lectures are delivered at times that do not conflict with bedside work.

Professors Mitchell, Fackler, Holt; Associate Professors Greiwe and Brown.

PAEDIATRICS

B. K. Rachford, M. D.,	Professor of Paediatrics.
ALFRED FRIEDLANDER, A. B., M. D.,	Associate Professor of Paediatrics.
FRANK H. LAMB, A. M., M. D.,	Assistant Clinical Professor of Paediatrics.
MAX DREYFOOS, M. D.,	Clinical Instructor in Paediatrics.
EDWARD A. WAGNER, M. D., . . .	Clinical Instructor in Paediatrics.
CHARLES K. ERVIN, M. D., . . .	Clinical Instructor in Paediatrics.
E. I. FOGEL, M. D.,	Clinical Instructor in Paediatrics.
WILLIAM J. GRAF, M. D.,	Clinical Instructor in Paediatrics.
EDWARD D. ALLGAIER, M. D., . .	Clinical Instructor in Paediatrics.
JOHN T. BATTE, M. D.,	Clinical Instructor in Paediatrics.
GEORGES RASETTI, M. D.,	Clinical Instructor in Paediatrics.
IDA M. WESTLAKE, M. D.,	Clinical Instructor in Paediatrics.
JAMES M. BENTLEY, M. D., . . .	Clinical Instructor in Paediatrics.
FRANK W. CASE, M. D.,	Clinical Instructor in Paediatrics.
ERIC R. TWACHTMAN, M. D., . . .	Clinical Instructor in Paediatrics.
CHARLES A. STAMMEL, M. D., . .	Clinical Instructor in Paediatrics.

The work of the Department of Paediatrics is conducted in the lecture rooms of the College building, in the College Dispensary, in the wards, amphitheatre, and laboratories of the City Hospital, in the amphitheatre of the Good Samaritan Hospital, and in the wards of the Contagious Disease Hospital.

1. Diseases of Children.—A series of lectures on diseases of the gastro-intestinal-tract and nutritional disorders; genito-urinary diseases; functional diseases of the nervous system; tuberculosis; and diseases of the blood. Thirty hours. Professor Rachford.

2. Diseases of Children.—A series of lectures on the acute infectious diseases (especially the acute exanthema, cerebro-spinal meningitis, anterior poliomyelitis); diseases of the heart; and diseases of the ductless glands. Fifteen hours.

Associate Professor Friedlander.

3. Dispensary Clinics.—Each member of the Senior class attends the paediatric clinic two hours daily for five weeks, during which time he has an excellent opportunity to see and study the more common, and some of the uncommon, diseases of children. This clinic is a large one, the attendance in 1912-13 being 5,011. In addition to the attention paid to the patient, much pains are spent in this clinic in following patients to their homes and in remedying the social causes of disease. For this purpose three special nurses are employed, and students have opportunities, and are urged to accept them, of seeing and studying home conditions.

Professor Rachford; Associate Professor Friedlander;
Assistant Professor Lamb; Drs. Dreyfoos, Wagner,
Allgaier, Batte, Ervin, Fogel, Graf, Rasetti, West-
lake, Bentley, Case, Twachtman, and Stammel.

4. Hospital Ward Classes.—Each member of the Senior class spends a certain amount of time (see bedside schedule) in the children's wards of the Cincinnati Hospital, and in the contagious disease wards of the new Hospital. Here instruction and opportunities for study are offered by the various members of the staff. Ninety hours.

Professors Rachford and Eichberg; Associate Professor
Friedlander; Assistant Professor Lamb; Drs. Bell
and Wagner.

5. Clinical Lectures.—Clinical lectures are delivered at regular intervals, in the amphitheatres of the Cincinnati and Good Samaritan Hospitals, to Senior students. One hundred and eight hours.

Professor Rachford, Associate Professor Friedlander,
and Assistant Professor Lamb.

PSYCHIATRY AND NEUROLOGY

FRANK WARREN LANGDON, M. D., . . . Professor of Psychiatry.

HERMAN HENRY HOPPE, A. M., M. D., . . . Professor of Neurology.

DAVID I. WOLFSTEIN, M. D., Assistant Clinical Professor of Nervous Diseases.

EDMUND M. BAEHR, M. D., Assistant Clinical Professor of Nervous Diseases and Lecturer on the History of Medicine.

ROBERT INGRAM, M. D., Clinical Instructor in Psychiatry.

CHARLES E. KIELY, A. B., M. D., Clinical Instructor in Neurology.

1. Psychiatry.—Lectures on Mental Diseases.

Professor Langdon.

2. Psychiatric Clinics.—Bedside and conference study of mental diseases in the wards of the Cincinnati Hospital and, through the courtesy of Dr. F. W. Harmon, at Longview State Hospital for the Insane.

Professors Langdon and Hoppe; Assistant Professors Wolfstein and Baehr, and Drs. Zenner and Ingram.

3. Nervous Diseases.—Lectures on the functional and organic diseases of the brain, spinal cord, and peripheral nerves, illustrated by charts and by a large collection of mounted sections.

Professor Hoppe.

4. Neurologic Clinics.—Each Senior student devotes a specified number of two-hour periods to bedside and conference study of neurologic cases in the Cincinnati Hospital.

Professor Hoppe, Assistant Professor Wolfstein, and Dr. Kiely.

5. Dispensary Clinics in Neurology.—

Professor Hoppe, Assistant Professor Baehr, Dr. Kiely.

DERMATOLOGY AND SYPHILOLOGY

MEYER L. HEIDINGSFELD, Ph. B., M. D., Professor of Dermatology and Syphilology.

AUGUSTUS RAVOGLI, A. M., M. D., Clinical Professor of Dermatology and Syphilology.

ELMORE B. TAUBER, M. D., Clinical Instructor in Dermatology and Syphilology.

JAMES W. MILLER, M. D., Clinical Instructor in Dermatology and Syphilology.

MOSES SCHOLTZ, Clinical Instructor in Dermatology and Syphilology.

1. Lectures on the hyperemias, inflammations, hypertrophies, atrophies, new growths, tuberculosis, and parasitic diseases of the skin; syphilis, diseases of the nails, hair, hair follicles, sweat and

sebaceous glands. The lectures are supplemented with demonstrations from several hundred colored lantern slides.

Professor Heidingsfeld.

2. Dermatologic Clinics.—Each Senior devotes a definite amount of time to the clinical study of syphilis and dermatologic cases in the dispensary.

Professor Heidingsfeld, and Drs. Tauber, Miller, and Scholtz.

SURGERY

JOSEPH RANSOHOFF, M. D., F. R. C. S. (Eng.), Professor of Surgery.

JOHN CHADWICK OLIVER, M. D., . Professor of Clinical Surgery.

CHARLES EDWARD CALDWELL, A. M., M. D., Associate Professor of Surgical Anatomy and Clinical Professor of Surgery.

_____, Adjunct Professor of Surgery.

E. OTIS SMITH, M. D., . . Adjunct Professor of Genito-Urinary Diseases.

FRANK FEE, M. D., Clinical Professor of Surgery.

CARL HILLER, M. D., . . Assistant Clinical Professor of Surgery.

HARRY HAYES HINES, M. D., Assistant Clinical Professor of Surgery.

CASPER F. HEGNER, M. D., . . . Assistant Professor of Surgery.

GOODRICH BARBOUR RHODES, A. B., M. D., Assistant Clinical Professor of Surgery.

DUDLEY WHITE PALMER, B. S., M. D., Assistant Clinical Professor of Surgery.

JOHN A. CALDWELL, M. D., Clinical Instructor in Surgery.

DUDLEY WEBB, M. D., Clinical Instructor in Genito-Urinary Surgery.

J. EDWARD PIRRUNG, M. D., . . . Clinical Instructor in Surgery.

WILLIAM A. LUCAS, M. D., . . . Clinical Instructor in Surgery.

RALPH STALEY, M. D., Clinical Instructor in Genito-Urinary Surgery.

CHARLES T. SOUTHER, M. D., . . . Clinical Instructor in Surgery.

GUY GIFFEN, M. D., Clinical Instructor in Surgery.

CARLETON G. CRISLER, M. D., Demonstrator in Surgery.

The work of the Department of Surgery is carried on in the lecture rooms of the College, in the College Dispensary, in the wards, operating rooms, amphitheatre, and laboratories of the Cincinnati Hospital, and in the amphitheatre, wards, and operating rooms of the Good Samaritan Hospital.

1. Surgical and Applied Anatomy.—This course consists of lectures which are illustrated by dissections of, and demonstrations upon, the cadaver. Associate Professor Caldwell.

2. **The Principles of Surgery.**—Wounds, infections, diseases of bones, fractures and dislocations, diseases of blood-vessels, lymphatics, muscles and tendons, nerves, tumors. Aseptic and anti-septic principles. Thirty hours. Dr. Hegner.

3. **Surgical Laboratory.**—Physiologic surgery, shock, anesthesia, hemorrhage, experimental infections; surgical technique, surgical dressings, minor operations. Thirty hours.

Assistant Professor Hiller.

4. **Surgery.**—Informal lectures on the surgery of the head, spine, back, and chest. The causes, effects, methods of diagnosis and methods of treatment are discussed. Professor Ransohoff.

5. **Surgery.**—Informal lectures on the surgery of the abdomen, rectum, and anus. The causes, effects, methods of diagnosis and the methods of treatment are discussed. Professor Ransohoff.

6. **Surgery.**—Informal lectures on the surgical diseases of the thyroid and mammary glands. The causes, effects, methods of diagnosis and the methods of treatment are discussed.

Professor Oliver.

7. **Genito-Urinary Surgery.**—Lectures on the surgery of the genito-urinary organs, including the causes, effects, diagnosis and methods of treatment. Adjunct Professor Smith.

8. **Dispensary Clinics.**—Each member of the Junior class spends two hours daily throughout half the year in the Surgical Clinic, where he has practical experience and instruction in history taking, methods of examination, diagnosis and treatment of ambulatory surgical cases. Drs. Caldwell, Rhodes, Pirrung, Lucas, Crisler, and Souther.

9. **Hospital Ward Classes.**—Each member of the Senior class spends two hours daily for two months in the surgical wards of the Cincinnati Hospital. During this time he serves as a clinical clerk, taking histories, making clinical examinations, etc., becoming thoroughly acquainted in other wards with the methods of caring for hospital patients. The student is present at operations on all his own patients and at many others. Part of the time is spent in making rounds with the staff officer under whose direction he is working. Professors Ransohoff, Oliver, Caldwell, Fee, Dr. Carson, and Assistants.

10. **Clinical Lectures.**—Clinical lectures on selected topics are delivered daily throughout the year in the amphitheatres of the Cincinnati and Good Samaritan Hospitals. These lectures are given at times which do not conflict with bedside work.

Professors Ransohoff, Oliver, Caldwell, Fee, and Dr. Carson.

ORTHOPEDIC SURGERY

ALBERT HENRY FREIBERG, M. D., Professor of Orthopedic Surgery.
 ROBERT CAROTHERS, M. D., Clinical Professor of Orthopedic Surgery.
 R. B. COFIELD, M. D., . Clinical Instructor in Orthopedic Surgery.
 ROBERT DANIEL MADDOX, M. D., Clinical Instructor in Orthopedic
 Surgery.

1. Orthopedic Surgery.—Lectures on the etiology of deformities. Diagnostic principles; principal chapters of special orthopedic surgery. Illustration by stereopticon, radiograms, and orthopedic apparatus. Thirty hours. Professor Freiberg.

2. Dispensary Clinics.—Each member of the Senior class devotes a specified number of days to service in the Orthopedic Clinic, where a fair number of interesting cases are treated. This clinic is equipped with the necessary equipment for treating certain classes of orthopedic cases, and the patients are under the supervision of a trained nurse, part of whose duty it is to follow patients to their homes, and there instruct them.

Professor Freiberg, Drs. Maddox and Cofield.

3. Hospital Ward Classes.—A certain amount of the time of each Senior student is devoted to study of orthopedic cases in the wards of the Cincinnati Hospital.

Professors Freiberg and Carothers, and Assistants.

4. Clinical Lectures.—Clinical lectures are delivered at stated times in the amphitheatre of the Cincinnati Hospital.

Professors Freiberg and Carothers.

OBSTETRICS

E. GUSTAV ZINKE, M. D., Professor of Obstetrics.
 WILLIAM D. PORTER, A. M., M. D., Clinical Professor of Obstetrics.
 GEORGE M. ALLEN, M. D., . . . Clinical Professor of Obstetrics.
 JAMES WILLIAM ROWE, A. B., M. D., . . Assistant Professor of
 Obstetrics.
 HENRY LYNDE WOODWARD, M. D., . . . Instructor in Obstetrics.

1. The Anatomy and Physiology of Pregnancy.—Menstruation and ovulation; the diseases of the fetus. The changes within the maternal organism and the diseases of the new-born. Mechanism and management of labor and the pathology of pregnancy. Lectures, sixty hours. Assistant Professor Rowe.

2. Obstetrics.—Lectures on the pathology of labor and the puerperium, with indications for, and methods of operative procedures. Professor Zinke.

3. Clinical Lectures.—Clinical lectures are delivered at stated times in the amphitheatre of the Cincinnati Hospital.

Professors Porter and Allen.

4. Obstetrics.—Recitations in Obstetrics. Supplementary to Courses 1 and 2.

Dr. Woodward.

5. Obstetric Clinics.—Obstetric clinics are held in the wards of the Cincinnati Hospital, and in the homes of patients who make applications to the out-patient department. The hospital work is attended by very small groups of Senior students. The out-patient work is attended by Junior students, one student being present at each case.

The out-patient work is in charge of the physicians of the Maternity Society of Cincinnati, to whom all out-patients are referred, and these cases, together with those applying to the Maternity Society, make, altogether, about 300 cases per annum. The teaching in connection with these cases is strictly personal and practical, and each case is cared for at the time of labor and in convalescence by a visiting nurse of the Maternity Society.

GYNECOLOGY

CHARLES LYBRAND BONIFIELD, M. D., . . . Professor of Gynecology.

CHARLES ALFRED LEE REED, A. M., M. D., Professor of Clinical Gynecology.

JOHN M. WITHROW, A. M., M. D., Professor of Clinical Gynecology.

RUFUS BARTLETT HALL, A. M., M. D., . . . Professor of Clinical Gynecology.

SIGMAR STARK, M. D., Professor of Clinical Gynecology.

JOHN D. MILLER, M. D., . . . Clinical Instructor in Gynecology.

JOSEPH A. HALL, M. D., . . . Clinical Instructor in Gynecology.

BENJAMIN W. GAINES, M. D., Clinical Instructor in Gynecology.

JOHN E. STEMLER, M. D., . . . Clinical Instructor in Gynecology.

JOSEPH S. PODESTA, M. E., . . Clinical Instructor in Gynecology.

PHILIP DORGER, M. D., Clinical Instructor in Gynecology.

WALTER R. GRIESS, M. D., . . Clinical Instructor in Gynecology.

1. Gynecology.—Lectures on gynecology, embracing a general consideration of gynecologic etiology. Diagnosis; malformations, diseases, and displacements of the uterus; disorders of menstruation; diseases of the urethra, bladder, and ureters; endometritis; diseases of the vulva and vagina; pelvic inflammation, pyosalpinx.

Professor Bonifield.

2. Gynecology.—Lectures on gynecology, embracing fibroid tumors, malignant diseases, and tuberculosis of the uterus; tumors

of the ovaries, solid and cystic; tuberculosis of the tubes and ovaries; tubal pregnancy; technique and after-treatment of abdominal section for pelvic diseases. Fifteen hours. Professor Bonifield.

3. Dispensary Clinics.—Each member of the Senior class spends two hours daily for a specified number of days in the gynecologic clinic of the dispensary. Here he receives practical instruction and experience in the methods of examination, diagnosis and treatment of ambulatory cases.

4. Hospital Ward Classes.—Each member of the Senior class spends a specified number of days in the gynecological wards of the Cincinnati Hospital, where he serves as clinical clerk, and as a spectator at operations. He therefore obtains valuable and practical experience in the methods of caring for hospital patients.

5. Clinical Lectures.—Clinical lectures on selected topics are delivered at stated times in the amphitheatres of the Cincinnati and Good Samaritan Hospitals.

OPHTHALMOLOGY

ROBERT SATTLER, M. D.,	Professor of Ophthalmology.
DERRICK T. VAIL, M. D., .	Clinical Professor of Ophthalmology.
WALTER FORCHHEIMER, A. B., M. D., . . .	Clinical Professor of Ophthalmology.
CHARLES W. TANGEMAN, M. D.,	Clinical Professor of Ophthalmology.
VICTOR RAY, M. D.,	Assistant Clinical Professor of Ophthalmology.
WYLIE MCLEAN AYRES, A. B., M. D.,	Assistant Clinical Professor of Ophthalmology.
JOHN RANLY, M. D., . . .	Clinical Instructor in Ophthalmology.
FRANK B. CROSS, M. D.,	Assistant Clinical Instructor in Ophthalmology.
CLARENCE J. KING, M. D., . . .	Assistant Clinical Instructor in Ophthalmology.
K. L. STOLL, M. D.,	Assistant Clinical Instructor in Ophthalmology.
HORACE F. TANGEMAN, M. D.,	Assistant Clinical Instructor in Ophthalmology.
FRANK U. SWING, M. D.,	Assistant Clinical Instructor in Ophthalmology.

The aim of instruction in Ophthalmology is to afford the student ample opportunity to study the essentials of the pathology of the more important ocular lesions, and to impress him with the importance of a practical knowledge of Ophthalmology and its close relationship to Internal medicine. The course is divided into didactic and clinical teaching, the first semester being devoted to recitations and lectures, and the second wholly to clinical work at the University

dispensary, Ophthalmic Hospital, and Cincinnati Hospital, under the personal direction of Professor Sattler and a corps of assistants.

An effort will be made to make the clinical course eminently practical and supplementary to the various departments of Internal medicine for those students who, through predilection and proficiency, desire to prepare for postgraduate instruction in Ophthalmology.

1. **The Pathology of Ocular Lesions.**—Lectures on the pathology of ocular lesions, supplemented by clinical instruction in the Cincinnati Hospital. Small class demonstrations in embryology and bacteriology of the eye, in the use of the ophthalmoscope, and refraction work at the Ophthalmic Hospital. Forty-eight hours.

Professor Sattler.

2. **Dispensary Clinics.**—Each Senior student spends a specified number of two-hour periods in daily attendance at the ophthalmologic clinic of the dispensary. Here he receives practical instruction and experience in dealing with the common affections of the eyes. Thirty hours.

Professors W. Forchheimer and Tangeman; Assistant Professors Ray and Ayres; Drs. Ranly, Cross, King, Stoll, Tangeman, Swing.

3. [Hospital Ward Classes.] Each Senior student spends specified number of two-hour periods in ward examinations of ophthalmic cases in the Cincinnati Hospital.

Omitted in 1913-14.

4. **Clinical Lectures.**—A certain number of clinical lectures in diseases of the eyes are delivered in the amphitheatre of the Cincinnati Hospital.

Professors Sattler and Vail.

OTO-LARYNGOLOGY

CHRISTIAN R. HOLMES, M. D., Professor of Otology.

JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryngology.

JOHN WESLEY MURPHY, A. M., M. D., . . . Clinical Professor of Laryngology and Otology.

SAMUEL IGLAUER, B. S., M. D., . . . Associate Professor of Otology.

WALTER E. MURPHY, M. D., Associate Professor of Laryngology, and Clinical Instructor in Rhinology, Laryngology, and Otology.

WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology, Laryngology, and Otology.

W. J. THOMASSON, M. D., Clinical Instructor in Rhinology, Laryngology, and Otology.

S. BERTHA DAUCH, M. D., Assistant Clinical Instructor in Rhinology, Laryngology, and Otology.

- CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology,
Laryngology, and Otology.
- GEORGE L. KRIEGER, M. D., Assistant Clinical Instructor in Laryngology
and Otology.
- ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryngology
and Otology.
- ROBERT W. BLEDSOE, M. D., Clinical Instructor in Laryngology and
Otology.

1. Laryngology.—A series of lectures on the diseases of the nose, mouth, pharynx, and larynx. These lectures are illustrated by wet and dry specimens and supplemented by demonstrations of operative technique. Professor Thompson.

2. Otology.—A series of lectures on diseases of the ear. Professor Holmes and Associate Professor Iglauer.

3. Dispensary Clinics.—Each Senior spends a specified number of two-hour periods in the oto-laryngologic clinic of the Dispensary, where he receives practical experience in the diagnosis and treatment of cases.

Professor J. W. Murphy; Associate Professors Iglauer and Murphy (W. E.), and Drs. Williams, Mitchoefer, Thomasson, Dauch, Weintz, Krieger, Stevenson, and Bledsoe.

[4. Ward Classes.] Ward classes of Senior students are held at the Cincinnati Hospital. During this service many operations may be witnessed.

Omitted in 1913-14.

5. Clinical Lectures.—

HYGIENE

JOHN HOWARD LANDIS, M. D., Professor of Hygiene.

1. The Hygiene of Food.—Transmissible diseases, quarantine, immunity, and preventive inoculation. Air, water, and soil, personal hygiene; municipal hygiene; disposal of refuse and dead; disinfection.

CO-OPERATIVE COURSE WITH THE BOARD OF HEALTH

During the session of 1911-12, a Co-operative Course with the Board of Health was introduced, whereby a student in his Junior year divides his time between active service in the Board of Health, and the regular work of the College of Medicine. The students assigned to the Board of Health are distributed among

its various departments to do chemical and bacteriologic work (the examination of milk and water, and testing for typhoid fever, tuberculosis, diphtheria, etc.); to do sanitary inspection and fumigation; to trace the sources of infections; to make food, dairy, bakery, barber shop, and school inspections; to practice preventive inoculation and vaccination; to study the methods of disposal of sewage and of the dead, and to serve in the city dispensaries. Through the cordial co-operation of the Anti-tuberculosis League and the staff of the Cincinnati Tuberculosis Hospital, students will be able to participate in their work and will have the advantage of first-hand experience with one of the best organized preventive campaigns of the day. The students take part not only in the laboratory and field work of the Board of Health, but also in its office work, where they study methods of making reports, of compiling statistics and of keeping records. The service with the Board of Health includes daily conferences with the officers of the Health Department, at which the methods of Boards of Health are discussed and elucidated.

Students serving in this way in the Health Department are expected to keep the same hours as are kept by the officials with whom they are serving. Records of each student's efficiency in his practical work are kept and filed at the college at each transfer.

MEDICAL JURISPRUDENCE AND ECONOMICS

JAMES B. SWING, Lecturer on Medical Jurisprudence and Economics.

1. Medical Jurisprudence and Economics.—Origin of our law courts and procedure; introduction of testimony; expert witnesses. Legal rights and duties of physicians; ethics; nature and value of evidence in cases of wounds, asphyxia, etc.; homicide and suicide; history of the law of insurance, etc.; accident cases. History of the law of insanity; legal responsibility in crime; contracts, testamentary capacity. Personal identity. Business methods. Changes in the human body after death; post mortem. Purposes of organization. Rape; pregnancy; abortion, infanticide. Lectures, sixteen hours.

CLINICAL INSTRUCTION

Just as the development of practical laboratory work marks the evolution of teaching in the first two years of medical training of this day, so does the greater employment of demonstrative methods in hospital and dispensary indicate the excellence of the curriculum

of a modern school of medicine, in its Junior and Senior years. The Ohio-Miami Medical College of the University of Cincinnati has, in this respect, a wealth of available material to offer the student in his third and fourth years which is excelled in few if any cities in the United States. This is true both in regard to the quantity and variety of clinical material, and to its accessibility to the student.

THE CINCINNATI HOSPITAL

Cincinnati has six large hospitals. Of these the largest is the *Cincinnati Hospital*, with a capacity of 500 beds. The clinical material at this hospital alone would amply suffice for the thorough teaching of practical medicine in all of its branches to a large medical school. During the college year the large amphitheater of this hospital is used for operative clinics and informal clinical lectures to the Senior class. Twelve hours per week are also utilized for bedside teaching by the Senior and Junior Attending Staff of the hospital, the classes being subdivided into sections for this purpose. The student is thus enabled to spend the entire forenoon of each day during his Senior year in practical clinical work. The sections of the Senior class attending the clinical lectures at the Good Samaritan Hospital on Tuesdays, Thursdays, and Saturdays are given bedside instruction in this hospital on these days. The morgue of the hospital contains a smaller amphitheatre in which the autopsies are made and the abundant pathological material is demonstrated by the pathologists of the hospital.

The thoroughly equipped laboratory of radiography is utilized for demonstration of both the therapeutic and diagnostic uses of the X-Ray. This work is given to the class in sections.

The contagious wards of the new City Hospital were opened during the summer of 1911. The group of buildings contains 120 beds, and students are assigned in groups to study the cases which are sent there, and receive instruction by the attending physicians.

The New Cincinnati Hospital, now nearly completed, will be in full operation by the opening of the session of 1914-15. It is no exaggeration to say that in this hospital, which is the largest and most thoroughly equipped general hospital in the United States, the students of the Medical Department of the University of Cincinnati will have as good advantages for clinical and pathological instruction as can be obtained anywhere in the world.

Pædiatrists:

B. K. RACHFORD, M. D.

ALFRED FRIEDLANDER, M. D.

Pathologist and Director of the Laboratories:

P. G. WOOLLEY, M. D.

Bacteriologist and Assistant Director of the Laboratories:

W. B. WHERRY, M. D.

Radiographer: SIDNEY LANGE, M. D.

Cystoscopists:

E. O. SMITH, M. D.

DUDLEY WEBB, M. D.

Dentists:

H. C. MATLACK, M. D.

E. G. BETTY, M. D.

JUNIOR VISITING STAFF

Physicians:

L. G. HEYN, M. D.

ALLAN RAMSEY, M. D.

H. L. WOODWARD, M. D.

Neurologists:

E. M. BAEHR, M. D.

ROBERT INGRAM, M. D.

Surgeons:

CARL HILLER, M. D.

D. W. PALMER, M. D.

H. H. HINES, M. D.

C. F. HEGNER, M. D.

CHARLES A. LANGDALE, M. D.

G. B. RHODES, M. D.

Orthopedic Surgeons:

ROBERT D. MADDOX, M. D.

ROBERT B. COFIELD, M. D.

Laryngologists:

G. A. HINNEN, M. D.

C. H. WEINTZ, M. D.

Oculists:

VICTOR RAY, M. D.

JESSE WYLER, M. D.

Obstetrician:

WILLIAM GILLESPIE, M. D.

M. A. TATE, M. D.

Pædiatrists:

F. H. LAMB, M. D.

E. A. WAGNER, M. D.

Dermatologists:

ELMORE E. TAUBER, M. D.

C. J. BROEMAN, M. D.

Gynecologist:

JAMES W. ROWE, M. D.

JOSEPH A. HALL, M. D.

Assistant Bacteriologist: WILLIAM H. PETERS, M. D.

Assistant Radiographer: WM. M. DOUGHTY, M. D.

Clinical and Pathological Laboratory and Museum:

A. E. OSMOND, M. D.

JOSEPH T. KENNEDY, M. D.

CHARLES GOOSMANN, M. D.

W. A. LUCAS, M. D.

OSCAR BERGHAUSEN, M. D.

GORDON F. MCKIM, M. D.

HERBERT BROWN, M. D.

STARR FORD, M. D.

GILBERT MOMBACH, M. D.

JOHN A. CALDWELL, M. D.

WILLIAM GRAF, M. D.

FRANK SWING, M. D.

Resident Physician in Pathology: E. D. ALLGAIER, M. D.

Resident Physician: CHARLES T. McDEVITT, M. D.

In 1887 the Board of Trustees of the Cincinnati Hospital authorized the organization of the staff for the purpose of teaching, under the title of the Clinical and Pathological School of the Cincinnati Hospital. Since 1896 this school has been in affiliation with the medical department of the University of Cincinnati.

The hospital requires the payment of a fee of ten dollars for the privilege of clinical instruction in this school. This privilege is open to all third and fourth year medical students in the city who are registered under the state law.

The fees collected from the students are used to support the hospital library and museum.

CLINICAL AND PATHOLOGICAL SCHOOL CINCINNATI HOSPITAL

AMPHITHEATER CLINICS AND BEDSIDE INSTRUCTION 1912-13

	HOOR	MON.	TUES.	WED.	THURS.	FRI.	SAT.
Oct. 1912 TO Feb. 1913	8:30 to 9:30	Greive Mitchell	Ransohoff Oliver	Caldwell Molt	Hoppe Carothers Poole	G. M. Allen Withrow Stark	Ravogli Sattler S. E. Allen
	9:30 to 11:30	BEDSIDE CLASSES					
February TO June 1913	8:30 to 9:30	Brown Fackler	Carson Whitacre	Kramer	Wolfstein Freiberg Rachford	Porter Hall Reed	Heldingsfeld Vail Murphy
	9:30 to 11:30	BEDSIDE CLASSES					

THE GOOD SAMARITAN HOSPITAL

The clinical instruction of this important hospital is conducted exclusively by the faculty, as follows: Dr. C. L. Bonifield, President, and Dr. C. C. Fihe, Secretary. The members of the staff are: Medicine, Drs. John E. Greiwe and C. C. Fihe; Juniors, Drs. A. E. Osmond and Starr Ford; Surgery, Drs. Robert Carothers and Carl Hiller; Junior, Drs. J. E. Pirrung and Goodrich B. Rhodes, M. D.; Gynecology, Drs. C. L. Bonifield, C. A. L. Reed, and John D. Miller; Junior, Dr. B. W. Gaines; Neurology, Dr. Herman H. Hoppe; Junior, Dr. E. M. Baehr; Nose and Throat, Drs. A. B. Thrasher and William Mithoefer; Junior, Dr. Robert Stevenson; Eye, Drs. Wylie Ayres and John Ranly; Junior, Dr. W. Keller; Children, Dr. Frank Lamb; Genito-urinary, Dr. E. O. Smith; Junior, Dr. Dudley Webb; Skin, Dr. J. W. Miller; X-Ray, Dr. Sidney Lange.

The Good Samaritan contains about one hundred beds. There is also, as a tributary, an outdoor department in connection with the hospital, adding materially to its resources. An abundance of clinical material is thus afforded both in the Departments of Medicine and Surgery, and this material is utilized for the instruction of groups of students on three mornings of each week. See bedside schedule.

Students of this College only are eligible for internship in the Good Samaritan Hospital. There are four positions filled annually.

CINCINNATI TUBERCULOSIS HOSPITAL

The Cincinnati Tuberculosis Hospital is a municipal institution of 330 beds. It is organized on modern lines with a full-time medical superintendent and an independent staff of specialists. In this hospital the members of the Junior class spend 128 hours during the second semester in a detailed clinical and sociologic study of tuberculosis. This study forms a continuation of the work in the Board of Health.

The members of the staff are as follows:

C. S. Rockhill, M. D., Medical Director and Superintendent; William Mithoefer, M. D.; Dudley Palmer, M. D.; R. D. Maddox, M. D.; Kennon Dunham, M. D.; W. McL. Ayres, M. D.; and Clifford Kennedy, M. D.

OTHER HOSPITALS OF CINCINNATI

The Faculty of the Ohio-Miami Medical College is also very largely represented in the staffs of Christ's Hospital, the Jewish Hospital, the German Deaconess Hospital, St. Mary's Hospital,

and the Episcopal Hospital for Children. While no regular place in the college schedule is allotted for clinical teaching in these institutions, there is abundant opportunity for utilizing their large amount of clinical material.

LONGVIEW STATE HOSPITAL FOR THE INSANE

A course of clinical lectures on mental diseases is given at Longview State Hospital for the Insane from January to April each year. This course is given through the courtesy and under the supervision of Dr. F. W. Harmon, the superintendent of the Hospital, by members of the Faculty of the Ohio-Miami Medical College. There is an enormous amount of material in this hospital available for the purpose of illustration, and it is unsurpassed in its variety. Admission to these lectures is open to practitioners and Senior students. Provision is made in the schedule of the Senior year for attendance upon this course; it is mandatory and entitles to credit.

In 1913 the exercises at Longview were as follows: February 8, Dr. Langdon, *Introductory*; February 15, Dr. Hoppe, *The Manic-Depressive Psychoses*; February 22, Dr. Wolfstein, *Dementia Praecox*; March 1, Dr. Zenner, *Paresis*; March 8, Dr. Baehr, *Exhaustive Psychoses*; March 15, Dr. Ingram, *Melancholia*; March 29, Dr. Hoppe, *Paranoia*; April 5, Dr. Wolfstein, *Drug and Alcohol Psychoses*.

THE COLLEGE DISPENSARY

The College conducts a dispensary for ambulatory cases in a building devoted entirely to this purpose. The clinic building is situated on the north side of McMicken avenue, at the head of Elm Street, upon the McMicken homestead grounds, and is therefore conveniently close to the College building. It is in charge of a salaried director.

The clinics are open from 10:30 a. m. to 1:00 p. m. for medical and surgical cases, and from 3:30 to 6:00 p. m. for paediatric, gynecologic, ophthalmologic, oto-laryngologic, neurologic, dermatologic, orthopedic, obstetric, and genito-urinary surgical cases. The morning clinics are exclusively for Junior students; the afternoon for Seniors.

Each clinic has the use of at least two rooms; one for consultations and examinations; one for demonstrations.

The annual attendance at these clinics is large. In the year 1912-13, about 20,000 cases were recorded, of which number, at least half were new cases. These cases are studied by small groups

of students under the supervision of the clinicians. The attendance of the clinicians is arranged so that two are always on duty to advise and demonstrate. Efficient teaching is therefore obtained.

CHILDREN'S CLINIC

The division of Paediatrics has charge not only of the usual patients who come for treatment, but also of those of the Ohio Maternity Society. This division has an annual sum of money, placed at its disposal by Mrs. Emery, which is expended in distributing certified milk, and in paying two visiting nurses who follow patients to their homes.

ORTHOPEDIC CLINIC

The division of Orthopedics also has been given an annual sum of money by an anonymous donor, and this money is to be expended in equipping a gymnasium, and in paying for the services of an attending nurse and a visiting nurse.

OBSTETRIC CLINIC

During the spring of 1912, an agreement was consummated with the Maternity Society of Cincinnati, whereby all of the patients making application to our clinic should be taken care of by the physicians and nurses of that society, provided students were allowed to attend such cases and receive instruction. The obstetrical work of the Maternity Society is under the supervision of Dr. Woodward of the Faculty of the College, and a corps of competent physicians. The nurses of the Visiting Nurse Association attend all cases. Students therefore see obstetrical cases under the most fortunate scientific and moral conditions. The number of cases attended each year is about 300.

COLLEGE OF COMMERCE

FACULTY

- CHARLES WILLIAM DABNEY, PH. D., LL. D., PRESIDENT OF THE
Office, 10 McMicken Hall. UNIVERSITY.
- FREDERICK C. HICKS, PH. D., DEAN and Professor of Economics and
Office, 8 McMicken Hall. Commerce.
- JOHN C. DUNCAN, PH. D., *Professor of Administration and Ac-*
countancy.
- , *Professor of Finance.*
- , *Professor of Commerce and Transportation.*
- NATHAN ISAACS, PH. D., LL. B., . . . *Lecturer on Commercial Law.*
Member of the Faculty of the Cincinnati Law School
- CHARLES W. DUPUIS, *Lecturer on Investments.*
Cashier Second National Bank.
- HARVEY M. MANSS, A. B., *Lecturer on Advertising.*
Of the J. Walter Thompson Advertising Company.
- HENRY M. BROUSE, *Lecturer on Administration.*
Auditor, Gale Brothers.
- ERNEST A. RODEN, *Lecturer on Accounting.*
Public Accountant and Auditor.
- EDWARD A. SISSON, A. B., *Lecturer on Banking.*
Assistant Secretary, Central Trust and Safe Deposit Company.
- GEORGE R. LAMB, C. P. A., *Lecturer on Accounting.*
Accountant.

OTHER ADMINISTRATIVE OFFICERS

- HENRY S. WEST, PH. D., *Director of School Affiliation.*
Office, 2 McMicken Hall.
- ALFRED BRODBECK, *Director of Physical Education.*
Gymnasium Building.
- DANIEL LAURENCE, B. S., *Secretary of the University.*
Office, 5 McMicken Hall.
- CHARLES ALBERT READ, A. B., . . . *Librarian of the University Library.*
Van Wormer Library Building.
- LELIA GARVIN HARTMANN, B. L., *Registrar.*
Office, 7 McMicken Hall.
- THOMAS L. MCJOYNT, *Secretary, College of Commerce.*
Office, 83 McMicken Hall.

GENERAL STATEMENT

The College of Commerce has been organized for the purpose of providing opportunity for higher commercial education. It was established in 1906 as a separate institution, largely the outgrowth of evening classes held under the patronage of the Cincinnati Chapter of the American Institute of Banking, and became a part of the University in 1912.

The time has come when it is worth while for the young man who desires to achieve success in a business career to begin by learning what the experience of others has to teach. The saving of waste is an important element in modern industry. It is in keeping with this idea that the wasteful method which requires business men to learn everything anew for themselves through their own experience should give place to a system which provides opportunity for each generation to know the results of the efforts of the preceding generation. It is thereby enabled to start somewhat in advance of where its predecessor did, and so to attain larger results.

There are, of course, many phases of business which every man must learn for himself, but business experience has developed principles and methods of procedure which can be taught. Moreover, these principles and methods have become so far standardized as to constitute a useful foundation upon which to build the experience of the individual.

In this respect, an interesting parallel may be drawn between preparation for the legal and medical professions, on the one hand, and preparation for a commercial career, on the other. Not very many years ago it was believed that training for law could best be secured in the office of a practicing attorney, and training for medicine, in the office of a physician. Today, those desiring to enter these professions avail themselves of the facilities offered by the colleges of law and of medicine. None of these colleges professes to qualify its graduates to become at once leaders in their respective fields. To their college training must be added practical experience. Yet few, if any, now question that the preparation afforded by such institutions makes possible more rapid progress in the practice of those professions and, what is even more important, a far greater ultimate achievement.

In like manner, colleges for commercial training do not undertake to turn out ready-made captains of industry, but they do expect to assist in laying a foundation which, when combined with the

training of practical experience, will enable the business man to attain larger results.

ADMISSION

The courses offered are open to all who are qualified to pursue them with profit. The College has been established for the purpose of supplying scientific instruction in the fundamental principles and practices of commerce with a view to increasing the efficiency of those who contemplate engaging in business or who have already entered upon such a career. To this end its facilities are available to every one whose training, either in school or in actual business, is such as to enable him to utilize them to advantage.

Students are admitted (a) as candidates for a degree, (b) as candidates for a diploma, or (c) as special students.

Candidates for a degree are expected to satisfy the regular college entrance requirements and to complete a pre-commercial course consisting of forty college credit hours and two years' successful business experience, or of sixty college credit hours, i. e., the equivalent of two years' college work.

A credit hour is one recitation hour a week carried through a semester or half year.

The college credit hours must include the following:

English Composition.....	4	credit	hours
Economics	4	"	"
Economic History.....	4	"	"
Commercial Geography.....	4	"	"
Statistics	4	"	"
Logic	4	"	"
Ethics	4	"	"
Psychology	4	"	"
Mathematics	8	"	"

Six credit hours in science may be substituted for four of the eight credit hours in mathematics.

Eight credit hours in German, French, or Spanish may be substituted for an equal amount of the required work listed above, subject to the approval of the faculty.

Opportunity to secure this preparation is afforded by the College of Liberal Arts of the University of Cincinnati, which offers, in addition to the regular day classes, late afternoon and evening

classes so adjusted as to enable the students to combine class work with practical business training. The following schedule has been arranged:

		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
First Year	4:45 to 6:45		English Composition		Logic	
	7:30 to 9:30			Economics	Economic History	Mathematics
Second Year	4:45 to 6:45	Statistics		Commercial Geography		
	7:30 to 9:30	Ethics	Psychology			Mathematics

In the two years' business training, the student is required to pursue a course of investigation under the direction of the teachers of the College of Commerce. Special schedules will be prepared with a view to directing the student's observation of business activities so as to make it effective as an essential part of his preparation for the work of the College of Commerce.

Candidates for a Diploma.—Persons are admitted as candidates for a diploma upon giving satisfactory evidence that their scholarship and business experience are adequate. They are required to submit to the Committee on Admission a detailed description of their educational and business training and to supplement this with such additional preparation as in the judgment of the committee may be desirable. Application blanks will be supplied upon request.

Special Students.—The classes of the College of Commerce are open to those who wish instruction along special lines only, provided they are of suitable age and business experience. Those desiring to enroll as special students are required to satisfy the Committee on Admission that they are able to carry on the work desired.

Any student who, after entering, becomes a candidate for a degree or for a diploma, will receive credit for all courses satisfactorily completed, but before becoming a candidate for a degree or for a diploma, he must satisfy the entrance requirements.

All students are amenable to the same regulations in matters of class work, examinations, discipline, etc.

Applications for admission should be addressed to the Dean of the College of Commerce, University of Cincinnati, Cincinnati, Ohio.

REGISTRATION

Registration in 1913 began on Thursday, September 18, and closed on Saturday, September 20. The office was open during the evening of each of these days from 7:30 to 9:30. Students registering on any other days than those designated above were required to pay a registration fee of one dollar.

No person will be admitted to any course after the beginning of the semester, unless a good and sufficient excuse for not entering at the opening of the semester be presented to the Dean; and in no event will any person be permitted to enter the work of any semester after the close of the third week of that semester. In accordance with this regulation *no person was admitted to the work of the first semester of 1913-14 after October 11, 1913.*

The steps in registration are as follows:

- (1) Secure from the Dean and fill out a Course Card.
- (2) Obtain from the Registrar a registration blank; fill out the same and present to the Registrar and secure a Card of Matriculation Fees.
- (3) Pay the registration and library and the tuition fees to the Clerk of the Board and get a receipt therefor.
- (4) File the Course Card and in the case of new students the Cards of Admission in the box prepared for that purpose in the Registrar's office.

FEES

Students taking work in the College of Commerce are charged a registration and library fee of \$5.00 per year. The tuition for a full year's work of five courses is \$50.00. Those taking less than a full year's work are charged \$6.00 per recitation hour per year. Thus the tuition for one two-hour course is \$12.00 a year.

PLAN OF INSTRUCTION

The course of study is planned to combine and co-ordinate theory and practice. Though differing in the details of organization, the basic principle is the same as that of the Co-operative Engineering Course.

Though not as yet fully developed, the course will require three full years of work for its completion. This work will consist of two parts carried on simultaneously: the first composed of courses at the University; the second, of practice in one or more fields of business.

College Courses.—During the first year, the student will give his attention to a group of fundamental subjects, a general knowledge of which is important in all kinds of commercial activity. These are:

Fundamental Principles of Commerce,
Business Administration,
Principles of Accounting,
Banking and Credit,
Commercial Contracts.

The second year's work will consist, in part, of additional fundamental subjects and, in part, of courses selected with reference to the special field for which the student desires to prepare. The required courses during this second year are:

Barometrics of Business,
Commercial Law.

In addition to these, the student will select, subject to the approval of the faculty, three two-hour year courses or their equivalent in half-year courses.

The subjects in the third year are elective, in order that the student may, if he so desires, confine his attention to a special field. At least five two-hour courses or their equivalent in half-year courses will be selected, subject to the approval of the faculty.

In the present stage of development of the College, the number of available electives is necessarily limited, but it is intended to increase these until opportunity for study is afforded in all the fields which properly belong in a College of Commerce.

Business Practice.—Throughout the three years, the student is expected to be in business and to carry on, under the supervision of the faculty of the College of Commerce, a carefully planned study of the business in which he is engaged. This will involve regular reports and conferences. Failure to meet successfully the practical demands of business will debar the student from continuing as a candidate for a degree.

Except as required in the regular schedule of studies, no student will be allowed to take more than ten hours of class work a week, of which not more than six hours, i. e., three two-hour courses or their equivalent, may be taken from 7:30 to 9:30.

GRADUATION

Degree.—The degree of Bachelor of Commercial Science will be conferred upon the following conditions:

(1) The completion of the course of study as outlined, consisting of sixty *credit hours and of three years' successful business experience, including a systematic study of the business concerned.

(2) The preparation of a satisfactory thesis relating to the business in which the student has been engaged, with special reference to the application thereto of the subjects studied in the College. The paper must show that the writer has the ability not only to gather data, but also to correlate and apply the same in solving commercial problems.

Only such students as have satisfied the entrance requirements prescribed for candidates for a degree may receive the degree of Bachelor of Commercial Science.

Diploma.—A diploma in Commerce will be given to those who, having been duly approved as candidates therefor, complete sixty credit hours as described in the Plan of Instruction and three years' successful business practice.

Certificate.—A certificate will be awarded to special students upon the completion of a duly approved group of selected subjects.

CERTIFIED PUBLIC ACCOUNTANT

A special course has been arranged for those who desire to obtain the Certified Public Accountant certificate.

EVENING ACADEMIC COURSES

The University of Cincinnati offers also evening academic courses, which are open to students in the College of Commerce. For detailed information concerning these courses, address the Supervisor of Evening Courses.

* For definition of credit hour, see p. 254. Two hours of laboratory work in the College of Commerce are considered equivalent to one recitation hour.

SCHEDULE OF COURSES

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
4:45 to 6:45		*Fundamental Principles of Commerce		*Business Administration †Barometrics of Business	*Accounting 1 Laboratory
7:30 to 9:30	Advertising *Banking	Insurance	†Commercial Law 2 Auditing	*Commercial Law 1 Adv. Accounting Investments	*Accounting 1 Lectures

* Required of regular first year students.

† Required of regular second year students.

COURSES OF INSTRUCTION

* Required of regular first year students.

† Required of regular second year students.

ADMINISTRATION AND ACCOUNTANCY

* 1. *Business Administration*.—A consideration of the physical factors which influence plant layouts, structures, and labor problems, followed by a discussion of the different types of organization necessary for financial and managerial administrative control. Th., 4:45—6:45.

* 2. *Principles of Accountancy*.—This course is the foundation of all work in accounting. The student is made familiar with the keeping of accounts of various kinds of business, mercantile, industrial, and financial; the accounting for various types of business organization; the methods of preparing the industrial and commercial statistics of a plant, for the purpose of making proper deductions as to the efficiency of departments and the soundness of business policy. This course includes drill in the designing of accounting systems for the different kinds of business considered. Lecture, F., 7:30—9:30; Laboratory, F., 4:45—6:45.

3. *Advanced Accounting*.—This is a problem course including the consideration of the principles of Cost Accounting, the handling of capital, revenue, dissolution of partnership, realization, liquidation, insolvency, good-will, treatment of bad debts, suspense, maintenance, depreciation, reserve and sinking funds, contingent funds, secret reserves and the like. In this course are also considered the special topics of executor accounts, insurance accounts, and accounting for municipalities and other public bodies. Th., 7:30—9:30.

4. *Auditing*.—Discussion of the duties and responsibilities of an auditor; the kinds of audits that can be made and the value of each; the auditor's report, what it should contain; his certificate, its value; the preparation of audit reports. W., 7:30—9:30.

COMMERCE

* 1. *Fundamental Principles of Commerce*.—The first part of this course will be devoted to the following subjects: an analysis of the nature of exchange; value and the conditions which determine it; price and price making, with special reference to the nature and influence of competition and monopoly; the relation of money and price.

There will follow a study of special price problems, such as the nature and function of a standard of value and the requisites for securing an adequate standard; the relation between purchases and

sales, especially in the case of exports and imports, and the effect upon price of internal revenue and import duties; domestic and foreign rates of exchange; transportation rates.

The purpose of this course is twofold: (1) to formulate the principles which determine price; and (2) to ascertain the nature of fair price and the method by which it can be secured. T., 4:45—6:45.

† 2. *Barometrics of Business.*—A study of the phenomena that are commonly regarded as signs of the trend of business activity, and of the various plans of combining them with a view to forecasting business conditions. Among the most important of the subjects to be considered are commodity prices, bank clearings, loans and discounts, crop and metal statistics, foreign trade, gold movements and money rates, investment conditions, railroad conditions, and business failures. Special attention will be given to crises and depressions. Th., 4:45—6:45.

3. *Advertising in Modern Merchandising.*—This course will outline the theory of advertising and apply it to the business of today. It will include: the scope of advertising; its place in modern commerce; what psychology has contributed to advertising; forms and media of advertising; the part played by population and its distribution; copy and layout; advertising to men; advertising to women; building an advertising campaign and interlocking it with the sales campaign; advertising as a business. M., 7:30—9:30.

4. *Railroad Transportation, Car Service and Demurrage.*—The subjects treated in this course are:

(a) The nature and scope of transportation; the origin of the American railway, its growth and the present railway system of the United States.

(b) The railway corporation and its charter; railway capitalization, earnings, expenses and dividends; railway freight, passenger and express service; the accounts and statistics of the railway service.

(c) Theory of rates and fares; rate making in practice; freight classifications; railway competition, pools, and traffic associations.

(d) Demurrage and car service; bills of lading and contracts; the handling of claims.

[(e) Railroad regulation by the state and national government; the Interstate Commerce Act.]

Omitted in 1913-14.

COMMERCIAL LAW

* 1. *Commercial Contracts.*—This course begins with a brief analysis of law and a description of the place of contract in jurisprudence. It then takes up the essential elements in the formation of contracts; offer and acceptance; form and consideration; contracts that must be in writing under the statute of frauds; the capacity of infants, corporations, and others to contract; the reality of consent as affected by mistake, fraud, undue influence, and duress; and illegality because in violation of the statutes or of the common law, or contrary to public policy, or fraudulent. There follows a consideration of the operation of contracts; their interpretation and construction; and the various modes of discharge of contracts, by agreement, by performance including payment and tender, by impossibility of performance, by operation of law, and by breach. The course concludes with a discussion of breach of contract, damages, and specific performance.

This course should precede all other courses in commercial law. Th., 7:30—9:30.

† 2. *Law of Commercial and Banking Paper.*—The following is the outline of this course:

(a) Negotiable instruments payable in money. This will include: The general rules governing all negotiable instruments treated under the following heads: form and interpretation; consideration, negotiation; rights of holder; liabilities of parties; presentation for payment; notice of dishonor; discharge of negotiable instruments. Drafts (bills of exchange), treated under the following heads: form and interpretation; acceptance; presentation for acceptance; protest; acceptance for honor; payment for honor; bills in a set. Promissory notes, bonds, checks and certificates of deposit treated under the following heads: form and interpretation; general provisions.

(b) Negotiable instruments payable in securities. There will be considered: warehouse receipts, bills of lading and certificates of stock, the issue of, rights and obligations under, negotiation and transfer of.

(c) Non-negotiable credit contracts. Book accounts, guaranty, and suretyship. W., 7:30—9:30.

[3. *Law of Partnership and of Business Corporations.*] The first half of the term will be given to the law of partnership, and the second half to the law of business corporations. The outline of the course is as follows:

(a) Partnership; what constitutes a partnership; classification and definition of partnership; contract of partnership; firm as entity; firm name and good will; capital of firm; partnership property; rights and liabilities of partners among themselves; rights and liabilities of

partners as to third persons; actions; dissolution; joint stock companies; limited partnership.

(b) Business corporations; definitions and legal status; formation and organization; charter, code of regulations, and by-laws; directors and officers; capital stock and bonds; stockholders; legal aspect of corporate accounts; dissolution; consolidation; reorganization.

Omitted in 1913-14.

FINANCE

*1. *Banking.*—The functions and methods of modern banks. There will be included a description of the organization and various departments of banks; national and state banks; savings banks and trust companies; discounts and deposits; the various forms of bank paper, drafts, certificates of deposit, letters of credit, and others; and foreign exchange. The leading banking systems will be compared and the problems of modern banking will be considered. M., 7:30—9:30.

2. *Investments.*—A study of the fundamental principles underlying the correct investment of funds: distribution of risk and selection in accordance with requirements, involving a consideration of safety of principal and interest; convertibility; stability of market price; regularity of income; prospect of appreciation in value; convenience and freedom from care, etc.

The various kinds of investments will be described and their distinguishing characteristics compared: bonds, municipal, railroad, public service, corporation, irrigation, timber, and others; stocks, railroad, large and small corporation; listed and unlisted securities; real estate mortgages and real estate; savings bank deposits; and life insurance. Railroad and corporation reports will be analyzed from the investor's standpoint.

The course will include also consideration of the functions of the dealers in investment securities; the underwriting houses and the stock brokers; the stock market, the mechanism of the stock exchange, speculation; the money market; and panics and crises in their relation to investments. Th., 7:30—9:30.

[3. *Corporation Finance.*] Methods of financing a corporation; forms of securities employed; their issue and sale; watered stock; amortization; the relation of shareholders, creditors, and the general public to corporation finance; the nature and purpose of state regulation.

Omitted in 1913-14.

INSURANCE

During the academic year 1913-14, special lectures on insurance will be given as follows:

- History of Life Insurance
- Principles and Theory of Life Insurance
- Economic Value of Life Insurance
- Calculation of the Premium
- Life Insurance as a Protection and Investment
- Organization and Administration
- Medical Selection
- Legal Phases of Life Insurance
- Conservation as Applied to Life Insurance
- The Field and the Agent

GERMAN, FRENCH, SPANISH

Facilities will be provided for those desiring to secure a commercial knowledge of German, French, or Spanish.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES 1913-1914

GRADUATE SCHOOL

The D. A. R. Fellowship in American History for 1913-14 was awarded to Margaret Beach Plimpton.

The Hanna Fellowship in Physics for 1913-14 was awarded to Edward Joseph Lorenz.

The Armstrong-Hunter Scholarship for 1913-14 was awarded to Helen Abigail Stanley.

A scholarship in the Law School for 1913-14 was awarded to James Willett Pottenger.

University scholarships for 1913-14 were awarded to the following students in the Graduate School:

William H. Dresch (Philosophy)

Freda Gleason (Latin)

Aubrey Highton (Physics)

Elizabeth Hyndman (Education)

Ruth Hyndman (Education)

Leonora Neuffer (Chemistry)

Mary L. Nute (Botany)

M. Cannon Sneed (Chemistry)

McMICKEN COLLEGE OF LIBERAL ARTS

PHI BETA KAPPA

The following students were elected to membership in the Phi Beta Kappa Honorary Fraternity:

Helen Stanley

Katherine Goodman

Artie Hartshorn

Bertha Baehr

Leonora Neuffer

Grace Naomi Matthews

Raymond Werner

Edith Kirschner

Pauline Haffner

Marius Rasinsky

Sidney Tedesche

Grace Lillian Ruggles

Mary Louise Nute

Herbert Shaffer

SCHOLARSHIPS

The Comegys Scholarship of fifty dollars was awarded to Walter Alan McIntire.

The McMicken Honorary Scholarships were awarded to the following Seniors:

Madeline Keiser

Simon Cohen

Estelle Hunt

Grace Jones

Edna O'Brien

Louis Mischkind

The twelve Thoms Honorary Scholarships were awarded to the following six Juniors:

Helen Kinsey	Miriam Urbansky
Frederick Franz	Jessie Getzendanner
Norma Pahren	Ethel Winston

And to the following six Sophomores:

Mary Mudge	Dorothy Anderson
Ethel Goldsmith	Lucile Saurer
Thomas Caie	Naomi Rasinsky

The Julius Fleischmann Scholarships in the University, offered for the year 1913-14, to the members of the graduating classes in the accredited schools of the University outside of Cincinnati, were awarded as follows:

Dorothy Breuer, 2140 Williams Ave., Norwood, O.
 Harriette Case, 113 E. Eighth St., Covington, Ky.
 Ralph A. Carmichael, Loveland, O.
 Elizabeth May Clark, Ohio Ave., Ft. Thomas, Ky.
 Jessie Ines Cosbey, Rossmoyne, O.
 Karl Hetsch, 626 York St., Newport, Ky.
 Katherine Hickok, 47 W. Fourth St., Covington, Ky.
 William Koehler, 1202 Central Ave., Newport, Ky.
 Esther Ranz, Blue Ash, O.
 Clara Belle Riddle, Hamilton, O.
 Mary Agnes Straub, 325 Retreat St., Bellevue, Ky.
 Marcus Taylor, 1600 Scott St., Covington, Ky.
 Marguerite Tierney, 233 Burns Ave., Wyoming, O.
 Louise Warren, 630 Third St., Newport, Ky.

The Optimist Club Scholarships, offered for the year 1913-14, were awarded to the following students in the University:

Oscar See, Blue Ash, O.
 Harold Frederic Richards, Dayton, Ky.

The Union Bethel Scholarships in Social Science, offered for the year 1913-14, to four advanced students in the Department of Social Science, were awarded as follows:

Chauncey H. Hand	Neil Wright
Earl Wagner	Clinton Wunder

PRIZES

The first Jones Prize of forty dollars for the best English oration was awarded to Marius Rasinsky.

The second Jones Prize of twenty dollars for the second best English oration was awarded to Sibyl Marjorie Heck.

The Henry Hochstetter Prize in Chemistry, of the value of forty dollars, for the best graduating thesis in Chemistry, was awarded to Taylor W. Anstead.

The Robert Patterson McKibbin Memorial Prize, a gold medal of the value of twenty-five dollars, was awarded to Robert Heuck.

COLLEGE OF MEDICINE

(OHIO-MIAMI MEDICAL COLLEGE)

The successful competitors in 1912-13 for places as resident physicians in hospitals were as follows:

CINCINNATI HOSPITAL

Charles E. Kiely	Jacob C. Hutzelman
Laurence A. Petty	William L. Shannon
Gilbert F. Thompson	Edward Kuck
Ellis R. Bader	Robert P. Williams
James S. Williams	Ray Vaughen
Edward Kennedy	Clarence L. Hans

CHRIST HOSPITAL

Arthur E. Koch

GOOD SAMARITAN HOSPITAL

Harry W. Fitzpatrick	Osa Hoerner
Harry J. Hammond	William J. Reuter

GOVERNMENT HOSPITAL, NATIONAL MILITARY HOME
Dayton, Ohio

Webster F. Keller

JEWISH HOSPITAL

Howard R. Heckert	Thomas W. Mahoney
Harry M. Brown	Verner T. Scott

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL
New York City

Joseph L. DeCourcy

ST. ELIZABETH'S HOSPITAL

Covington, Ky.

Charles E. Neal

HOLDERS OF FELLOWSHIPS SINCE 1900

FELLOWSHIPS BY COURTESY:

Eliab Washburn Coy.....	1906-07
Frederick Alwin King.....	1906-07
Gordon Woods Thayer.....	1908-09
Nathan Tovio Isaacs.....	1910-11
Elliott Smith.....	1910-11

D. A. R. FELLOWSHIP IN AMERICAN HISTORY:

George Washington Johnson.....	1900-01
Mabel Sara Carpenter.....	1901-02
Alice McGuffey Morrill.....	1902-03, 1903-04
Isaac J. Cox.....	1904-05
Frank P. Goodwin.....	1905-06
Helen L. Stein.....	1906-07
Marie Paula Dickoré.....	1907-08
Henrietta Marie Mackzum.....	1909-10
Lesley Henshaw.....	1910-11
Elizabeth Thorndyke.....	1911-12
Reginald C. McGrane.....	1912-13
Margaret Beach Plimpton.....	1913-14

ALLIANCE FRANÇAISE SCHOLARSHIP IN FRENCH:

Alice Wilson.....	1905-06
Louis Selbert.....	1908-09
Carrie May Perin.....	1909-10

COLONIAL DAMES FELLOWSHIP IN OHIO VALLEY HISTORY:

Theodore T. Belote.....	1906-07
Earl Francis Colborn.....	1907-08
Edgar Chew Sweeney.....	1908-09
Paul Philip Rover.....	1909-10
H. Dora Stecker.....	1910-11, 1911-12

HANNA FELLOWSHIP IN PHYSICS:

Robert E. Clyde Gowdy.....	1906-07, 1907-08, 1908-09
Edward G. Rieman.....	1909-10, 1910-11
Sebastian J. Mauchly.....	1911-12, 1912-13
Edward Joseph Lorenz.....	1913-14

TEACHING FELLOWSHIP IN CHEMISTRY:

Harry Shipley Fry.....	1901-02
Geoffrey Arthur Gray.....	1902-03
Ralph Ballard Dimmick.....	1906-07

TEACHING FELLOWSHIP IN ECONOMICS:

Eugene Ewald Agger.....1901-02

TEACHING FELLOWSHIP IN BIOLOGY:

William O. Pauli.....1902-03

Mabel Spellmire.....1903-04

Joseph Hughes Shaw.....1904-05

Stanley Rossiter Benedict.....1905-06

Leon D. Peaslee.....1907-08, 1908-09

Louis W. Sauer.....1907-08, 1908-09

Vernon Lantis.....1909-10, 1910-11

TEACHING FELLOWSHIP IN PHILOSOPHY:

Abraham Cronbach.....1902-03

TEACHING FELLOWSHIP IN ENGLISH:

Arthur James Kinsella.....1903-04

Elizabeth Merrill.....1904-05

TEACHING FELLOWSHIP IN MODERN LANGUAGES:

Elsie Metz.....1903-04

TEACHING FELLOWSHIP IN PHYSICS:

Harry L. Wieman and Earl Farnau.....1903-04

Herbert M. Hughes.....1904-05

FELLOWSHIP IN PHYSICS:

William Bell Cartmel.....1905-06

DEGREES CONFERRED IN 1913

THE GRADUATE SCHOOL

Doctor of Philosophy

HECKER, CHARLES H.....	2881 Williams Ave.
MAUCHLY, SEBASTIAN JACOB.....	2706 Eden Ave.

Master of Arts

BENTLEY, LOUISE ESTELLE.....	3471 Cornell Pl.
BERGMAN, ERICH FRANK.....	20 E. Rochelle St.
BRAAM, MAXIMILIAN.....	5805 Glenview Ave., College Hill
HOBAN, MAY BELLE.....	1363 Myrtle Ave.
JAMES, ARTHUR.....	Lebanon, O.
LEIST, AMELIA.....	4012 Elsmere Ave., Norwood, O.
LEVINGER, LEE JOSEPH.....	207 Hearne Ave.
MCGRANE, REGINALD CHARLES.....	422 Hopkins St.
MCMILLAN, OLIVE GERTRUDE.....	2840 Observatory Ave.
MARCH, CORA.....	Wyoming, O.
METZ, ELSIE LAURETTA.....	2648 Melrose Ave.
OSKAMP, PEARL C.....	West Loveland Heights, O.
SANDERS, ETHEL.....	2918 Montana Ave.
SOUTHGATE, VIRGINIA.....	2221 Nelson Ave.
VAN PELT, CHARLOTTE RUTH.....	6115 Navarre Pl., Madisonville

McMICKEN COLLEGE OF LIBERAL ARTS

Bachelor of Arts

AHLERS, HELEN GERTRUDE.....	1301 California Ave., Bond Hill
BAEHR, BERTHA MARIE.....	3868 Oakley Ave.
BAUSCH, LILLIE OLIVE.....	1754 Brewster Ave.
BECKER, MARIE.....	3831 Cass Ave.
BRIDGE, JOSIAH.....	1325 Yarmouth Ave.
BUEHLER, EDWIN CHARLES.....	932 Ludlow Ave.
BURNS, MARGHERITA ORMSBY.....	1804 Laurel Ave., College Hill
CALDWELL, DOROTHY.....	410 W. Eighth St.
CALIMAN, WILLIAM MOSES.....	2618 Kemper Lane
CANTOR, ETHEL.....	18 Landon Court
CARTER, JENNIE LILLIAS.....	North Bend Rd.
CLOUDE, HELEN LOUISE.....	2210 Kemper Lane
CRISSEY, LENA MAUDE.....	1029 Wesley Ave.
DALY, MARGARET MARY.....	583 Grand Ave., Price Hill
DAVIDSON, HUGH MOYER.....	Williamsburg, O.
DAVIS, ADOLPH MORRIS.....	345 Forest Ave.
DAVIS, JOHN EVAN.....	530 Prospect Pl.
DIECKMAN, ELSA PAULINE.....	2243 Spring Grove Ave.
EDWARDS, IRENE.....	2905 Woodburn Ave.
EMBSHOFF, HILDA.....	802 Delhi Ave.
FETTWEIS, MARTHA ANNA.....	107 E. University Ave.
FISHER, MARION ELEANOR.....	404 Crestline Ave., Price Hill
FITZPATRICK, KATHLEEN MARY.....	1047 Considine Ave.
FOX, MARY AGNES.....	4 St. Leger Flats
FRANK, LUCIE EUGENIA.....	3000 Reading Rd.
FRIASON, ETHEL CAMILLE.....	1021 Foraker Ave.

GEHR, MARY ANNA.....	540 Grand Ave.
GLEASON, FREDA LOUISE.....	2005 Delaware Ave., Norwood, O.
GOODMAN, KATHARINE HERBERT.....	1551 Garrard St., Covington, Ky.
GRUESSER, EMILY CAROLINE.....	3565 Trimble Ave.
HAFFNER, PAULINE JULIANE.....	541 Howell Ave.
HALBEN, ELEANOR VON DER.....	3145 Bishop St.
HALPRIN, JULIUS.....	Newark, N. J.
HANCE, ROBERT THEODORE.....	723 Freeman Ave.
HARTLIEB, RUTH COLUMBIA.....	2465 W. McMicken Ave.
HARTSHORN, ARTIE LAURENCE.....	6115 Liberty Ave., Pleasant Ridge
HECK, SIBYL MARJORIE.....	3757 Darwin Ave.
HEIZER, MARY ELIZABETH.....	2016 Hudson Ave., Norwood, O.
HEUCK, ROBERT.....	3336 Jefferson Ave.
KEIM, EDITH ROSE.....	3526 Bevis Ave., Evanston
KELLY, NINA.....	1320 Burdette Ave.
KENDALL, DOROTHY CARTER.....	4 St. James Pl.
KIRSCHNER, EDITH EMMA.....	5145 Main Ave., Norwood, O.
KLEINSCHMIDT, EMMA.....	Rapid Run Pike
KOCH, ADELAIDE AUGUSTINE.....	3217 Gilbert Ave.
KREBS, GERTRUDE C.....	1612 Hoffner St.
LAVELL, ROBERT JAMES.....	3005 Junietta Ave.
LINDENLAUB, ELLA.....	345 Thrall Ave.
LIVINGSTON, SADIE ETTA HILL.....	1609 Baymiller St.
LONDON, HENRIETTE.....	3579 Bogart Ave.
LONG, CHARLOTTE MAE.....	3003 Hackberry St.
LORENZ, ELEANOR MARY.....	North Bend Rd.
MAGNIN, EDGAR FOGEL.....	San Francisco, Cal., and 857 Rockdale Ave.
MARCKWORTH, OLIVIA MARIE.....	Ramona Ave., Westwood
MASON, MAME CHARLOTTE.....	2231 St. James Ave.
MATTHEWS, GRACE NAOMI.....	3531 Zumstein Ave.
MAYERBERG, SAMUEL SPIER.....	The Wilhelm
MEADOR, MILDRED.....	814 Considine Ave.
MEININGER, FREDA BERNARDINA.....	1638 Pulte St.
MEYER, JACOB ISA.....	Oakland, Cal.
MOORHAUS, OLGA FREDDA.....	1900 Clarion Ave.
MORROW, ISABELLA GREER.....	947 Chateau Ave.
NEUFFER, LEONORA.....	Lockland, O.
NUTE, MARY LOUISE.....	5 Marguerite Flats, Norwood, O.
PATTERSON, LULU ANNETTE.....	1246 Edwards Rd.
PEALE, CORINNE WUNDER.....	1820 Freeman Ave.
PLIMPTON, MARGARET BEACH.....	731 Grand Ave., Price Hill
POOR, ELIZABETH BEATRICE.....	1787 Humboldt Ave.
POTTENGER, JAMES WILLET.....	1641 Laurel Ave.
POTTENGER, WILLIAM TOWNLEY.....	1641 Laurel Ave.
RANSHAW, VIRGINIA TRAVIS.....	1030 Madison Ave., Covington, Ky.
RASINSKY, MARIUS.....	Maple and Harvey Aves.
RECHTIN, LORETTA.....	3104 Gilbert Ave.
RICKEL, GILBERT JOHN.....	2185 Harrison Ave.
RODGERS, HAZEL MARIE.....	479 Considine Ave.
ROUSE, GLADYS LOUESA.....	2219 Ohio Ave.
RUGGLES, LILLIAN GRACE.....	2132 St. James Ave.
SHELL, ROBERT MERCER.....	132 W. Ninth St.
SCHNEIDER, ERMA LILLIAN.....	Robinson Rd., Pleasant Ridge, O.
SEIWER, JOSEPH JOHN.....	4000 Spring Grove Ave.
SHAFFER, HERBERT.....	312 Straight St.
SIMON, MARY EMMA.....	457 Considine Ave.
STANLEY, HELEN ABIGAIL.....	3576 Zumstein Ave.

STEINKAMP, EDYTHE HENRIETTA.....	1627 Waverly Ave.
STEWART, FLORENCE MARIE.....	1852 Columbia Ave.
TEDESCHKE, SIDNEY.....	3433 Carthage Ave.
THOMAS, MARY LOUISE.....	2241 Cameron Ave., Norwood, O.
TRACY, KATHLEEN EUGENIA.....	532 Howell Ave.
TRISLER, MABEL ELIZABETH.....	Madisonville, O.
WACHS, STANLEY EUGENE.....	235 Hosea Ave.
WAIT, MARY ETHEL.....	4011 Columbia Ave.
WALKER, JANE ELIZABETH.....	3712 Sachus Ave.
WARTCKI, SARAH MILLIE.....	815 Oak St.
WEISS, HIRAM BERTRAM.....	3314 Perkins Ave.
WERNER, RAYMOND EDMUND.....	1053 Wesley Ave.
WIEDEMER, LOTTIE BECHT.....	4821 Linden St., Norwood, O.
WILLIAMS, SUSIE PEARL.....	3973 W. Belle Pl., St. Louis, Mo.
ZELLER, ELSIE MAY.....	3112 W. Eighth St., Price Hill

THE COLLEGE FOR TEACHERS

Bachelor of Arts in Education

LINDSEY, HELEN M.....	1352 Grace Ave., Hyde Park
STEWART, MARJORIE.....	18 The Roslyn

Teacher's Diploma

IN ELEMENTARY EDUCATION

AHLERS, HELEN GERTRUDE.....	1301 California Ave.
BAUSCH, LILLIE OLIVE.....	1754 Brewster Ave.
BECKER, MARIE.....	3831 Cass Ave.
BERNSTEIN, ARCHIBALD.....	2863 Stanton Ave.
BURNS, MARGHERITA ORMSBY.....	1804 Laurel Ave., College Hill
CALDWELL, DOROTHY.....	410 W. Eighth St.
CALIMAN, WILLIAM MOSES.....	2618 Kemper Lane
CANTER, ETHEL.....	18 Landon Court
CLOUDE, HELEN LOUISE.....	2210 Kemper Lane
DALY, MARGARET MARY.....	583 Grand Ave., Price Hill
DIECKMAN, ELSA PAULINE.....	2243 Spring Grove Ave.
EDWARDS, IRENE.....	2905 Woodburn Ave.
EMBSHOFF, HILDA.....	802 Delhi Ave.
FETTWEIS, MARTHA ANNA.....	107 E. University Ave.
FISHER, MARION ELEANOR.....	404 Crestline Ave., Price Hill
FITZPATRICK, KATHLEEN MARY.....	1047 Considine Ave.
FRIASON, ETHEL CAMILLE.....	1021 Foraker Ave.
GEHR, MARY ANNA.....	540 Grand Ave.
GRUESSER, EMILY CAROLINE.....	3565 Trimble Ave.
HAFFNER, PAULINE JULIANE.....	541 Howell Ave.
HALBEN, ELEANOR VON DER.....	3145 Bishop St.
HARTLIEB, RUTH COLUMBIA.....	2465 W. McMicken Ave.
HECK, SIBYL MARJORIE.....	3757 Darwin Ave.
HEIZER, MARY ELIZABETH.....	2016 Hudson Ave., Norwood, O.
KEIM, EDITH ROSE.....	3526 Bevis Ave., Evanston
KENDALL, DOROTHY CARTER.....	4 St. James Pl.
KIRSCHNER, EDITH EMMA.....	5145 Main Ave., Norwood, O.
KOCH, ADELAIDE AUGUSTINE.....	3217 Gilbert Ave.
KREBS, GERTRUDE C.....	1612 Hoffner St.
LAVELL, ROBERT JAMES.....	3005 Junietta Ave., Westwood
LINDENLAUB, ELLA.....	345 Thrall Ave.
LIVINGSTON, SADIE ETTA HILL.....	1609 Baymiller St.

LONDON, HENRIETTE.....	3579 Bogart Ave.
LONG, CHARLOTTE MAE.....	3005 Hackberry St.
LORENZ, ELEANOR MARY.....	E. North Bend Rd., College Hill
MATTHEWS, GRACE NAOMI.....	3531 Zumstein Ave., Hyde Park
MEADOR, MILDRED.....	814 Considine Ave., Price Hill
MEININGER, FREDA BERNARDINA.....	1658 Pulte St.
MORROW, ISABELLA GREER.....	947 Chateau Ave., Price Hill
PATTERSON, LULU ANNETTE.....	1346 Edwards Rd.
PEALE, CORINNE WUNDER.....	1820 Freeman Ave.
POOR, ELIZABETH BEATRICE.....	1787 Humboldt Ave.
RATTERMANN, KATHERINE.....	510 York St.
RECHTIN, LORETTA.....	3104 Gilbert Ave.
RODGERS, HAZEL MARIE.....	479 Considine Ave., Price Hill
RUGGLES, LILLIAN GRACE.....	2132 St. James Ave.
SCHNEIDER, ERNA LILLIAN.....	Robinson Rd., Pleasant Ridge
SEIWERT, JOSEPH JOHN.....	4000 Spring Grove Ave.
STEINKAMP, EDYTHE HENRIETTA.....	1627 Waverly Ave.
TRACY, KATHLEEN EUGENIA.....	532 Howell Ave.
TRISLER, MABEL ELIZABETH.....	Cincinnati, Station M, R. F. D. 10, Madisonville
WAIT, MARY ETHEL.....	4011 Columbia Ave.
WALKER, JANE ELIZABETH.....	3712 Sachem Ave.
WARTCKI, SARAH MILLIE.....	815 Oak St.
WILLIAMS, SUSIE PEARL.....	3973 W. Belle Pl., St. Louis, Mo.
ZELLER, ELSIE MAY.....	3112 W. Eighth St., Price Hill

IN ART

CHACE, MAY LYDIA.....	2610 Stratford Ave.
HILDWEIN, EDNA FLORA.....	539 E. Liberty St.
HOTTENDORF, IDA.....	810 Richmond St.
WHARTON, EDITH A.....	325 Fourth Ave., Dayton, Ky.

COLLEGE OF ENGINEERING

Bachelor of Chemical Engineering

BATSNER, ARTHUR MILLS.....	238 Albany Ave.
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Bachelor of Civil Engineering

BARR, INGLE WILLIAMS.....	1231 Grace Ave., Hyde Park
BIEDINGER, JOHN ROBERT.....	548 Ridgeway Ave.
BUERGER, FREDERICK CLARENCE.....	105 W. Charlton St.
GOETTLE, RICHARD JOSEPH.....	622 Orient Ave., Winton Pl.
WITTE, RUSSELL BENNETT.....	2627 Moorman Ave.

Bachelor of Electrical Engineering

PERRY, STANLEY.....	2319 Stratford Ave.
---------------------	---------------------

Bachelor of Mechanical Engineering

JONES, RUFUS BELL.....	4349 Columbia Ave., Madisonville
------------------------	----------------------------------

Chemical Engineer

ANSTEAD, TAYLOR WILLIAM.....	908 Columbia St., Newport, Ky.
------------------------------	--------------------------------

Civil Engineer

LEUE, CONRAD F.....	Cincinnati, O.
---------------------	----------------

Electrical Engineer

BRUEGEMAN, JOHN GEORGE.....	111 W. University Ave.
DAVIS, ADOLPH H.....	837 Oak St.
NOCKA, KARL WILLIAM.....	Batesville, Ind.

Mechanical Engineer

BODENSTEIN, WILLIAM EDWARD.....	827 Ann St., Newport, Ky.
BREITENBACH, HERMAN JOHN.....	28 Mulberry St.
COLBURN, BETHUEL VINCENT.....	Jamestown, N. Y.
FLOHR, RALPH CHARLES.....	253 Van Voast Ave., Bellevue, Ky.
GETZ, CHARLES HOWARD.....	Dayton, O.
HAINES, PHILIP GOBLE.....	Portland, Ore.
HAUCK, RICHARD JOHN.....	231 Fosdick St.
LYTLE, CHARLES WALTER.....	Wolcott, N. Y.
PEASLEE, WILLETTS.....	2340 Ohio Ave.
PEETS, WILBUR J.....	Macomb, Ill.
ROEHM, ERWIN GRANT.....	4268 Colerain Ave.
SCHNEIDER, JOSEPH HERMAN.....	Henderson, Ky.
TANGEMAN, WALTER W.....	2706 Eden Ave.
ZUGELTER, GEORGE EMIL.....	207 Elliott Ave., Arlington Heights, O.

COLLEGE OF MEDICINE**Doctor of Medicine**

BADER, ELLIS ROBERT.....	Hamilton, O.
BROWN, HENRY MOLLINEAUX.....	New Vienna, O.
DECOURCY, JOSEPH LUKE.....	827 W. Eighth St.
FITZPATRICK, HARRY WATTERSON.....	Somerset, Ky.
HAMMOND, HARRY JOSEPH.....	23 Walden Ave., Buffalo, N. Y.
HANS, CLARENCE LOUIS.....	2000 Western Ave.
HECKERT, HOWARD RAY.....	Cairo, W. Va.
HOERNER, OSA.....	Lewisburg, O.
HUTZELMAN, JACOB CASPER.....	Hamiiton, O.
KELLER, WEBSTER FELS.....	3102 Jefferson Ave.
KENNEDY, EDWARD.....	1821 Kinney Ave.
KIELY, CHARLES EDWARD.....	420 Broadway
KOCH, ARTHUR E.....	810 York St., Newport, Ky.
KUCK, EDWARD.....	1727 Highland Ave.
MAHONEY, THOMAS WILLIAM.....	235 E. North St., Springfield, O.
NEAL, CHARLES E.....	Covington, Ky.
PETTY, LAURENCE ARTHUR.....	Charleston, W. Va.
REUTER, WILLIAM JAMES.....	North Bend Rd., Mt. Airy, O.
SCOTT, VERNER TRENARY.....	Manchester, O.
SHANNON, WILLIAM LAWRENCE.....	925 Saratoga St., Newport, Ky.
SMITH, WARDE BYRON.....	Austin, O.
THOMPSON, GILBERT FRANK.....	603 Lexington Ave., Newport, Ky.
VANLUE, JOYCE W.....	Gettysburg, O.
VAUGHEN, RAY.....	West Union, O.
WILLIAMS, JAMES STANLEY.....	Mercerville, O.
WILLIAMS, ROBERT PARVIN.....	Harrisburg, Pa.

SUMMARY OF GRADUATES, JUNE, 1913

Graduate School.....	17
McMicken College of Liberal Arts.....	98
College for Teachers.....	62
College of Engineering.....	27
College of Medicine.....	26
Total	230
Twice Counted (taking two degrees).....	54
Net total.....	176

REGISTRATION OF STUDENTS, 1913-14

THE GRADUATE SCHOOL

The D. A. R. Fellow in American History

PLIMPTON, MARGARET BEACH (*History*).....731 Grand Ave., Price Hill
A. B., University of Cincinnati, 1913

The Hanna Fellow in Physics

LORENZ, EDWARD JOSEPH (*Physics*).....633 W. McMicken Ave.
A. B., University of Cincinnati, 1911; A. M., Ibid, 1912

University Scholars

DRESCH, WILLIAM HAUCK (*Philosophy*).....Lynchburg, O.
A. B., Ohio Northern University, 1909; B. D., Garrett Bible Institute, 1911

GLEASON, FRED A. (*Romance Languages*).....2005 Delaware Ave., Norwood, O.
A. B., University of Cincinnati, 1913

HIGHTON, AUBREY H. (*Physics*).....604 Greenup St., Covington, Ky.
A. B., University of Cincinnati, 1912

HYNDMAN, ELIZABETH (*Education*).....324 Mills Ave., Wyoming, O.
A. B., Leland Stanford Junior University, 1913

HYNDMAN, RUTH (*Education*).....324 Mills Ave., Wyoming, O.
A. B., University of Illinois, 1908

NEUFFER, LEONORA (*Chemistry*).....Lockland, O.
A. B., University of Cincinnati, 1913

NUTE, MARY LOUISE (*Biology*).....The Marguerite, Norwood, O.
A. B., University of Cincinnati, 1913

Graduate Students

ALBRAY, SARAH ABBIE (*History*).....2629 Alms Pl.
A. B., University of Cincinnati, 1899

ALLEN, HELEN JEANETTE (*Education*).....2404 Auburn Ave.
A. B., Vassar College, 1913

ALLGAIER, JENNIE S. (*English*).....2921 Werk Rd., Westwood
A. B., University of Cincinnati, 1901; A. M., Ibid, 1904

ANDREW, AGNES KNOX (*Education*).....3600 Shaw Ave.
A. B., University of Cincinnati, 1903

ANDRIESSEN, EMMA (*German*).....116 Parker St.
A. B., University of Cincinnati, 1908; A. M., Ibid, 1912

ARUNDEL, MARY E. (*Geology*).....332 Ellen St.
A. B., University of Cincinnati, 1912

AULICK, EDWIN C. (*Latin*).....18 E. Seventh St.
A. B., University of Kentucky, 1894

BAKER, ESTHER MARY (*Romance Languages*).....3510 Zinsle Ave., Kennedy
A. B., University of Cincinnati, 1912

BANKARD, MRS. FLORENCE C. (*Philosophy*).....The Clermont
A. B., Goucher College, 1903; A. M., University of Cincinnati, 1912

BAUMANN, GEORGE (*English*).....2549 Fairview Ave.
A. B., University of Chicago, 1910

- BECKER, MARIE (*Mathematics*).....3831 Cass Ave.
A. B., University of Cincinnati, 1913
- BERGMAN, ERICH F. (*English*).....20 E. Rochelle St.
A. B., University of Cincinnati, 1908; A. M., Ibid, 1913
- BERNSTEIN, ARCHIBALD (*Romance Languages*).....2863 Stanton Ave.
A. B., University of Cincinnati, 1910; A. M., Ibid, 1912
- BERNSTEIN, DORIS (*English*).....2863 Stanton Ave.
A. B., University of Cincinnati, 1912
- BIGLER, ELBERTA (*English*).....217 Bosley St.
B. L., University of Cincinnati, 1898
- BINGMAN, CARL WILSON (*Education*).....914 Hawthorne St.
B. Ped., Ohio University, 1911
- BLOCH, EMILY MARTHA (*Greek*).....70 Albany Pl.
A. B., University of Cincinnati, 1887
- BOGLE, ELIZABETH (*Latin*).....2313 Wheeler St.
A. B., Western College, 1903
- BRAAM, MAXIMILIAN (*German*).....5805 Glenview Ave., College Hill
A. B., University of Cincinnati, 1906; A. M., Ibid, 1913
- BRAUN, EMMA LUCY (*Biology*).....2702 May St.
A. B., University of Cincinnati, 1910; A. M., Ibid, 1913
- BRIDGE, JOSIAH (*Geology*).....1325 Yarmouth Ave.
A. B., University of Cincinnati, 1913
- BROWN, JANET BEGGS (*Education*).....183 Grand Ave., Ft. Thomas, Ky.
A. B., University of Cincinnati, 1910
- BURNS, CAROLYN ORMSBY (*Mathematics*).....College Hill
A. B., University of Cincinnati, 1907; A. M., Ibid, 1908
- BURNS, HELEN ORMSBY (*Physics*).....1804 Larch Ave., College Hill
A. B., University of Cincinnati, 1910
- BUTTERFIELD, EMMETT EARLE (*Mathematics*).....Hamilton, O.
Ph. B., Mt. Union-Scio, 1911
- CANTOR, ETHEL (*English*).....18 Landon Court
A. B., University of Cincinnati, 1913
- COCKERILL, M. ALMEDA (*English*)...20 N. Tenth St., Washington Court House
B. L., Ohio Wesleyan University, 1907
- CONANT, ROGER LEWIS (*Economics*).....5709 Arnsby Pl.
A. B., Columbia University, 1895; A. M., University of Cincinnati, 1912
- CONNER, MARJORIE MILLER (*History*).....711 Woodbine Ave., Hartwell
A. B., University of Cincinnati, 1911
- CRAVENS, FRANCES O. (*English*).....The Roanoke
A. B., University of Cincinnati, 1908
- CROUCH, STEPHEN D. (*Philosophy*).....2514 Hackberry St.
A. B., Trinity College, Texas, 1911
- DAVIDSON, CHARLES LOWELL (*Education*).....3 Leroy Court
A. B., Yale University, 1907
- DEUTSCH, EDITH R. (*German*).....3600 Wilson Ave.
A. B., University of Cincinnati, 1912
- DUBOIS, CLOVIS PRINGLE (*Philosophy*).....Reeves Pl.
A. B., Lebanon University, 1902; Lane Seminary, 1905
- EGARTNER, ZACHAEUS THOMAS (*Philosophy*).....1914 Harrison Ave.
New College, Edinburgh
- ELLIOTT, CLIFFORD W. (*History*).....20 N. Tenth St., Hamilton, O.
A. B., Miami University, 1912
- EMBSHOFF, HILDA (*Mathematics*).....802 Delhi Ave.
A. B., University of Cincinnati, 1913
- ESSLINGER, EDWIN W. (*Chemistry*).....2831 Wheeler St.
B. S., University of Michigan, 1907; A. M., Johns Hopkins University, 1912

- EVANS, WILLIAM ANDERS (*Education*).....Newport, Ky.
A. B., *Denison University, 1906*
- FICKEN, RICHARD OSCAR (*German*).....Moore's Hill, Ind.
B. S., *Moore's Hill, 1906*
- FILES, ELLERY K. (*Chemistry*).....3411 Clifton Ave.
B. S., *Nebraska Wesleyan University, 1908; A. M., University of Nebraska, 1910*
- FINK, CLARA (*Biology*).....Lockland, O.
A. B., *Miami University, 1910*
- FOSTER, JR., JOSEPH BUCK (*Philosophy*).....Mt. Washington
A. B., *Delaware College, 1906*
- FOSTER, SAMUEL ERNEST (*English*).....Lane Seminary
A. B., *Cedarville College, 1913*
- FRANK, LUCIE (*English*).....3000 Reading Rd.
A. B., *University of Cincinnati, 1913*
- FURNESS, MARY BAKER (*English*).....The Barclay
A. B., *University of Cincinnati, 1912*
- GIBSON, MARTHA JANE (*Greek*).....Pleasant Ridge
A. B., *University of Cincinnati, 1913*
- GILBERT, MARY ALICE (*English*).....4408 Erie Ave.
A. B., *Ohio Wesleyan University, 1911*
- GOLDSMITH, ADELE (*English*).....3148 Harvey Ave.
A. B., *University of Cincinnati, 1906*
- GOSLING, THOMAS WARRINGTON (*Education*).....559 Evanswood Pl.
A. B., *Yale University, 1894; A. M., Ibid, 1904; Ph. D., University of Cincinnati, 1911*
- HALLIDAY, CLIFFORD (MISS) (*German*).....College Hill
A. B., *Ohio State University, 1913*
- HANCE, ROBERT THEODORE (*Biology*).....723 Freeman Ave.
A. B., *University of Cincinnati, 1913*
- HAWLEY, MRS. ELEANOR C. (*English*).....2 Hedgerow Lane
B. S., *St. Lawrence University, 1902*
- HECK, JEAN OLIVE (*English*).....3757 Darwin Ave.
A. B., *University of Cincinnati, 1907; A. M., Ibid, 1908*
- HECK, SIBYL M. (*English*).....3757 Darwin Ave.
A. B., *University of Cincinnati, 1913*
- HECKLER, RUBY MAY K. (*Education*).....219 Bodman Ave.
A. B., *Leland Stanford Junior University, 1913*
- HEISEL, EMMA ELIZABETH (*Education*).....308 Shillito St.
A. B., *University of Cincinnati, 1901*
- HELLER, JAMES GUTHEIM (*Philosophy*).....315 Hearne Ave.
A. B., *Tulane University, 1912*
- HENSHAW, LESLEY (*History*).....1928 Bigelow St.
A. B., *University of Cincinnati, 1910; A. M., Ibid, 1911*
- HIRSCH, EFFIE WYLER (*English*).....4015 Beechwood Ave.
A. B., *University of Cincinnati, 1900*
- HOBAN, MAY BELLE (*English*).....1363 Myrtle Ave.
A. B., *University of Cincinnati, 1903; A. M., Ibid, 1913*
- HOECK, LOUIS GEORGE (*Philosophy*).....2822 Highland Ave.
Glasgow University and New Church Theological Seminary, Cambridge, Mass., 1894
- HOFFHEIMER, EDITH (*Social Science*).....The Madrid
A. B., *University of Cincinnati, 1910*
- HOMBURG, EMIL (*Chemistry*).....104 W. Clifton Ave.
A. B., *University of Cincinnati, 1902; A. M., Ibid, 1909*
- HOWE, CLAYTON MORGAN (*Mathematics*).....508 Riddle Rd.
A. B., *Oberlin College, 1910*

- HOWELL, SARA JEAN (*History*).....2611 Ashland Ave.
A. B., University of Cincinnati, 1900
- HUBBARD, EDGAR (*English*).....304 Broadway
A. B., Trinity College, Texas, 1913
- HUNTER, FLORENCE (*Latin*).....715 Woodbine Ave., Hartwell
B. L., Ohio Wesleyan University, 1899
- IHRIG, ROSCOE M. (*German*).....233 Hearne Ave.
Ph. B., Wooster University, 1901; Ph. M., University of Chicago, 1909
- ISAACS, RAPHAEL (*Biology*).....3552 Bogart Ave.
A. B., University of Cincinnati, 1911; A. M., Ibid, 1912
- ISAACS, SCHACHNE (*Psychology*).....3552 Bogart Ave.
A. B., University of Cincinnati, 1910; A. M., Ibid, 1912
- JAMES, ARTHUR (*Psychology*).....Lebanon, O.
A. B., Lebanon University, 1911; A. M., University of Cincinnati, 1913
- KENDALL, DOROTHY C. (*English*).....4 St. James Pl.
A. B., University of Cincinnati, 1913
- KIEL, ANNA (*German*).....2400 E. Montana Ave.
B. S., New York University, 1912
- KINDLE, JOSEPH H. (*Mathematics*).....2706 Eden Ave.
A. B., Ohio State University, 1905; A. M., Ibid, 1907
- KING, ROBERT LEE (*English*).....Lane Seminary
A. B., Arkansas Cumberland University, 1913
- KOEHLER, KATHERINE LOUISE (*English*).....2807 Bellevue Ave.
A. B., University of Cincinnati, 1907
- KOHNKY, EMMA (*English*).....Cor. Crown St. and Essex Pl.
A. B., University of Cincinnati, 1909; A. M., Ibid, 1911
- KREIMER, EDITH (*Romance Languages*).....Mooney Ave., Hyde Park
A. B., University of Cincinnati, 1909; A. M., Ibid, 1911
- KRIM, ISIDORE ABRAHAM (*Philosophy*).....369 Howell Ave.
A. B., Oskaloosa College, 1912
- KROGER, LUCILE IDA (*English*).....768 N. Crescent Ave.
A. B., Wellesley College, 1911
- LANTIS, VERNON (*Biology*).....238 McCormick Pl.
A. B., Miami University, 1909; A. M., University of Cincinnati, 1911
- LAWSON, JAMES THOMAS (*Philosophy*).....Rising Sun, Ind.
A. B., Transylvania University, 1905
- LEVI, ISABELLE J. (*Education*).....3469 Trimble Ave.
A. B., University of Cincinnati, 1909
- LIVINGSTON, SADIE (*History*).....1609 Baymiller St.
A. B., University of Cincinnati, 1913
- LOEBMAN, ELISE REIS (*English*).....524 Hickman St.
A. B., University of Cincinnati, 1909; A. M., Ibid, 1910
- LOGAN, HELEN GOODMAN (*English*).....3492 Cheviot Ave.
A. B., Wellesley College, 1913
- LONDON, HENRIETTE (*German*).....3579 Bogart Ave.
A. B., University of Cincinnati, 1913
- LORENZ, ELEANOR (*Mathematics*).....E. North Bend Rd.
A. B., University of Cincinnati, 1913
- LOTSPEICH, MRS. HELEN GIBBONS (*English*).....416 Resor Ave.
Student, University of Leipsic, 1902; A. M., University of Cincinnati, 1910
- LOTTER, FREDERICK D. (*Geology*).....2425 McMicken Ave.
A. B., University of Cincinnati, 1910
- LUDWICH, MARTIN H. (*German*).....262 Albion Pl.
A. B., Königsberg Gymnasium, 1899; A. M., University of Cincinnati, 1913
- MACMILLAN, DAVID WALLACE (*Philosophy*).....140 W. McMillan St.
A. B., University of Iowa, 1893

- MACK, EDWARD (*Philosophy*).....Lane Seminary
A. B., *Davidson College, 1886; A. M., Ibid, 1887*
- MADDEN, FANNIE (*Romance Languages*).....6121 Clason St.
A. B., *University of Cincinnati, 1907*
- MALTANER, FRANK (*Anatomy*).....Pleasant Ridge
A. B., *Leland Stanford Junior University, 1912; A. M., Ibid, 1913*
- MARCH, CORA (*History*).....Wyoming, O.
A. B., *Wooster University, 1896; A. M., University of Cincinnati, 1913*
- MAUCHLY, SEBASTIAN J. (*Physics*).....2706 Eden Ave.
A. B., *University of Cincinnati, 1911; Ph. D., Ibid, 1913*
- MAYERBERG, SAMUEL SPIER (*Social Science*).....The Wilhelm
A. B., *University of Cincinnati, 1912*
- METZGER, RUTH HARRIET (*Social Science*).....516 Hickman Ave.
A. B., *University of Cincinnati, 1911; A. M., Ibid, 1912*
- MORRIS, JAMES WESTLEY (*Political Science*).....15 E. Eighth St.
A. B., *Miami University, 1912*
- MORRIS, LUCILE (*Philosophy*).....2846 Harrison Ave.
A. B., *Wellesley College, 1913*
- MURRAY, ALMA DARST (*English*).....502 Clinton St.
A. B., *University of Cincinnati, 1909*
- NAGEL, LAURA HENRIETTE (*English*).....2932 Montana Ave.
A. B., *Wellesley College, 1913*
- NICHOLSON, ARCH H. (*English*).....Lane Seminary
A. B., *Arkansas Cumberland University, 1913*
- NIPPERT, ELEANORE C. (*German*).....The Laurel
A. B., *University of Cincinnati, 1903*
- OESPER, RALPH EDWARD (*Chemistry*).....2559 Fairview Ave.
A. B., *University of Cincinnati, 1908; A. M., Ibid, 1909*
- OSKAMP, PEARL C. (*Philosophy*).....West Loveland Heights, O.
A. B., *University of Cincinnati, 1910*
- PALMER, MRS. FLORENCE PRATHER (*English*).....33 E. McMillan St.
A. B., *Vassar College, 1908*
- PARKER, MRS. HARRIET W. L. (*Philosophy*).....2 Glen Armand St.
B. L., *Bucknell University, 1894; A. M., University of Cincinnati, 1910*
- PATTERSON, LULU ANNETTE (*Political Science*)...1346 Edwards Rd., Hyde Park
A. B., *University of Cincinnati, 1913*
- PERIN, CARRIE M. (*Romance Languages*).....4613 Central Ave., Madisonville
A. B., *University of Cincinnati, 1910*
- PHIPPS, JESSIE (*Romance Languages*).....506 Boal St.
A. B., *University of Cincinnati, 1908*
- PIERCE, ROSE P. (*Latin*).....2330 Robertson St., Norwood, O.
A. B., *Miami University, 1912*
- PORTER, CHRISTINE (*Philosophy*).....Erie and Zumstein Aves.
A. B., *University of Cincinnati, 1910*
- RAITT, ANNA HALL (*Biology*).....1875 Fairfax Ave.
A. B., *University of Cincinnati, 1911; A. M., Ibid, 1912*
- REED, SAMUEL RICHARD (*English*).....Lane Seminary
A. B., *Arkansas Cumberland University, 1913*
- RICKEL, GILBERT JOHN (*Mathematics*).....2185 Harrison Ave.
A. B., *University of Cincinnati, 1913*
- ROSIN, AMY (*Romance Languages*).....727 E. Ridgeway Ave.
A. B., *University of Cincinnati, 1904*
- ROUNDS, CHARLES RUFUS (*Education*).....6108 Epworth St., Madisonville
B. S., *Ohio University, 1913*
- RUE, ALVIN OWSLEY (*English*).....Lane Seminary
B. L., *Trinity College, Texas, 1913*

- SANDERS, ETHEL (*Mathematics*).....2918 Montana Ave.
A. B., University of Cincinnati, 1907; A. M., Ibid, 1913
- SARASOHN, ISRAEL JOSHUA (*Philosophy*).....369 Howell Ave.
A. B., Clark University, 1912
- SCHNEIDER, ERMA LILLIAN (*Philosophy*).....Pleasant Ridge
A. B., University of Cincinnati, 1913
- SCHUTZKWER, MARIE (*German*).....3434 Lyleburn Pl.
A. B., University of Cincinnati, 1909
- SEARS, ISABEL (*Education*).....Glendale, O.
A. B., University of Cincinnati, 1905
- SHAFFER, LUCY KENNEDY (*German*).....2260 Park Ave.
A. B., Smith College, 1908
- SLUTZ, EARL RANSOM (*Philosophy*).....1840 Josephine St.
A. B., Ohio Wesleyan College, 1906; B. D., Drew Theological Seminary, 1909
- SMITH, EDWARD S. (*Mathematics*).....3826 Forest Ave., Norwood, O.
M. S., University of Virginia, 1912
- SNEED, MAYCE CANNON (*Chemistry*).....827 Maple Ave., Newport, Ky.
A. B., Peabody College for Teachers, 1910
- SOUTHGATE, VIRGINIA (*Mathematics*).....2221 Nelson Ave.
B. S., Hanover College, 1892
- SPENCER, WILLIAM A. (*Economics*).....2916 Gilbert Ave.
A. B., Northwestern University, 1910
- STANLEY, HELEN ABIGAIL (*English*).....3576 Zumstein Ave.
A. B., University of Cincinnati, 1913
- STEINAU, IRENE (*Romance Languages*).....3445 Mooney Ave., Hyde Park
A. B., University of Cincinnati, 1909
- STEVENSON, PAUL RAYMOND (*Psychology*).....3228 Wold Ave.
A. B., Park College, 1909
- SWAN, HOWARD (*English*).....2510 Kemper Lane
Diploma from London Technical College, 1881
- TACKENBERG, CHARLES W. (*English*).....124 E. University Ave.
A. B., University of Cincinnati, 1909
- TEMPLETON, DAVID HENRY (*Philosophy*).....Lane Seminary
A. B., Trinity College, Texas, 1910
- THOMAS, MARY LOUISE (*Philosophy*).....2241 Cameron Ave., Norwood, O.
A. B., University of Cincinnati, 1913
- THORNDYKE, ELIZABETH (*History*).....533 Camden Ave.
A. B., University of Cincinnati, 1909; A. M., Ibid, 1912
- VAN SLYCK, AGNES E. (*English*).....328 Rockdale Ave.
A. B., University of Cincinnati, 1912
- VAN WINKLE, EDWIN C. (*Education*).....2930 Carthage Ave., Pleasant Ridge
B. S. in Education, Ohio University, 1913
- VICKERS, HELEN JUDITH (*Romance Languages*).....3885 Reading Rd.
A. B., University of Cincinnati, 1908
- VON STEIN, ALICE E. (*English*).....The Tevanagh
A. B., Mt. Holyoke College, 1906
- WAGNER, STELLA M. (*English*).....Cor. Ninth and Linn Sts.
A. B., University of Cincinnati, 1906
- WAITE, MARY GLOYD (*Psychology*).....The Delmoor
B. S., Columbia University, 1909
- WALKER, ALFRED MARSHALL (*Education*).....577 Considine Ave.
A. B., University of Cincinnati, 1900
- WALLACE, ADLAI GROVER (*Philosophy*).....Lane Seminary
A. B., Arkansas Cumberland University, 1913
- WALLS, CALLIE KING (*History*).....2706 Eden Ave.
B. S., Ohio University, 1912

WARD, BERTHA EVANS (<i>English</i>).....	6 Lane Seminary A. B., University of Chicago, 1912
WARTCKI, SARAH M. (<i>English</i>).....	815 Oak St. A. B., University of Cincinnati, 1913
WERNER, LOUIS F. (<i>Chemistry</i>).....	914 Oak St. A. B., University of Cincinnati, 1912
WHITE, JOHN W. (<i>Philosophy</i>).....	Lane Seminary B. L., Trinity College, Texas, 1910
WHITFIELD, MARY DUNN (<i>English</i>).....	6028 Oak Ave., College Hill A. B., University of Cincinnati, 1910
WIEDEMER, LOTTIE (<i>Education</i>).....	4821 Linden St., Norwood, O. A. B., University of Cincinnati, 1913
WILLIAMS, CORA (<i>Biology</i>).....	717 Center St., Bellevue, Ky. M. S., University of Kentucky, 1903
WOELLNER, FREDRIC (<i>Education</i>).....	1617 Dudley St. A. B., University of Cincinnati, 1912
YANCEY, ROBERT LEE (<i>Education</i>).....	36 W. Tenth St., Covington, Ky. A. B., Fisk University, 1889
ZELLER, ELSIE M. (<i>English</i>).....	729 Considine Ave. A. B., University of Cincinnati, 1913

McMICKEN COLLEGE OF LIBERAL ARTS

Seniors

ABRAMS, SAMUEL JOSHUA.....	New York City, and 515 W. Ridgeway Ave.
ACKERSON, ESTELLE.....	307 Grove Ave., Wyoming, O.
BARDES, EUGENIA CATHERINE.....	128 W. McMillan St.
BARRETT, OSCAR SLACK.....	2303 Grandview Ave.
BOLAN, BESSIE MARGARET.....	22 E. Eighth St., Covington, Ky.
BRUMLEVE, CAMILLE.....	123 Hosea St.
CANTOR, HYMAN BERNARD.....	Buffalo, N. Y., and 1639 Clayton St.
CLARK, HAZEL JUNE.....	3243 Epworth Ave., Westwood
COHEN, SIMON.....	Baltimore, Md., and 3589 Wilson Ave.
COWELL, SARAH JANE.....	3015 Woodburn Ave.
CUMMINS, MARY DOROTHY.....	3453 Cornell Pl.
DABNEY, KATHERINE BRENT.....	1 The Romaine
D'AMOUR, MARTHA PAULA.....	7 The Eistun
D'ARCY, FRANCES ELIZABETH.....	454 E. Fifth St.
DAVIS, MARGUERITE.....	235 Albion Pl.
DEAN, ADELAIDE.....	826 Liberty St.
DONES, ELISABETH JANE.....	5915 Sierra St., Madisonville
ELHOFF, EDNA AMANDA.....	3251 Vine St.
EPPINGER, JEANETTE.....	2242 Vine St.
FAY, SARAH HELEN.....	325 Reilly Ave., Wyoming, O.
FORTHMAN, WILLIAM.....	3033 Percy Ave.
FREEHOF, SOLOMON BENNETT, Washington, D. C., and S. E. Cor. Highland and McMillan Sts.	
GEOGHEGAN, MARGUERITE.....	2108 Fulton Ave.
GILBERT, GRACE M.....	328 Albany Ave.
GOODHART, SADIE ISABEL.....	506 Hale Ave.
GRODSKY, DAVID HYMAN.....	207 Forest Ave.
GUP, SAMUEL MARCUS.....	Mobile, Ala., and Flat P, The Wilhelm
HAND, CHAUNCEY HARRIS.....	2558 Eden Ave.
HOFFMAN, JULIUS JOSEPH.....	3245 Bishop St.
HUNT, ESTELLE AUGUSTA.....	3344 Whitfield Ave.
INSKEEP, HAROLD ELWOOD.....	1328 Scott St., Covington, Ky.

JACOBS, FREDERICK RUDOLPH.....	1266 Iliff Ave.
JENKINS, RUTH LE MARIAN.....	839 Washington Ave., Newport, Ky.
JONES, ARTHUR DAVID.....	Cleves, O., and 3447 Jefferson Ave.
JONES, GRACE ELIZABETH.....	2215 Cameron Ave., Norwood, O.
JOSLIN, FLORENCE.....	514 Camden Ave.
KAUTZ, MARY KATHRYN.....	1209 Walnut St.
KEISER, MADELINE HENRIETTA.....	245 McCormick Pl.
KREHBIEL, MARIE.....	328 McGregor Ave.
LE CLERE, JOHN BURK.....	2256 Beechmont Ave., Mt. Washington
LINNARD, ELIZABETH CHARLOTTE.....	2550 N. Ingleside Pl.
LIPPERT, OTTO CARL FERDINAND.....	1601 Freeman Ave.
LOEB, MARTHA.....	829 Rockdale Ave.
LOUIS, IRENE LUCILE.....	420 Elizabeth St.
LUDWIG, LOWELL HOBART.....	1011 Scott St., Covington, Ky.
MCINTIRE, WALTER ALAN.....	2318 Williams Ave., Norwood, O.
McKEE, FLORENCE LOUISE.....	2201 Nelson Ave.
MIHALOVITCH, AMY FLETCHER.....	Kasota and Delaware Aves.
MILLER, GRACE EVA.....	Highland and Beech Aves.
MISCHKIND, LOUIS ARTHUR.....	Brooklyn, N. Y., and 369 Howell Ave.
MOMBACH, BLANCHE ALTHOF.....	70 Albany Ave.
MONTGOMERY, CHARLOTTE F.....	2325 Maryland Ave.
NEAVE, ARTHUR STUART.....	461 Considine Ave.
O'BRIEN, EDNA.....	2721 Woodburn Ave.
O'HARA, ETTA MARIE.....	3047 Hackberry St.
ORTH, HELEN.....	1925 Crown Ave., Norwood, O.
PAGE, MARY KATHERINE.....	1344 Locust St.
PHILLIPS, ANNETTA.....	Bodman Ave. and Young St.
PHILLIPS, KATHERINE.....	2525 Gilbert Ave.
RABENSTEIN, RUTH MARGHERITA.....	3429 Boudinot Ave.
ROBINSON, BURTON EMMAL.....	3119 Imperial Ave.
ROSEN, JEROME.....	515 Ridgeway Ave.
SCHEUER, IRMA.....	1522 Blair Ave.
SEAMAN, RUTH GORDON.....	2312 Harper Ave., Norwood, O.
SEE, OSCAR FRANKLIN.....	Blue Ash, O.
SHERWOOD, EVELYN DALLAS.....	2329 Ashland Ave.
SILVER, ABRAHAM HILLEL.....	New York City, and 1358 Burdette Ave.
SILVER, MAXWELL.....	New York City, and 1358 Burdette Ave.
SIMON, MARY EMMA.....	457 Considine Ave.
STANSBURY, CHARLES BERTRAM.....	272 McCormick Pl.
STEPHENS, ALICE VIRGINIA.....	2238 Nelson Ave.
STEISS, LILLIAN ESTHER.....	2327 Burnet Ave.
STRUKE, NORMA LOUISE.....	3334 Jefferson Ave.
SUER, WERNER JOHN.....	2352 Harper Ave., Norwood, O.
TARSHISH, JACOB.....	3158 Harvey Ave.
TEDTMANN, MARTHA FLORENCE.....	414 Betts St.
THIESING, CATHERINE MARIE.....	3019 Bathgate St.
VAN TYNE, ELIZABETH LUCY.....	212 Chelsea Pl., Delhi
WAGNER, EARL WILLIAM.....	1114 Draper St.
WHALLON, MARY ROBERTA.....	1532 Chase Ave.
WILFERT, ELSIE.....	358 Bryant Ave.
WILLEY, RUTH MAGDALEN.....	3453 Whitfield Ave.
WISSEL, CLARA ANNA.....	Sta. K, Mt. Airy, O.
WITHAM, MARIE ALIS.....	3711 Morris Pl.
WOLFROM, GERTRUDE MARIE.....	201 Maine Ave., Elmwood Pl., O.
WRIGHT, NEIL.....	The Delmoor
WUNDER, CLINTON.....	1640 Pullan Ave.

Juniors

ACKRET, MAX CONRAD.....	3264	McHenry Ave.
BALLENTINE, CLARA L.....	4722	Ward St., Madisonville
BAUER, BESSIE MAY.....		Pleasant Ridge, O.
BAUM, HILDA CHRISTINA.....	3130	Fairfax Ave.
BELSINGER, RALPH EDWARD.....	804	Grand Ave.
BESCHORMAN, KATHERINE MARIE.....	6546	Montgomery Rd., Norwood, O.
BETTMAN, LOUISE.....	3739	Reading Rd.
BLANK, LAURA.....	1048	Scott St., Covington, Ky.
BRIDGE, AGNES HILL.....	1325	Yarmouth Ave., Bond Hill
BROWN, KARLINE MEYERFIELD.....	510	Hale Ave.
BURGOYNE, MARGARET.....	19	The Roanoke
CALDWELL, GENEVIEVE.....	828	Beecher St.
CARD, LORNA DOONE.....		Silverton, O.
CELLARIUS, MARY ELIZABETH.....		Forest and Hudson Aves., Norwood, O.
CLAASSEN, ELLA ANNA.....	2723	Scioto St.
COOK, STANLEY E.....	116	Huntington Pl.
CORNUELLE, HERBERT CUMMING.....	6400	Desmond St., Madisonville
CORNUELLE, RALPH DUDLEY.....	6400	Desmond St., Madisonville
CROCKETT, HELEN LAEL.....	304	Broadway
CROZIER, HELEN EDITH.....	8	The Glenwood, College Hill
DEARNES, DONALD FREDERICK.....	2654	Harrison Ave.
DEVOU, MARGARET LOUISE.....		Pleasant Ridge
DIECKMANN, ALMA SOPHIE.....	2243	Spring Grove Ave.
DIERINGER, STELLA MARIE.....	3901	Dickson Ave.
DOWNER, JR., JOHN.....	3722	Woodland Ave., Hyde Park
DRUCKER, FANNIE NATHALIE.....	3460	Knott Ave.
DURY, FLORENCE.....	529	W. Ridgeway Ave.
FARRAR, DOROTHY DAVIS.....	4018	Thirtieth St., Oakley
FILLMORE, ANNIE LOUISE.....	2254	Park Ave., Norwood, O.
FISCHBACH, VERONICA M.....	1604	Sycamore St.
FOOTE, HELEN ALLEE.....	1773	Humboldt Ave.
FOOTE, KATHERINE CORNEALIA.....	1773	Humboldt Ave.
FRANCIS, FLORA L.....	3432	Hazelwood Ave.
FRANZ, FREDERIC WILLIAM.....	219	Wade St.
FRIEDMAN, BENJAMIN.....		New York City, and 3455 Whitfield Ave.
GEIGER, RUTH MARIA.....	1330	Bremen St.
GEOHEGAN, KENNETH PRICE.....	820	Mt. Hope Rd.
GERLING, MATILDA.....	248	Loraine Ave.
GETZENDANNER, JESSIE TUMY.....	4540	Erie Ave.
GIBSON, ROBERTA MOORE.....	2224	Kemper Lane
GORDON, ARTHUR WENTWORTH.....	2210	Ohio Ave.
GRACE, LORETTA ANGELA.....	1912	Colerain Ave.
HALBEN, MATILDA VON DER.....	8145	Bishop St.
HAYS, LENORE FLORA.....	207	Albany Ave.
HOFFMANN, CLARA EVA.....	2908	Urwiler Ave., Westwood
HOWLAND, HARRIET ELISE.....	2365	Kemper Lane
JOKERS, ETHEL.....	3556	Burch Ave., Hyde Park
JOSEPH, RUTH BLOCH.....	353	Hearne Ave.
KEIM, HELEN ELIZABETH.....	3526	Bevis Ave.
KELLER, RUTH HASKELL.....	4700	Chickering Ave.
KOHLER, HENRY C.....	706	W. Eighth St.
KROUSE, KATHERINE KAICHEN.....	274	Helen St.
KRUCKER, ELSIE LOUISE.....	1432	E. McMillan St.
KYTE, MARGUERITE LOUISE.....	3430	Berry Ave.
LALLY, ELLA MAY.....	4706	Central Ave., Madisonville

LANGENHEIM, NORMA MIRIAM.....	1627 Sycamore St.
LAZARON, BERTHA.....	2452 Highland Ave.
LEIBERT, JULIUS.....	Louisville, Ky., and 2372 Stratford Ave.
LYON, NORMAN MORAIS.....	627 Rockdale Ave.
MANN, LOUISE.....	3540 Zumstein Ave., Hyde Park
MOLONY, IPHIGENE HELEN.....	Hamilton Ave., College Hill
MORGAN, MRS. MARY ELIZABETH.....	The Roanoke
MURDOCK, RUTH GERTRUDE.....	3414 Osage Ave., Price Hill
MUSEKAMP, FREDA ELIZABETH.....	3919 Harrison Ave.
MYERS, AGNES PAULINE.....	3326 Fairfield Ave.
NOCKA, RUTH MAGDALENE.....	4810 Wesley Ave., Norwood, O.
OTTEN, FREDA.....	3016 Scioto St.
PAHREN, NORMA.....	382 Terrace Ave.
PHILLIPS, PAUL.....	1424 E. McMillan St.
POCIEY, JOSEPHINE VIOLET.....	1722 Hewitt Ave.
RICHARDSON, RUTH KATHARINE.....	2632 Kemper Lane
ROLLE, CLIFFORD JAY.....	3803 Glenway Ave.
RYAN, RUTH.....	3207 Mozart Ave.
SCHRADIN, WILLIAM.....	2540 Park Ave.
SCHROEDER, ESTHER LYDIA.....	425 Ridgeway Ave.
SCHULTZ, GLADYS LOUISÉ.....	1053 Richwood Ave.
SCOVILL, DOROTHEA HAVEN.....	Cor. Bodman and Young Sts.
SERODINO, MADOLIN MARIE.....	2223 Cameron Ave., Norwood, O.
SHERIKE, ALICE LOUISE.....	430 E. Liberty St.
SNABLEY, VICTORINE MARY.....	630 Neave St.
SNYDER, JOHN WESLEY.....	1321 E. Third St.
STICKNEY, GERTRUDE CLARA.....	709 Longview Ave., Carthage
TAYLOR, HELEN CATHERINE.....	3130 Harvey Ave.
TAYLOR, IONA MAY WATHEN.....	1620 Scott St., Covington, Ky.
TAYLOR, JEAN KIMBALL.....	Glendale, O.
TOOTHMAN, MADOLENE MARGUERITE.....	4602 Central Ave., Madisonville
TRACY, MARGARET ANTHONY.....	532 Howell Ave.
URBANSKY, MIRIAM BELLE.....	431 Forest Ave.
VENNING, KATHARINE SHEPHERD.....	3204 Bishop St.
VOLKERT, ESTHER FLORENCE.....	3502 Stacey Ave.
WACHTEL, IRMA.....	3463 Harvey Ave.
WAGNER, HAROLD HARR.....	1114 Draper St.
WALDMAN, BESSIE.....	5835 Hamilton Ave., College Hill
WILKINSON, RUTH STAFFORD.....	1055 Richwood Ave.
WILKINSON, WARREN HAGER.....	Sterling Hotel
WILLIAMS, SOPHIA MAURICE.....	954 Locust St.
WINSTON, ETHEL FORBES.....	8 Oak Ave., Hartwell
WINSTON, MATTIE.....	959 Hatch St.
WOODSON, NEOLA ESTELLA.....	2722 Ashland Ave.
WUEST, ALMA MARIE.....	158 W. McMillan St.

Sophomores

ACOMB, MARGARET JANET.....	6103 Liberty St., Pleasant Ridge
ANDERSON, DOROTHY.....	4749 Winton Rd.
APPEL, JEANNETTE.....	4511 Homer Ave., Madisonville
BAHR, JR., LEONARD KASPER.....	3868 Oakley Ave.
BEITZEL, ANNE HARRIET.....	2316 Neison Ave.
BENSON, PAULINE ELIZABETH.....	3028 Hackberry St.
BENZINGER, MARTIN RICHARD.....	Oakland, Cal., and 2915 Auburn Ave.
BERGMEIER, EDWIN HERMAN.....	2415 W. Clifton Ave.
BIDDLE, VIRGINIA TEMPLE.....	861 Lexington Ave.

BLEIER, CORALIE.....	3460 Knott Ave.
BRAND, LESTER WILLIAM.....	14 W. Charlton St.
BRILL, WALTER HENRY.....	3930 Huston Ave., Norwood, O.
BROOKS, GERTRUDE WILDER.....	1455 Tecoma Ave., College Hill
BROWN, HELEN EDMUNDS.....	2215 Washington Ave., Norwood, O.
BROWN, HELEN MARIE.....	2717 Cleinview Ave.
CAIE, THOMAS JOPLIN.....	435 Riddle Rd.
CHAMBERS, ENOLIA IRENE.....	3182 McHenry Ave.
CLAASSEN, HARRY LOUIS.....	2723 Scioto St.
CLARK, FREDERICK ROY.....	Williamstown, Ky.
CLINE, ALFREDA BUCHANAN.....	3752 Isabella Ave., Hyde Park
COOK, JEROME H.....	The Wilhelm
COOPER, LOIS BELLE.....	1525 Lincoln Ave.
CRAMER, HELEN AVENUE.....	1564 Glen Parker Ave.
CURTIN, ANGELA MARIE.....	2411 Ashland Ave.
DANIELS, VERA CAROLYN.....	120 Calhoun St.
DAVIS, EDWARD.....	Philadelphia, Pa., and 409 Union St.
DAVIS, JOHANNA SOMMERFIELD.....	347 Forest Ave.
DINKELAKER, SELMA ELLA.....	Howland Pl.
EWALD, ELSA LOUISE.....	2612 Fenton Ave.
FAY, GENEVIEVE.....	325 Reilley Ave., Wyoming, O.
FELS, CORA INGERBAR.....	3091 Beekman St.
FELTER, DORAH HELEN.....	1728 Chase Ave.
FINKELSTEIN, JOSEPH.....	Dayton, O., and 409 Union St.
FISCHBACH, VICTOR WILLIAM.....	Newport, Ky., and McCormick Pl.
FRANKLIN, JOHN HARCOURT.....	2006 Clarion Ave.
GIBBONS, MARTHA BELLE.....	North Bend Rd., College Hill
GOLDSMITH, ETHEL FANNY.....	255 Hearne Ave.
GRANT, BERTHA LOOMIS.....	3618 Woodford Rd., Kennedy
GREGG, JR., ELLIS BAILEY.....	565 Terrace Ave.
GUHMANN, RUTH BARBARA.....	240 Hosea Ave.
HARTE, DOROTHY OLIVE.....	5413 Wetzell Ave., Madisonville
HARTMAN, MABEL GERTRUDE.....	Mt. Washington
HARVEY, FRANK HARRIS.....	2050 Symmes St.
HENLE, CLAIRE.....	827 Oak St.
HILL, ESTHER ANNIS.....	Milford, O.
HOLSBERG, ETHEL FRANCES.....	260 Ehrman Ave.
HOPPE, HENRY HERMAN.....	1820 Dexter Ave.
HYDE, BERTHA MAY.....	814 Lincoln Ave.
ISAACS, NESHA.....	3552 Bogart Ave.
JAMES, EDWARD MURDOCK.....	310 Oak St.
JOHNSTON, RUTH JEANNETTE.....	1719 Hewitt Ave.
JONES, FRANCES LOUISE.....	4349 Columbia Ave., Madisonville
JOSEPH, DAVID BERMAN.....	3010 Melrose Ave.
KAHN, MARIE B.....	3975 Beechwood Ave.
KAPLAN, SAMUEL SHAMMAI.....	2812 Stanton Ave.
KEMPER, ELIZABETH SHIRLEY.....	Lane Seminary.
KENNEDY, JENNIE KILLAM.....	4223 Williamson Pl.
KOCH, HERBERT FRANK.....	325 Hearne Ave.
KREIMER, ALBERT GEORGE.....	2901 Erie Ave.
LA MAY, ETHEL ROBERTA.....	5310 Ravenna St., Madisonville
LEVI, RUTH MILDRED.....	812 Mann Pl.
LINDSLEY, FLORENCE ELMORE.....	4546 Edgewood Ave., Winton Pl.
LYLE, ALICE FRANKLIN.....	203 Woolper Ave.
LYNCH, MARY BEATRICE HOLLISTER.....	225 Albion Pl.
LYON, PHILIP EDMUND.....	5505 Arnsby Pl., Madisonville
LYTLE, LAWRENCE ROY.....	2064 Eastern Ave.

McDONOUGH, ETHEL HELEN.....	Claypoole Ave., Price Hill
McGREGOR, ANNA LAURA.....	3734 Oakley Ave.
McNUTT, HELEN GRACE.....	5654 Glenview Ave., College Hill
MACHT, WOLFE.....	Newburgh, N. Y., and 38 W. McMillan St.
MARTIN, ANNA CAROLINE.....	820 Beecher St.
MARTIN, EDNA EUGENIE.....	820 Beecher St.
MARTIN, ROBERT SCOTT.....	Anna, O.
MERZ, EDNA MARGARET.....	3436 Cheviot Ave., Westwood
MOORMAN, THOMAS AQUIN.....	McMillan St. and Moorman Ave.
MORTEN, RUTH DUNHAM.....	2015 Hudson Ave., Norwood, O.
MUDGE, MARY ROSALIE.....	19 E. Eighth St., Covington, Ky.
NADEL, ERNESTINE.....	833 Wade St.
NEVITT, EDYTH LEANNAH.....	1027 Wesley Ave.
NIMMO, EDWARD A.....	6452 Lower River Rd.
OSKAMP, ELIZABETH.....	West Loveland Heights, O.
PAUL, ELVIRA MARCELLA.....	2364 Victor St.
PERIN, RHODA PEARL.....	3631 Morris Pl.
PFLEGER, MARGARET CLAIRE.....	3523 Clifton Ave.
PLUCKEBAUM, DOROTHY ELIZABETH.....	850 W. Fifth St.
PORTER, NINA.....	3450 Zumstein Ave.
RASINSKY, NAOMI.....	3416 Laronia Ave.
REECE, JOHN ANDREWS.....	2318 Ashland Ave.
RICHARDS, HAROLD FREDERIC.....	413 Fifth Ave., Dayton, Ky.
RICHARDSON, OLIVE MAY.....	564 Delta Ave.
RICHMOND, HARRY RAYMOND.....	807 E. Ridgeway Ave.
RIEMAN, MARY ELLEN.....	501 E. Third St.
RIESENBERG, ALPHONSE GERARD.....	1029 Columbia St., Newport, Ky.
RIFFE, LAURA CASSEDY.....	Eighteenth St. and Madison Ave., Covington, Ky.
ROBINSON, EDWARD STEVENS.....	15 The Crescent
ROSENTHAL, EVELYN.....	991 Marion Ave.
ROSENTHAL, THERESA MATILDA.....	3666 Reading Rd.
RUBEL, VERE LINA.....	920 Burton Ave.
RUCKER, MARGARET CLARKE.....	The Romaine
RYPINS, FREDERICK ISRAEL.....	369 Howell Ave.
SANDERS, ADELAIDE WILHELMINE.....	1630 Sutter Ave., N. Fairmount
SAUER, ALMA GENEVIEVE.....	N. E. Cor. Central Ave. and Baymiller St.
SAUNDERS, ADLAI CARLISLE.....	845 Dayton St.
SCHEUERMANN, ALFRED ARTHUR.....	2931 Jefferson Ave.
SEGEL, ALEXANDER.....	3600 Wilson Ave.
SHAFFER, SUSAN LEWIS.....	2260 Park Ave.
SHIGLEY, CELESTINE LIDA.....	843 Ridgeway Ave.
SIBBALD, LUCILLE FAY.....	1818 Fairfax Ave.
SMITH, DOROTHY GERTRUDE.....	3787 Warsaw Ave.
SPENCER, GRETA.....	167 Twain Ave., Saylor Park
STAPLEFORD, ABIGAIL DILWORTH.....	2640 Beekman St.
STERN, BERNARD JOSEPH.....	Chicago, Ill., and 3446 Wilson Ave.
STEWART, MARY ISABELLA.....	1 Park Pl., Mt. Auburn
STIFEL, CATHERINE MARIE.....	3927 Colerain Ave.
STRAUS, FLORENCE LEAHNORE.....	3259 Fredonia Ave.
SWINEFORD, HELEN AGNES.....	147 Elm St., Ludlow, Ky.
TAYLOR, CELLA.....	Dayton, Ky.
THOMPSON, MARGARET VIOLA.....	400 Grand Ave.
TOMS, ALICE ELIZABETH.....	223 Calhoun St.
TURNER, DARWIN ROMANES.....	1074 W. Liberty St.
VAUPEL, JEAN CLARA.....	6024 Ferris Ave., College Hill
WAGER, IRENE.....	3312 Columbia Ave.
WALTON, CLARA VIRGINIA.....	12 The Elstun

WEATHERBY, LORENE EMMA.....	1643 Vandalia St., Northside
WEBER, MARIE ROSALIE.....	2405 Norwood Ave., Norwood, O.
WESSEL, HARVEY EDWARD.....	New York City, and 809 Oak St.
WILDER, EUGENIA ELIZABETH.....	3292 Montana Ave.
WIRTH, MARGARET LOUISE.....	622 Prospect Pl.
WRIGHT, PEARL MAE.....	2528 Chatham St.

Freshmen

ALBERT, MARION CAROLINE.....	5 The Romaine
ALLEE, ALICE BRAGDON.....	2362 S. Elm St.
ALMS, FLORA FREEDA.....	3211 Glendora Ave.
APPEL, ELSIE.....	4511 Homer Ave., Madisonville
BANCROFT, JUNE SEIFRIED.....	The Glencoe Hotel
BARASCH, NATHAN E.....	Bayonne, N. J., and 369 Howell Ave.
BARKLEY, ALMA BURKART.....	3456 Liston Ave.
BARNES, VERNON CARY.....	Mt. Healthy, O.
BARNETT, LELAND MEYER.....	1937 Hudson Ave., Norwood, O.
BAUER, PAUL JACOB.....	3605 Dawson Ave.
BEAMAN, LUSANNA JUNE.....	Sidney, O., and 3126 Durreil Ave.
BERESFORD, CURTIS RENSHAW.....	854 Lincoln Ave.
BERRY, DAVID EVERETT.....	Gallipolis, O., and 428 Eighth St.
BOGEN, JESSIE.....	943 Summit Ave., Price Hill
BOSS, RALPH LANGDON.....	4014 Main Ave., Norwood, O.
BRAUNECKER, HELEN AUGUSTA.....	246 Hosea Ave.
BRAUNWART, HELEN LOUISE.....	228 Shillito St.
BREUER, DOROTHY.....	2140 Williams Ave., Norwood, O.
BROWN, ELAINE CARUTH.....	937 E. McMillan St.
BROWN, VIDA CHAPMAN.....	937 E. McMillan St.
BRUEGGEMAN, HARRIET SWEENEY.....	214 Dorchester Ave.
BRUNHOFF, SOPHIE WILHELMINA.....	215 Forest Ave.
BUCKMAN, ALICE.....	524 Prospect Pl.
BUCKNER, SOPHIE HARRISON.....	808 Ludlow Ave.
BUENTE, SYBYL.....	4253 Hamilton Ave.
BULLERDICK, ELLEN MARTHA.....	4823 Hamilton Ave.
BURGOYNE, HELEN HENDERSON.....	19 The Roanoke
BUSCHING, HOWARD ELLSWORTH.....	504 Walnut St., Elmwood Pl., O.
BUTTENWIESER, PAUL.....	3208 Fredonia Ave.
BUTTERFIELD, BRYANT SYDNEY.....	4411 Erie Ave., Madisonville
CALDWELL, TIRZAH.....	410 W. Eighth St.
CALE, HOWARD LAMONT.....	Dublin, Ind., and 15 E. Seventh St.
CALE, WILLARD GEORGE.....	Dublin, Ind., and 15 E. Seventh St.
CAMPBELL, MARGARET.....	726 Sturgis Ave., Hartwell, O.
CARD, ROTH A GENEVIEVE.....	Silverton, O.
CARMICHAEL, RALPH ALLISON.....	Loveland, O.
CASE, HENRIETTE SEWELL.....	113 E. Eighth St., Covington, Ky.
CLARK, ELIZABETH MAY.....	Ohio Ave., Ft. Thomas, Ky.
CLIFT, MAY.....	4028 Clifton Ave.
COHEN, NELSON JENN.....	2724 Mitchell Ave., Hyde Park
CORD, HELEN.....	1950 Hopkins Ave., Norwood, O.
COSBEY, JESSIE.....	Rossmoyne, O., and 500 Delta Ave.
CRAMER, HELEN CELESTE.....	128 Malvern Pl.
CRIDER, VERA MADELINE.....	2631 Halstead St.
CROMWELL, ELWOOD LEWIS.....	3013 Alms Pl.
CROWE, EUNICE MARIE.....	757 Purcell Ave.
DAVIDSON, CARLETON FREDERICK.....	1764 Humboldt Ave.
DAVIS, JOHN FRANCIS.....	Cambridge, O., and 228 Atkinson St.
DAY, KARL S.....	3807 Spencer Ave., Norwood, O.

DOOLEY, EDWARD MEAGHER.....	Glendale, O.
DONNELLY, JOSEPH LAWRENCE.....	291 Mt. Pleasant Ave., Ft. Thomas, Ky.
DUDLEY, GRACE ELIZABETH.....	2218 Burnet Ave.
DUKE, DOROTHY.....	The Anthony, Seminary Pl.
ECKSTEIN, JR., GUSTAV.....	1547 Linn St.
EDMONDS, CHARLES P.....	Wausau, Wis., and 350 Terrace Ave.
ELBERG, ETTA LOUISE.....	510 Walnut St., Elmwood Pl., O.
ENGELHARDT, JR., EDWARD CHARLES.....	2108 Ravine St.
FARLICE, ELNETTA AMANDA.....	314 John St.
FELDMAN, ABRAHAM JEBIEL.....	New York City, and 1856 Burdette Ave.
FELS, IDA JEANETTE.....	3091 Beekman St.
FERRY, DOROTHY WITHERBY.....	5 The Belmont
FINEBERG, SOLOMON.....	Pittsburg, Pa., and 369 Howell Ave.
FISCHBACH, GLENA PRETZINGER.....	1604 Sycamore St.
FLAGLER, MARJORY CURTIS.....	7373 Lower River Rd.
FOSTER, ALMA VIRGINIA.....	Portsmouth, O., and 3334 Bonaparte Ave.
FRANK, FELICIA.....	319 W. Rockdale Ave.
FRIEDRICH, JR., CHARLES.....	4510 Homer Ave., Madisonville
GARTELMAN, CLIFFORD ADAM.....	529 York St.
GREENBERG, HENRY.....	3 Le Roy Court
GEOHEGAN, EDMUND HARRISON.....	820 Mt. Hope Rd.
GEYER, EMMA DOROTHY.....	2972 Werk Rd., Westwood
GIBSON, AILEEN MAE.....	905 Third Ave., Dayton, Ky.
GOETTSCH, MARIANNE.....	145 University Ave.
GREGG, CLIFFORD CILLEY.....	565 Terrace Ave.
GREGORY, ALEXANDER.....	301 Calhoun St.
GREGSON, ANITA HULL.....	3622 Zumstein Ave., Hyde Park
GREGSON, MARIE KERFOOT.....	3622 Zumstein Ave., Hyde Park
GROMME, EMMA DOROTHY.....	1832 Brewster Ave.
GROSSMAN, RALPH.....	845 Lexington Ave.
GROTHAUS, ETHEL LOUISE.....	Oak St. and Highland Ave.
GUCKENBERGER, THELMA.....	3469 Brookline Ave.
HAILE, RALPH VIRDEN.....	811 Lexington Ave.
HALL, FRANK KINCAID.....	Rapid Run Rd., Price Hill
HALL, GEORGE THOMAS.....	138 Kinsey Ave.
HANNAFORD, ROGER EDWIN.....	2540 Trevor Pl.
HARTMANN, GEORGE EDGAR.....	3398 Hillside Ave.
HASLINGER, EMMA SOPHIE.....	93 Mulberry St.
HATFIELD, MARTHA EUGENIA.....	The Dexter
HAUCK, EMILIE MARGARET.....	935 Dayton St.
HAYS, SARA HANAUER.....	3551 Alaska Ave.
HEARD, KATHERINE MONG.....	3637 Edwards Rd.
HEGER, EVELYN ELIZABETH.....	Towne Ave., Bond Hill
HEILBRUN, MARGERY SERVILLIA.....	3623 Washington Ave.
HEILE, ELMORE.....	38 E. McMillan St.
HELBIG, CARL FRANKLIN.....	College Hill
HETSCH, JUSTUS KARL.....	626 York St., Newport, Ky.
HEYL, HELEN MARCELIA.....	2402 Upland Pl.
HICKOK, KATHERINE CRAMER.....	47 W. Fourth St., Covington, Ky.
HILLER, GRACE RICHMOND.....	2455 Madison Rd.
HOEHN, BERTHA LOUISE.....	3113 Gloss Ave., Pleasant Ridge
HOLLOWAY, CLARENCE.....	Norway Ave.
HOLZBERG, JULIUS.....	260 Ehrman Ave.
HULING, MAY CATHERINE.....	3026 Woodside Ave.
HUNT, MARGARET CHARLOTTE.....	5405 Wetzell Ave., Madisonville
IDESON, ELEANOR GERTRUDE.....	2156 Cameron Ave., Norwood, O.
ISAACS, STANLEY MORRIS.....	6 The Harvey

ISRAEL, EDWARD L.....	3589	Wilson Ave.
JOHNSON, FREDERICK AUGUSTUS.....	861	Beecher St.
JONES, DOROTHY CARTWRIGHT.....	12	Bella Vista Pl.
JONES, MARGARETTA ABIGAIL.....	4349	Erie Ave., Madisonville
KASSON, LEE BROOKS.....	28	Blue Grass Ave., Ft. Thomas, Ky.
KELLER, ADELINE LOUISE.....	218	Stetson St.
KEMPER, SAMUEL FREDERICK.....	2209	Fulton Ave.
KEYSER, WENDELL.....		Munro Hotel
KLAPPERT, RUTH MILDRED TEBBS.....	2936	Woodburn Ave.
KOEHLER, WILLIAM AUGUSTUS.....	1202	Central Ave., Newport, Ky.
KOTZIN, GODFREY.....	243	Hearne Ave.
KRUEGER, JUSTINE.....	917	Garfield Ave., Price Hill
KUNSHIK, EMMA AUGUSTA.....	3206	Madison Rd.
LAMBERT, MARGARET LOUISE.....	223	W. Twenty-first St., Covington, Ky.
LANDMAN, SOLOMON.....	3455	Whitfield Ave.
LE CLERE, MILDRED GRACE.....		Mt. Washington
LILLARD, DAVIS.....	1745	Chase Ave.
LITTELL, HAZEL GRACE.....	1603	Ruth Ave.
LUSBY, HELEN ALISON.....	943	E. Third St.
LYLE, DONALD JOHNSON.....	203	Woolper Ave.
MCCARTHY, ALICE MARIE.....	1937	Clarion Ave.
MCDVITT, LESTER WILLIAM.....	275	McCormick Pl.
MCGOWAN, CAROLYN LEHMAN.....	9	The Haydock
MCINTYRE, LAURA MILDRED.....	2318	Williams Ave., Norwood, O.
McKINLEY, RUTH ELIZABETH.....	5727	Davey Ave., College Hill
MADDUX, HOWARD STANLEY.....	421	Delta Ave.
MARCUS, JACOB.....		Wheeling, W. Va., and 521 Ridgeway Ave.
MARK, JEROME.....		Baltimore, Md., and 369 Howell Ave.
MATRE, EDNA CLARA.....	4505	Hamilton Ave.
MENDELSON, JOHN.....	350	Rockdale Ave.
MENDELSON, SAMUEL FELIX.....		Newark, N. J., and 435 Ridgeway Ave.
MESSEHAM, MARY FLORENCE.....		Silverton, O.
MICHAEL, LILLIAN.....	1521	Hapsburg Ave.
MITCHELL, MARY LUCILE.....	2312	Sauer Ave.
MONTGOMERY, HARRIET LETCHER.....		Salt Lake City, Utah, and 527 Hale Ave.
MORRIS, GERTRUDE ELLEN.....		Loveland, O.
MOTZ, JOHN LOUIS.....	337	Albany Ave.
MURRAY, WILLA LILLIAN.....	502	Clinton St.
NELSON, CLIFFORD JOSEPH.....	654	Rockdale Ave.
NESTLEY, EDWARD JULIUS.....	235	W. Seventh St., Newport, Ky.
NEU, KATHERINE.....	2113	Colerain Ave.
NONNEZ, HENRY.....	2327	Ashland Ave.
NOONAN, CHARLES STEWART.....	332	W. Rockdale Ave.
NORTHCUTT, JOHN T.....	1901	Vine St.
OEHLMANN, WILLIAM CHRISTIAN.....	2411	Moerlein Ave.
O'HARA, LAURA M.....	3047	Hackberry St.
OSBORN, JOSEPHINE.....	3439	Whitfield Ave.
OTT, REUBEN ERVIN FREDERICK.....	820	York St.
OTTING, EDITH AGNES.....	806	Park Ave.
OTTO, CARL EVERETT.....	1	Highway Ave., W. Covington, Ky.
PEASLEE, PATRICIA DOROTHY.....	3218	Warsaw Ave.
PERKINS, HILDEGARDE.....	3459	Observatory Pl., Hyde Park
PERKINS, MARGARET.....		Belmont Ave., College Hill
PETERS, WALTER FREDERIC.....	943	Sunset Ave., Price Hill
PHARES, LAVILLA.....	3719	Terrace Pl.
PICHEL, SWEET MARIE.....	233	Goodman St.
PITCHER, GEORGIA.....	424	Hopkins St.

POELKING, GERTRUDE ESTELLE.....	2707 Alms Pl.
POLLITT, BASIL HUBBARD.....	2242 Frances Lane
PRESSLER, LOUISE CAROLYN.....	3649 Archer St.
RAGAN, MAUDE BELLE.....	721 W. Eighth St.
RANZ, ESTHER.....	Blue Ash, O.
REINECKE, LUCY AGNES.....	9 The Parkside
RICHARDS, POLLIE ANN.....	Erie Ave. and Arnsby Pl.
RICHARDSON, BAYLE MANSER.....	86 W. McMillan St.
RIDDLE, CLARA BELLE.....	Hamilton, O., and 131 Park Ave., Hartwell
RIKER, ALBERT JOYCE.....	Oakland, Md., and 1916 Bigelow St.
ROSENBERG, DAVID.....	500 Hale Ave.
ROSS, FRANCES MOYER.....	Moyer Pl., Linwood
ROST, NORMA BEATRICE.....	2411 Fairview Ave.
ROUDA, ALVIN HARRY.....	1322 Chapel St.
ROYER, LUCILE MARIE.....	744 Mt. Hope Rd.
RULISON, JEANETTE ELIZABETH.....	6006 Prentice St., Madisonville
RUNCK, FRANCES ROBERTA.....	928 Locust St.
RYAN, ESTHER ELIZABETH.....	3207 Mozart Ave., Westwood
SACHS, MARIE HELLMAN.....	932 Avondale Ave.
SALKOVER, MEYER BERNARD.....	1720 Dexter Ave.
SCHADE, ARTHUR ALBERT.....	241 Emming St.
SCHAEFER, ALVINE BERTHA.....	4216 Leeper St.
SCHAEFER, WILLIAM RALPH.....	362 Howell Ave.
SCHOENWANDT, HELEN BERTHA.....	1926 Bigelow St.
SCHMIDT, IRMA MARY.....	3005 Scioto St.
SCHRODER, PAULINE.....	438 Rockdale Ave.
SCHUCHARDT, CECELIA AGNES.....	691 N. Crescent Ave.
SCHWALLIE, EVA MARIE.....	2218 Cameron Ave., Norwood, O.
SEITER, JEANETTE ERRETT.....	2201 Highland Ave.
SHAFER, RALPH NEWTON.....	319 Stites Ave.
SIEBLER, SALMEN KORKES.....	862 E. Rockdale Ave.
SIMPSON, LAURA CARROLL.....	College Hill
SMITH, HAROLD WATERMAN.....	2215 Norwood Ave., Norwood, O.
STAATS, CHESTER CLYDE.....	225 Bosley St.
STEVENS, DOROTHY SCOVIL.....	3627 Edwards Rd.
STEVENSON, MARY THOMAS.....	17 Ft. Thomas Ave., Ft. Thomas, Ky.
STRAUB, MARY AGNES.....	325 Retreat St., Bellevue, Ky.
STRAUS, ROBERT LEE.....	Maysville, Ky., and College Hill
SUDBRINK, ELSIE WILHELMINA.....	1374 Avon Pl.
TANGEMAN, HELEN.....	2815 Burnet Ave.
TASHMAN, RACHEL.....	1647 Clayton St.
TAYLOR, DOROTHEA COCKAYM.....	3826 Spencer Ave., Norwood, O.
TAYLOR, IRENE MARSHALL.....	6139 Montgomery Pike, Pleasant Ridge
TAYLOR, MARCUS BUELL.....	1600 Scott St., Covington, Ky.
TAYLOR, MAX FREEMAN.....	1600 Scott St., Covington, Ky.
THIEL, WALDA MARGUERITE.....	172 Bosley St.
TIERNEY, MARGUERITE ESTHER.....	233 Burns Ave., Wyoming, O.
TOBIN, ELLEN LOUISE.....	Kennedy Heights, O.
TRACY, CAROLINE BARRETT.....	532 Howell Ave.
TURLEY, HAROLD EDWIN.....	Burney, Ind., and 1215 Elm St.
TURNER, JACK.....	1835 S. Turner Ave.
VALERIO, BERNICE.....	907 Elberon Ave.
VANDERBILT, ETHEL.....	1134 Sherman Ave.
VOSS, LEROY CHARLES.....	3443 Burch Ave.
WARREN, LOUISE BEATRICE.....	630 E. Third St., Newport, Ky.
WASCEWITZ, PHILIP FOGEL.....	San Francisco, Cal., and 369 Howell Ave.
WATKINS, ANNE MAE.....	63 E. Ninth St., Covington, Ky.

WEBER, ELSIE MARGARET.....	208 Baxter Ave.
WESTERLUND, AGNES.....	130 Division St., Bellevue, Ky.
WILSHIRE, SIDNEY GORDON.....	710 Linden Ave., Newport, Ky.
WILSON, GEORGE HENRY.....	Winchester, O.
WINTERMEYER, WALTER HENRY.....	1001 Madison Ave., Covington, Ky.
WRIGHT, HELEN LOUISE.....	2452 Highland Ave.
WULFEOETTER, GERTRUDE MARIAN LOUISE.....	3202 Harrison Ave., Westwood
WYDMAN, DOROTHEA GARRARD.....	1330 Grace Ave., Hyde Park
ZIMMERMAN, FRANCES CAMERON.....	Glendale, O.

Irregular Students

BERMAN, TRESSA C.....	861 Lexington Ave.
BROWN, LUCY ATWATER.....	183 Grand Ave., Ft. Thomas, Ky.
CAREY, ALICE VIRGINIA.....	3538 Epworth Ave., Westwood
EMERSON, SARADELLE.....	Bellevue and Samuel Aves., Colledge Hill
EVANS, SARA MILDRED.....	4009 Floral Ave., Norwood, O.
GINSBERG, WILLIAM ABRAHAM.....	3404 Telford Ave.
HARRIS, MARIE KATHRYN.....	602 E. Third St., Newport, Ky.
HARRIS, HELEN PRISCILLA.....	3653 Washington Ave.
HOFFHEIMER, AMY R.....	6 W. Summerfield Ave.
KAPLAN, DORA E.....	16 The Cumberland
LEVY, ADELE.....	1735 Dexter Ave.
MORRIS, JAMES.....	Forestville, O.
OPPENHEIMER, ROSALYN.....	14 Landon Court
SELIG, HANNAH LEWIN.....	709 S. Crescent St.
SENIOR, FANNY.....	318 Rockdale Ave.
STEINAU, STELLA.....	3445 Mooney Ave.
STRAUS, HERBERT CERF.....	603 Rockdale Ave.
TANNIAN, KATHRYN.....	4205 Dana Ave.
WEISS, MAX.....	Homestead, Pa., and 857 Rockdale Ave.

Special Students

BEAUMONT, JOHN HERBERT.....	2633 Bellevue Ave.
BIRCH, MABEL HUBBARD.....	315 Wayne Ave.
BROWNELL, ADELIA.....	134 Elm St., Wyoming, O.
BUTLER, RACHAEL.....	1 New Westminster Bldg.
DABNEY, MRS. CHARLES W.....	The Romaine
DAVIS, EDITH J.....	845 Forest Ave.
FAULWETTER, LENORA CATHERINE.....	276 W. Fifth St., Covington, Ky.
GASTON, FANNIE R.....	3441 Observatory Ave.
GERDING, JANE.....	4 Leroy Court
GIBBS, CLINTON.....	2817 Preston Ave.
GOLDBERG, ETTA W.....	3491 Wilson Ave.
GOLDBERG, JACOB M.....	Bronx, New York, and 537 Betts St.
GOLDENBERG, GRACE DELANEY.....	1711 Brewster Ave.
GOLDENSTEIN, RAPHAEL.....	Portland, Ore., and 312 Straight St.
HARDIN, OLIVER WENDELL.....	Lincoln Ave.
HOLTMANN, FRIEDA.....	259 Greendale Ave.
HUME, PHILLIP RUSSEL.....	Walton, Ky., and Y. M. C. A., Covington, Ky.
KADISEVITZ, ISIDORE E.....	925 W. Seventh St.
KAHR, JOHANNA.....	259 Greendale Ave.
KATZENBERGER, EDITH FANNY.....	3015 Bathgate Ave.
KAUFMAN, JEAN B.....	617 Forest Ave.
KLEIN, BEATRICE ROSE.....	705 Glenwood Ave.
KLEIN, JULIA R.....	2372 Stratford Ave.
KRAMER, ELMER CHARLES.....	8302 Monteith Ave.
LICHTENSTEIN, MORRIS.....	Russia, and 3 LeRoy Court

LOWMAN, EVELYN THERESA.....	715 S. Crescent Ave.
MCCLELLAND, JOHN MILLS.....	Sandusky, O.
MAGEER, ORA ANNA.....	Tremont and Caroline Ave., Ft. Thomas, Ky.
MONAHAN, FAE M.....	2749 Observatory Ave.
MOORE, CHARLOTTE.....	Spokane, Wash., and Highland Ave.
MOORE, LUCILLE DORETTE.....	3450 Clifton Ave.
MYERS, MRS. FLORENCE.....	3432 Lyieburn Pl.
NULSEN, MARIE ELAINE.....	2323 Madison Ave., Norwood, O.
PIXLEY, MARIE LOUISE.....	Portsmouth, O., and 2027 Auburn Ave.
RAMMELSBERG, ALICE.....	Belmont Ave., College Hill
ROBINSON, MAX BREWSTER.....	2650 Bellevue Ave.
RODENBERG, ALBERT HENRY.....	4910 Eastern Ave.
RUSSEL, MILDRED.....	Shaw and Wabash Aves.
SALESKY, JOSEPH E.....	New York City, and Howell Ave.
SAUERSTON, SYBILLA MARTHA.....	313 Overton Ave., Newport, Ky.
SCHNUCKS, JULIA MARY.....	830 Poplar Ave.
SCHROEDER, CARL ATMORE.....	1605 Clayton Ave.
SIEKMAN, CHARLES ACHILLES.....	350 Terrace Ave.
SPOENEMAN, WALTER HERMAN.....	2514 Ravine Ave.
STIX, ELIZABETH F.....	3243 Delaware Ave.
TEASDALE, ANNA.....	The Harvey
THOMSON, MRS. ALEXANDER.....	5907 Belmont Ave.
THOMAS, RALPH.....	Dayton, O., and 1215 Elm St.
TRAGER, ELMA HORTENSE.....	3863 Reading Rd.
TROUNSTINE, HELEN.....	782 Clinton Springs Ave.
VILLENSKY, ETHEL.....	1013 E. McMillan St.
WAGNER, DOROTHY ELIZABETH.....	1114 Draper St.
WEISS, ROSE CLARA.....	271 W. McMillan St.
WHITFIELD, FLORENCE WINIFRED.....	1028 Oak Ave., College Hill
WITT, MRS. CATHERINE L.....	1613 Dexter Ave.

Unclassified Students

TEACHERS IN SPECIAL COURSES

ALDRICH, LAURA E.....	3413 Burch Ave.
BALDRIDGE, EDWARD HOLMES.....	4 Oak Ave., Hartwell
BECKER, LILLIE.....	416 Hawthorne Ave.
BIELER, FLORA.....	240 E. University Ave.
BOYD, EMMA.....	2376 Montana Ave.
BURDGE, ALICE VIRGINIA.....	1873 Kinney Ave.
BURGHARDT, FREDERICK K.....	103 Juergens Ave.
CHIDLAW, WILLIAM M.....	Cleves, O.
CLAASSEN, CLARA M.....	4025 Elsmere Ave., Norwood, O.
CORNWELL, MRS. IRENE D.....	3568 Rosedale Pl.
DEARNESS, FREDERICK WILLIAM.....	2654 Harrison Ave.
DUNN, JESSE K.....	3458 Cheviot Ave.
FINDEISS, ROSE LOUISE.....	2303 Park Ave.
FLICK, CATHERINE.....	721 W. Ninth St.
GEISENHOFER, KATHERINE.....	1615 Pullan Ave.
GIBERT, MARIE.....	1828 Fairfax Ave.
GRIESER, ADOLPHUS LOUIS.....	3039 Montana Ave.
GROSSE, SIMON J.....	5123 Wetzel Ave.
HARPER, GRACE M.....	828 Maple Ave., Newport, Ky.
HAUER, FRANK J.....	3254 Montana Ave.
HECKERMANN, RUTH.....	642 Monroe Ave., Newport, Ky.
HERRLE, KARL.....	3240 Bishop St.
HILL, EDITH ANNA.....	3 The Roanoke

HOLDT, CLARA W.....	421 Ludlow Ave.
HOLDT, META.....	Sta. L, Route 3, City
HOUSH, WILLIAM K.....	238 Gilman Ave.
HUMMEL, STELLA M.....	922 E. McMillan
HUSEMAN, LOUISE.....	1357 Broadway
JOHNSON, CHARLES W.....	2315 Williams Ave.
JOHNSTON, JOHN B.....	1719 Hewitt Ave.
JONES, WINIFRED.....	922 Nassau St.
KAEFER, WILLIAM.....	407 Ludlow Ave.
McKENZIE, MINNIE ELIZABETH.....	3274 Nash Ave.
MINKS, FLOYD G.....	232 Calhoun St.
OSBORNE, VIRGINIA A.....	3439 Whitfield Ave.
PICKER, ADOLPH.....	25 E. McMillan St.
PLATZ, ANNA MARIE.....	92 E. Mitchell Ave.
POWERS, JAMES P.....	205 Emma St., Covington, Ky.
REGENSTEIN, ANNA BELLE.....	24 Highland Ave., Ft. Thomas, Ky.
RESZKE, FELIX EUGENE.....	2230 Spring Grove Ave.
SCHICK, ALFRED C.....	2117 Hatmaker St.
SCHIEL, LUELLA.....	540 Terrace Ave.
SCHIEL, LOUIS M.....	540 Terrace Ave.
SCHLOTMAN, ROBERT C.....	3443 Pleasant View Ave.
SCHOEPFEL, CORA.....	832 Clinton St.
SCHRIEFER, ELSIE.....	2358 Wheeler St.
SCHRIEFER, VERONA LOUISE.....	2358 Wheeler St.
SKILLMAN, ADA MARIE.....	224 Williams Ave., Lockland, O.
STUNTZ, EDNA MARY.....	2981 Observatory Ave.
TELKER, MINNA J.....	220 Fosdick St.
THAYER, WARREN NELSON.....	Spring St., Norwood, O.
TRISLER, ANNA H.....	Plainville, O.
TRISLER, EARLY CLINTON.....	Plainville, O.
WILLIAMS, KATHERINE M.....	4425 Station Ave., Winton Pl.
WILSON, ARTHUR L.....	Newtown, O.
WINTER, ELIZABETH M. B.....	Egbert Ave.
WINTER, EMMA.....	Egbert Ave.

Evening Students

ACOMB, HELEN JANET.....	5642 Ridge Ave.
ACOMB, IRENE ALICE.....	5642 Ridge Ave.
AHLERS, JOHN FREDERICK.....	1307 California Ave.
ALBERS, FRANK JOSEPH.....	1320 Broadway
ALLEN, FOREST ROSE.....	1529 Gilpin Ave.
ALLEN, ZAY MARIE.....	1529 Gilpin Ave.
ANDERSON, YEATMAN.....	485 Riddle Rd.
ANDREWS, CLINTON H.....	Lane Seminary
APPEL, LOUIS KARL.....	264 Calhoun
AUSTIN, EDGAR COVILLE.....	Cincinnati Hospital
BAEHR, EDMUND M.....	3868 Oakley Ave.
BAER, SIGMUND C.....	3465 Reading Rd.
BAKER, EDGAR HUBBARD.....	2210 Ohio Ave.
BALDWIN, HARRIET.....	2631 Hemlock St.
BALL, SUE ADDIE.....	1734 Baymiller St.
BARR, CHARLES HUGH.....	3326 Glenmary Ave.
BARR, INGLE H.....	1231 Grace Ave.
BARTLETT, FRANCIS THORNTON.....	740 Woodbine Ave., Hartwell
BAST, JOHN E.....	1611 Waverly Ave.
BATES, FLORENCE ADELE.....	2606 Park Ave.
BAUMGARTNER, ALFRED.....	463 Warner St.

BAYLEY, LILLIAN M.	3473 Knott Ave.
BEIGEL, HERBERT ARTHUR.	1623 Tremont St.
BELL, MARY JANE.	119 Seventieth St.
BERNHEIM, RUTH GRACE.	2241 Kemper Lane
BIELER, FLORA.	240 E. University Ave.
BIEN, SUSAN JOSEPHINE.	3026 Woodburn Ave.
BILLIAN, AUGUSTA.	308 W. McMillan St.
BLACKBURN, ALEXANDER JOSEPH.	1708 Brewster Ave.
BLANCHARD, JENNIE.	56 The South Warwick
BLANTON, WILLIAM SPENCER.	718 Orchard St., Newport, Ky.
BLOCH, MARTIN.	528 Ridgeway Ave.
BOESCH, BERTHA.	3324 Westside Ave.
BOTTS, T. REED.	3831 Llewellyn Ave.
BOYLE, BLAIR.	670 June St.
BRICE, GERTRUDE.	Lima, O., and Kemper Lane and Locust St.
BROWDER, LILLIAN MAY.	4809 Winona Terrace
BRUECKNER, ERNA KATHERINE.	2917 Jefferson Ave.
BUCHANAN, CHARLES BYRNS.	3323 Spokane Ave.
BULLERDICK, ETHEL.	4323 Hamilton Ave.
BUNGENSTOCK, AUGUST GERARD.	1231 Beech Ave.
BURDGE, ALICE.	1875 Kinney Ave.
BURRIDGE, L. E.	485 Riddle Rd.
CAIE, THOMAS J.	435 Riddle Rd.
CALIMAN, SAMUEL DAVID.	2618 Kemper Lane
CALLAHAN, FLORENCE M.	966 Hawthorne Ave.
CALLON, ALBERT.	Milford, O.
CARR, NORA GENTRY (MRS.).	554 Evanswood Pl.
CARR, OSSIAN E.	554 Evanswood Pl.
CLAASSEN, CLARA MARGARET.	4025 Elsmere Ave., Norwood, O.
CLARKE, ROBERT HENRY.	Nashville, Tenn., and Lane Seminary
CLARKE, ERNST GEORGE.	2541 Vine St.
CLYDE, EDGAR ADAM.	523 Considine Ave.
COFFIN, WILLIAM MARMADUKE.	3449 Wilson Ave.
COLLINS, ISABEL.	826 Maple Ave., Newport, Ky.
CONANT, GERTRUDE GREENWOOD.	5709 Arnsby Pl., Madisonville
CONANT, ROGER L.	5709 Arnsby Pl., Madisonville
CONDIT, ARTHUR THOMAS.	Flat G, The Wilton
CONE, MAUDE R.	Glencoe Hotel
COOMBS, JOSEPH E.	Ft. Mitchell, Covington, Ky.
COX, ISABEL.	3246 Woodburn Ave.
CREGMILE, MARGARET ZAY.	Anna Louise Inn
CURRY, ELSIE CLAY.	Carlisle, Ky., and 291 Southern Ave.
DANIELS, VERA CAROLYN.	120 Calhoun St.
DARR, THERESA BEATRICE.	3977 Lowry Ave., Avondale
DAVIS, BEULAH GLADYS.	2358 Gilbert Ave.
DAVIS, EDITH STELLA.	826 Maple Ave., Newport, Ky.
DAVIS, GEORGE HOWARD.	4627 Glenshade Ave.
DECKER, EDNA MAY.	830 Main St., Covington, Ky.
DECKER, RAYMOND WILLIAM.	2280 Spring Grove Ave.
DEMAR, ANNIE ROHAN.	City Hospital
DEPRAD, PHERRELL ANDERSON.	828 Clark St.
DEUSCHLE, CECILIA AGNES.	2415 Fairview Ave.
DICKENS, MERVIN.	3770 Drake Ave.
DIECKMANN, ALVINA HENRIETTA.	3416 Cornell Pl.
DIECKMANN, OTTO.	3416 Cornell Pl.
DORMAN, SARAH BIRD.	7417 Carthage Ave.
DORNSEIFER, ETHEL MAY.	1612 Palm St., Northside

DOURSON, MARY CATHERINE.....	3117 Ahrens St.
DOWLING, GERTRUDE MARY.....	611 Crown St.
DOWNER, JR., JOHN.....	3722 Woodland Ave.
DRAPER, MARY RUTH.....	4324 Lafayette Ave.
DRESCH, WILLIAM HAUCK.....	Lynchburg, O.
DROEGE, LOYOLA EMMA.....	68 E. Eighth St., Covington, Ky.
DROSTE, ARCHIBALD J.....	863 Rockdale Ave.
DULLE, ARTHUR GEORGE.....	2218 Wheeler St.
DUNN, JESSE K.....	3458 Cheviot Ave.
ECKSTEIN, LUCIA.....	1547 Linn St.
EDWARDS, ALAMEDA MAE.....	315 W. Seventh St.
EDWARDS, MARION.....	Flat 3, 2905 Woodburn Ave.
EGER, ALFRED.....	1814 Fairfax Ave.
EISENSCHMIDT, FREDERICA EMMA.....	2111 Loth St.
ELLIOTT, CARRIE KINSINGER.....	2110 Fulton Ave.
ELLIOTT, MRS. HELEN G.....	2110 Fulton Ave.
ELSCHE, ESTELLA.....	Thirteenth and Main Sts.
ENGLANDER, FRIEDA.....	1361 Burdette Ave.
ERSKINE, HULDA.....	20 E. Eighth St.
EVANS, ANNE ELIZABETH.....	2336 Burnet Ave.
EVANS, ROBERT JOHNSON.....	633 Carlisle Ave.
EVERSMAN, MADELINE CATHERINE.....	574 Purcell Ave., Price Hill
EYRICH, JR., GEORGE FREDERICK.....	3127 Glendora Ave.
FAHNESTOCK, LEROY.....	3001 Observatory Ave.
FAIN, MARTHA GILLESPIE.....	The Roanoke
FAULKNER, JAMES BURTON.....	Flat 3, 2346 Auburn Ave.
FECHHEIMER, LOUIS F.....	250 Northern Ave.
FECHHEIMER, RUTH.....	250 Northern Ave.
FELDMANN, MARY HELEN.....	1623 Greenup St., Covington, Ky.
FELDMANN, OTTMAR J.....	1623 Greenup St., Covington, Ky.
FISCHER, ELIZABETH.....	2133 Sinton Ave.
FLICK, CATHERINE.....	721 W. Ninth St.
FLYNN, EDWARD MATTHEW.....	2417 Salutaris Ave.
FORTHMAN, MARTHA LOUISE.....	Bracken Rd., Westwood
FORTHMAN, ROBERT.....	Bracken Rd., Westwood
FOSTER, MARGARET ALICE.....	2362 Auburn Ave., and 36 Mills Ave., Wyoming, O.
FOX, EUGENE.....	605 Milton St.
FRANK, CARL FRED.....	2540 Homestead Pl.
FRANKEL, DESHA.....	21 Eastbourne Terrace
FRANKEN, BERTHA.....	717 Ninth St.
FRANKLIN, BLUMA.....	Flat P, The Wilhelm
FRANKLIN, JOHN.....	2006 Clarion Ave.
FRANZ, GEORGE.....	25 Eastbourne Terrace
FREDERICK, TESS.....	1017 Baymiller St.
FRIDMAN, JENNIE.....	1501 Lincoln St.
FRISCH, DAVID.....	927 Richmond St.
FUHRMANN, KENNETH FLINT.....	2107 West Clifton Ave.
FULLER, FRED WILLIAM.....	2321 Clifton Ave.
FURNESS, MARY BAKER.....	The Barclay
GEMBERG, HARRY.....	950 West Seventh St.
GEIGER, RUTH MAME.....	1330 Bremen St.
GISSLER, CLARA CECILIA.....	1244 Ellis St.
GERINGER, ALBERT CONNELL.....	3485 Colerain Ave.
GIBERT, MARIE.....	1828 Fairfax Ave.
GINBERG, HARRIS.....	9 LeRoy Court
GINSBERG, WILLIAM.....	3404 Teiford Ave.
GOODMAN, MADELINE ELIZABETH.....	3129 Harvard Ave.

GORES, GUIDO.....	2928 Hackberry St.
GRAD, SARAH BELLE.....	631 West Ninth St.
GRAEF, ALBERT AUGUST.....	1723 Central Ave.
GRAU, MAUDE ESTELLA.....	728 Park Ave., Newport, Ky.
GREEN, STELLA MARY.....	403 Dorchester Ave.
GRONWEG, ERNST.....	3362 Morrison Ave.
GROSSMAN, JOHN.....	717 Laurel Ave.
GRUBER, WALTER WILBUR.....	4126 34th St., Oakley
GUERTIN, GRACE.....	1239 East Third St.
HAECKL, LAURA CRESCENCE.....	1756 Powers St.
HALSEY, JESSE.....	2726 Cleinview Ave.
HAMANO, GEORGE T.....	Lane Seminary
HAMMOND, JOHN MARSHALL.....	306 West Seventh St.
HANAU, ALMA LOUISE.....	607 Riddle Rd.
HAPPE, CHARLES.....	957 Hawthorne Ave.
HAPPERSBERGER, EMELIN.....	2302 Kemper Lane
HAPPERSBERGER, HERBERT.....	2302 Kemper Lane
HAPPERSBERGER, PAULA.....	3202 Kemper Lane
HARGITT, MARY BELL.....	810 N. Crescent Ave.
HARGITT, ROBERT PALMER.....	810 N. Crescent Ave.
HARPER, GRACE MARTHA.....	828 Maple Ave., Newport, Ky.
HARPER, HAZEL.....	4227 Cherry St.
HARRIS, ELIZABETH.....	3901 Llewellyn Ave.
HARRIS, SAMUEL RICHMOND.....	628 Shillito St.
HAUCK, CARRIE.....	1522 Central Ave.
HAUCK, GEORGE W.....	457 Dayton St.
HAUMESSER, HEDWIG.....	Pleasant Ridge
HAUSS, KATHRYN VIOLA.....	1528 Elm St.
HAWLEY, MARGARET B.....	Syracuse, N. Y., and 2214 Slane Ave., Norwood, O.
HEHEMANN, FREDERICK HERMAN.....	1651 Queen City Ave.
HELM, AUGUST.....	3760 Clyde St.
HELMAN, MABEL ROCKWOOD.....	2527 Erie Ave.
HENGGE, JR., PETER PAUL.....	2604 Jefferson Ave.
HERMANN, JOS. M.....	2501 Homestead Pl.
HETTRICH, WALTER JOHN.....	15 W. Seventh St.
HICKMAN, THOMAS.....	Lane Seminary
HICKS, LOUIS RAY.....	4716 Ward St.
HIGGINS, CHESTER.....	Bellevue, Mich., and 3615 Morris St.
HILL, EDITH ANNA.....	3 The Roanoke
HILLER, CARL A.....	2205 Wheeler St.
HINES, ALLIE MARSHALL.....	56 The Warwick
HIRST, MARY JULIA.....	985 Paradrome St.
HISSEM, HELEN HUNT.....	12 The Madrid
HOEHN, RUTH JENNY.....	3113 Gloss Ave., Pleasant Ridge
HOFFMAN, MINNIE.....	1729 Carl St.
HOFFMEIER, LOUISE SOPHIE.....	Mt. Healthy, O., and 3206 Madison Rd.
HOLDT, MARTHA.....	558 Howell Ave.
HOOKE, RUTH CATHERINE.....	1518 Vine St.
HOTTENDORF, ELIZABETH.....	810 Richmond St.
HOWE, CLAYTON MORGAN.....	508 Riddle Rd.
HOWLETT, ELEANOR MARY.....	1901 Hopkins Ave., Norwood, O.
HUHEEY, FLORETTA KATE.....	1526 Garrard St., Covington, Ky.
HUMMEL, STELLA M.....	922 E. McMillan St.
HUTCHESON, WILLIAM TELEFORD.....	2113 Scott St., Covington, Ky.
INKROT, HENRY J.....	3822 Floral Ave., Norwood, O.
JACOBS, WILLIAM VEITH.....	553 Mitchell Ave.
JENKINS, BERTRAM W.....	2806 Madison Ave.

JOHANNIGMAN, JOHN G.....	481 Riddle Rd.
JOHNSON, CHARLES W.....	2315 Williams Ave., Norwood, O.
JOHNSON, CLARENCE NATHANIEL.....	3259 Gaff Ave.
JOHNSON, EVA MAY.....	4921 Wesley Ave., Norwood, O.
JONES, ANNE.....	443 Riddle Rd.
JONES, EFFIE MAE.....	3815 Hazel Ave., Norwood, O.
JONES, EDWARD SAFFORD.....	3323 Spokane Ave.
JORDAN, FLOYD.....	26 Garfield Pl.
JOYCE, BLANCHE MAY.....	215 Kinsey Ave.
KADISEVITZ, ISIDOR.....	925 W. Seventh St.
KASSELEBERG, IDA.....	721 Richmond St.
KAUFMAN, ANTOINETTE VICTORIA.....	1042 Wesley Ave.
KEMME, LOUIS JOSEPH.....	1819 Pleasant St.
KENNEDY, MAY C.....	81 E. Tenth St., Covington, Ky.
KINDERMANN, F. M.....	3823 Spencer Ave.
KING, ROBERT LEE.....	Lane Seminary
KINSBURG, MAX.....	1529 John St.
KLAHM, JOHN HENRY.....	1332 Ethan Ave., Camp Washington
KLAUS, CLAIRE MARIE.....	3532 Handman Ave.
KLEIN, JULIA ROSE.....	2372 Stratford Ave.
KLINE, JANE MARGARET.....	2215 Sinton Ave.
KLUSMEYER, CHARLES ANTON.....	304 Warner St.
KNAPP, AUGUST JOSEPH.....	2523 Halstead St.
KNORR, ARLINE J.....	2225 Ohio Ave.
KOHLER, HENRY.....	706 W. Eighth St.
KOHLMANN, JR., GEORGE HENRY.....	528 Howell Ave.
KOHLMANN, IRWIN L.....	528 Howell Ave.
KRAMER, ELMER CHARLES.....	3302 Monteith Ave.
KRAUSS, HENRY F.....	1376 Harrison Ave.
KUNSCHIK, EMILIE LAURA.....	3206 Madison Rd.
KUNTZ, HELEN MARGARET.....	4309 Haight Ave.
LACKEY, MARGARET.....	The Brittany, Ninth and Race Sts.
LAHKE, CHARLES FREDERICK.....	2829 Erie Ave.
LAIB, PAULINE LOUISE.....	1239 Hopple St.
LAMPE, MILDRED LOUISE.....	809 Overton St., Newport, Ky.
LANTIS, VERNON.....	238 McCormick Pl.
LECOUNT, VERA ADELIA.....	835 Armory Ave.
LEHNHOFF, RAYMOND G.....	475 Riddle Rd.
LEISER, OSCAR.....	255 Gilman St.
LEONARD, FRANK LOUIS.....	2366 Kemper Lane
LEVI, NANNETT.....	736 E. Ridgeway Ave.
LEVY, HATTIE.....	2623 Stanton Ave.
LEWIN, SARAH.....	723 Richmond St.
LEWIS, ANNA BELLE.....	2102 Fulton Ave.
LIEBENBERG, ARTHUR J.....	230 Stetson St.
LINCH, HARRY.....	1326 Locust St.
LINDSLEY, HOWARD FERRIS.....	5301 Church St., Madisonville
LITTLEJOHN, CHRISTINE.....	3070 Gilbert Ave.
LIVINGSTON, SADIE.....	1609 Baymiller St.
LOBITZ, CARL H.....	2559 Fairview Ave.
LOBITZ, ELSIE.....	2559 Fairview Ave.
LOMMEL, ELIZABETH.....	752 Clinton St.
LOTH, ROBERT.....	851 Rockdale Ave.
LOUIS, EDITH ALICE.....	420 Elizabeth St.
LOVETT, EDWARD.....	3324 Spokane Ave.
LOWE, VIRGIL.....	College Hill
LUESSEN, HENRY.....	2539 Marsh Ave., S. Norwood, O.

LYON, FLORA.....	412 Fifth Ave., Dayton, Ky.
LYON, HENRY.....	3416 Walworth Ave.
LYONS, HELEN.....	609 Overton St., Newport, Ky.
LYONS, MARY.....	426 Greenup St., Covington, Ky.
McCAFFERTY, FLORENCE.....	2723 Woodburn Ave.
MCDONALD, MARGARET HELEN.....	652 Lincoln Ave.
MCDONALD, MARY C.....	652 Lincoln Ave.
McINTIRE, WALTER ALAN.....	2318 Williams Ave., Norwood, O.
McKENZIE, ELIZABETH.....	3274 Nash Ave.
McMILLAN, GERTRUDE.....	2840 Observatory Ave.
MAESCHER, JOHN VICTOR.....	507 Terrace Ave.
MAGEE, MARGARET.....	3114 Ahrens St.
MAISH, ALBERT.....	1323 Laidlaw Ave.
MAJOEWSKY, ERNA MARGARET.....	2976 Gilbert Ave.
MAJOEWSKY, LEO RUDOLPH.....	121 Mason St.
MAJOEWSKY, WALTER.....	121 Mason St.
MALKIN, ABRAHAM.....	1822 Hewitt Ave.
MANISCHEWITZ, MRS. BESSIE.....	28 The Park Flats
MANISCHEWITZ, ROSE.....	2211 Park Ave.
MANNBECK, GEORGE F.....	1506 Dempsey St.
MARCUSON, AUGUSTA.....	868 Lexington Ave.
MARION, EDWARD ELLIOTT.....	2417 Salutaris Ave.
MARKLEY, CARL THOMPSON.....	1807 Josephine St.
MARKWARD, CHESTER SAUNDERS.....	2120 St. James Ave.
MARQUEZADO, JOHN.....	322 W. Fourth St.
MARSHALL, ROBERT BOYD.....	3068 Durrell Ave.
MASSA, VICTOR SIMON.....	307½ Central Ave.
MATTICK, CLARA CATHERINE.....	4223 Dane St.
MAYHEW, GENEVIEVE GRACE.....	1901 State Ave.
MEARS, NELLIE VIOLA.....	1050 Flint St.
MEINERS, EDMUND B.....	1532 Race St.
MEININGER, WALTER.....	1638 Pulte St.
MELROSE, BELLE.....	810 Mann Pl.
MERLAND, ELISE FREDERICA.....	2128 Ohio Ave.
MICHAEL, MAYM.....	1521 Hapsburg Ave.
MILLER, EDWARD ELLIOTT.....	2140 Auburn Ave.
MILLER, MRS. ETHEL BLOCH.....	528 Ridgeway Ave.
MILLER, RHEA GDULLA.....	6 The Waldemar
MINGES, MICHAEL.....	4 E. Ninth St.
MINKOVCKY, AARON.....	521 Richmond St.
MINKS, FLOYD.....	232 Calhoun St.
MOHRING, HARRY H.....	1116 Poplar St.
MONTAGUE, JR., SAMUEL FOSTER.....	116 E. McMillan St.
MONTGOMERY, LUCILLE BELLE.....	1358 Ethan Ave.
MOOR, LUCILLE DORETTA.....	345 Clifton Ave.
MORRISSEY, JULIA JOSEPHINE.....	3030 Gilbert Ave.
MORRISON, EDITH.....	2634 Alms Pl.
MORRISON, EMMA HENRIETTA.....	2543 Kincaid St.
MORRISON, ROBERT.....	784 Ludlow Ave.
MOYSE, AYLEEN.....	310 W. Rockdale Ave.
MUETHING, FRED F.....	136 Trevor St., Covington, Ky.
MUNRO, MARY TREASURE.....	2143 Sinton Ave.
MURPHY, MARY LORETTA.....	4163 Columbia Ave.
NENNINGER, LESTER FREDERICK.....	3327 Monteith Ave.
NICHOLSON, STANLEY THOMAS.....	8538 Bevis Ave.
NIEDERMEYER, AMELIA CLARA.....	920 Grand Ave., Price Hill
NIEMAN, HERBERT ANTHONY.....	930 Linn St.

O'CONNOR, MARGARET EUGENE.....	1125 Scott St., Covington, Ky.
OCKRANT, BESSIE.....	709 W. Ninth St.
OESTERLEIN, CHARLES DANIEL.....	862 Beecher St., Madisonville
O'NEAL, CHARLES EDWARD.....	2652 Stanton Ave.
O'NEAL, ELLA C.....	2652 Stanton Ave.
OTTEN, FLORENCE.....	3016 Scioto St.
OTTEN, FREDA.....	3016 Scioto St.
OTTERMAN, CHRISTINE EDMUND.....	1821 Highland Ave.
PADEN, RUSSELL HOMER.....	2216 Ohio Ave.
PARKER, GAIL.....	813 Maple Ave., Newport, Ky.
PARRY, JAMES G.....	31 Sixteenth St., Newport, Ky.
PAUL, WILLIAM C.....	2364 Victor St.
PELTON, MRS. MARTHA C.....	3 The Roanoke
PENDLETON, CHARLES GOULD.....	822 Clark St.
PERRY, ARLINGTON C.....	707 E. McMillan St.
PETERSON, ROGER WALES.....	3132 McHenry Ave.
PFISTER, MILDRED MARIE.....	2231 Spring Grove Ave.
PHILLIPS, VIRGINIA LYSLE.....	705 York St., Newport, Ky.
PICKER, ADOLPH.....	25 E. McMillan St.
PIDGEON, BERTHA MABEL.....	3120 Gloss Ave., Pleasant Ridge
PIESCHE, ELSIE CAROLINE.....	245 Earnshaw Ave.
PLATZ, ANNA M.....	92 E. Mitchell Ave.
PLIMPTON, LOIS ELIZABETH.....	2342 Auburn Ave.
PLUEDDEMANN, R. OSCAR.....	R. R. No. 1, California
POTRAFKE, AUGUSTA ALMA LOUISE.....	2517 Vine St.
POUND, MABEL L.....	Y. W. C. A., E. Eighth St.
POWELL, CARROLL ARTHUR.....	Hartwell
PRINCE, A. SENIOR.....	765 N. Crescent Ave.
PRINCE, MRS. EMMA H.....	765 N. Crescent Ave.
PROBST, NORMA.....	311 Northern Ave.
PUND, PHILOMENA F.....	20 E. Eighth St.
QUIRK, WILLIAM.....	2531 Moorman Ave.
RABENSTEIN, RUTH.....	3429 Boudinot Ave.
RAPPOPORT, JACOB ELLSWORTH.....	2853 Winslow Ave.
RASSELL, ROSE.....	928 Richmond St.
RAWLINGS, ROBERT W.....	406 E. Fifth St., Newport, Ky.
REED, ELOISE.....	844 Oak St.
REED, SAMUEL RICHARD.....	Lane Seminary
REEMELIN, ISABELLE.....	3471 Cheviot Ave.
REHN, ROBERT BERT.....	6036 Lantana Ave., College Hill
REINECKE, HILDA M.....	9 The Parkside
REINECKE, MARY DUDLEY.....	9 The Parkside
REINKE, CAROLYN ELLEN.....	Boudinot Ave. near Lischer St.
REINKE, LOUISE MARY.....	Boudinot Ave. near Lischer St.
REITZES, BERTHA.....	3139 Markbreit Ave.
RESZKE, FELIX.....	2230 Spring Grove Ave.
REUTHER, SINA.....	2120 Sinton Ave.
RICHARDS, JAMES S.....	3541 Burch Ave.
RITCHIE, EDGAR B.....	Cliff Pl., Price Hill
ROBERTS, EDWARD DODSON.....	248 Hosea Ave.
ROBINSON, GUY H.....	3483 Cornell Pl.
ROBINSON, IVA ZALUMA.....	2918 Fischer Pl.
ROOD, ARTHUR.....	73 E. Sixth St., Covington, Ky.
ROSENBAUM, DAVID N.....	1333 Locust St.
ROTHSTEIN, ROSE.....	2531 Park Ave.
ROYER, EARL BUFORD.....	744 Mt. Hope Rd.
RUNGE, CLIFFORD HERMAN.....	752 Dixmyth Ave.

RUSSELL, MILDRED.....	Shaw and Wabash Aves.
RUST, RICHARD SUTTON.....	267 Greendale Ave.
SACKHOFF, CLARENCE ALBERT.....	3023 Paxton Rd.
SAGMEISTER, CHARLES.....	322 Emming St.
SAHLFELD, ROBERT.....	3434 Burch Ave.
SAMUELS, MORRIS.....	McMillan St. and Copeland Ave.
SAXE, SAMUEL I.....	714 Hopkins Ave.
SCHAEFER, SAMUEL HOWARD.....	721 Richmond Ave.
SCHEAR, HARVEY.....	611 West Eighth St.
SCHICK, ALFRED C.....	2117 Hatmaker St.
SCHICK, JOHN MATTHEW.....	3269 Montana Ave.
SCHMALZ, DOROTHEA FRANCIS.....	2919 Glendora Ave.
SCHMID, ROBERT GEORGE.....	110 Peete St.
SCHMIDT, ALVIN EDWARD.....	3005 Scioto St.
SCHMIDT, IRMA MARY.....	3005 Scioto St.
SCHMIDT, JOHN G.....	4 Crescent Pl.
SCHMIDT, SINGUE O.....	4 Crescent Pl.
SCHMOGROW, FREDERICK THEODORE.....	3706 Cass Ave.
SCHNEIDER, ERMA LILLIAN.....	Robinson Rd., Pleasant Ridge
SCHOOK, KATHERINE.....	6601 E. Ledge St., Madisonville
SCHOOK, MARY ROSE.....	6601 E. Ledge St., Madisonville
SCHRADER, LOUISE K.....	2215 Ohio Ave.
SCHRIEFER, VERONA LOUISE.....	2358 Wheeler St.
SCHROEDER, CARL F.....	122 W. St. Clair St.
SCHUYLER, BURT TUTTLE.....	2619 Kemper Lane
SCHWEIKERT, MABEL.....	725 York St., Newport, Ky.
SCHWEIN, STELLA.....	6612 Poplar St., Madisonville
SEE, OSCAR.....	Blue Ash, O.
SEIBERT, EDWARD ADAM.....	3527 Wabash Ave.
SEMLER, VIOLA MARIE.....	McMillan St. and Upland Pl.
SHEA, DANIEL LINDSEY.....	2757 Webster Ave.
SHEPHERD, SANFORD E.....	1759 Cedar Ave., College Hill
SHOENTHAL, MARTIN.....	3563 Wilson Ave.
SHOOK, CHESTER RINEHART.....	The Euclid Apts.
SHORTER, SELMARITA.....	706 Barr St.
SICKING, MAY.....	102 E. Clifton Ave.
SIEBLER, SALMEN K.....	862 E. Rockdale Ave.
SILVERBLATT, LOUIS.....	761 W. Eighth St.
SILVERBLATT, NATHAN.....	761 W. Eighth St.
SILVERBLATT, SIMON.....	761 W. Eighth St.
SIMLICK, WILLIAM NELSON.....	3766 Isabella Ave.
SINNIGE, CARL ELMOR.....	213 E. University Ave.
SKILLMAN, ADA MARIE.....	224 William St., Lockland, O.
SKILLMAN, ELSA CORINNE.....	3553 Edwards Rd.
SMICKLER, SAMUEL.....	1326 Locust St.
SMITH, ALBERT EUGENE.....	1111 Myrtle Ave.
SMITH, CLARA MARGARET.....	655 Linn St.
SOUTHGATE, VIRGINIA.....	124 Garrard St., Covington, Ky.
SPEARS, J. RANKIN.....	646 E. Ninth St.
SPENCER, WILLIAM A.....	2916 Gilbert Ave.
SPOHR, ARTHUR AUGUST.....	434 W. McMicken Ave.
SPREEN, ERNST.....	4041 Runnymede Ave.
SPRIGG, MARY LOUISE.....	3027 Reading Rd.
STANLEY, WILLIAM H.....	288 Ludlow Ave.
STEIN, JOHN HARRY.....	717 Weingartner Pl., Newport, Ky.
STEINHARTER, BLANCHE.....	1813 Fairfax Ave.
STEINHARTER, JACOB LOUIS.....	1813 Fairfax Ave.

STEMLER, EMIL W.....	3335 Bonaparte Ave.
STEWART, HAROLD CLARK.....	1852 Columbia Ave.
STRATE, JESSIE B.....	5744 Bramble Ave.
STRAUSS, GODFREY EYRIC.....	4422 Station Ave., Winton Pl.
STRAUSS, MRS. LOUISE W.....	336 Northern Ave.
STRAUSS, MORRIS.....	2 The Valencia
STRAUSS, MRS. MORRIS.....	2 The Valencia
STRAUSS, SAMUEL.....	4422 Station Ave., Winton Pl.
STROBRIDGE, CATHERINE ERWIN.....	118 Malvern Pl.
STRONG, JAMES ALBERT.....	214 E. Center St., Carthage
STRUBBE, ELEANOR.....	3000 Euclid Ave.
STUNTZ, EDNA MAY.....	2981 Observatory Ave.
STURLA, HARRY L.....	3372 Hillside Ave.
SUER, WERNER.....	314 W. McMillan St.
SWOPE, JOSIE.....	20 E. Eighth St.
TATGENHORST, JR., CHARLES.....	117 Huntington Pl.
TALLMADGE, JR., HARRY.....	3489 Leland Ave.
TAPKE, MARIE JOSEPHINE.....	1532 Dixmont Ave.
TAYLOR, ARTHUR CULLEN.....	1928 Auburn Ave.
TEDTMAN, MARTHA.....	414 Betts St.
TELKER, MINNA J.....	220 Fosdick St.
TENNENBAUM, ESTHER.....	712 Richmond St.
TENNENBAUM, MINNIE.....	1356 Burdette Ave.
THIEL, WALDA.....	172 Bosley St.
THILLY, CHRISTEL.....	3205 Bishop St.
THUL, NATHAN WHEELER.....	2631 Hemlock St.
TOPP, BERTHA MARIE.....	1203 E. McMillan St.
VAN DUSEN, GORDON.....	924 Hawthorne Ave.
VAN PELT, CHARLES.....	1607 Brewster Ave.
VIEHMAN, BERTHA ANNA.....	2358 Flora St.
VOCKELL, WILLIAM H.....	4322 34th St., Oakley
VOLPP, MARGUERITE CAROLYN.....	6404 Kennedy Ave., Kennedy Heights
WAGNER, HAROLD H.....	1114 Draper St.
WAHLKE, ALBERT B. C.....	1054 Wilstach St.
WALL, LEO.....	3059 Mathey St.
WARNKING, LAURA JOSEPHINE.....	522 Rosemont Ave.
WARNKING, MAY.....	522 Rosemont Ave.
WATSON, FLORENCE.....	Grand Hotel
WEHRUNG, WESLEY WILLIAM.....	1992 Harrison Ave.
WELLER, ARTHUR.....	1142 Putnam St., Newport, Ky.
WEISKOPF, MAURICE FOX.....	Reading Rd. and Dana Ave.
WEISS, ROSE CLARA.....	271 W. McMillan St.
WEIST, LILLIE.....	225 McCormick St.
WEITLER, RETTA.....	2669 Dennis St., Corryville
WEST, SADIE WOOD.....	56 The South Warwick
WEST, SUSANNA.....	56 The South Warwick
WHEELER, ALFRED.....	2391 Warsaw Ave.
WHITCOMB, HELEN A.....	3539 St. Charles Pl.
WICKER, EDWIN ARTHUR.....	243 Hosea Ave.
WILBURN, BALLARD RUFUS.....	104 West Seventh St.
WILCOX, HARRIETT PAULINE.....	3617 Zumstein Ave.
WILKINS, WALTER.....	2514 Hackberry Ave.
WILLIAMS, JESSIE.....	4309 Haight Ave.
WILLIS, CLARA.....	1332 Lincoln Ave.
WILMS, ANTOINETTE DOROTHY.....	2232 Shadwell Ave.
WILSON, LEROY.....	932 E. McMillan St.
WILSON, RAYMOND.....	915 Paradrome St.

WILSON, WARNER C.....	728 Greenup St., Covington, Ky.
WINKELMANN, ALBERT T.....	460 Warner St.
WISE, ISAAC MEYER.....	3816 Dakota Ave.
WOIROL, GEORGE.....	2245 Stratford Ave.
WOLFF, GABRIEL HERMAN.....	2245 Stratford Ave.
WOLFROM, GERTRUDE.....	201 Main Ave., Elmwood Pl.
WOOD, MARIE CECELIA.....	18 Eastbourne Terrace
WRIGHT, ROBERT EMORY.....	2902 McMillan St.
WUENKER, ALBERT H.....	2609 Stanton Ave.
WUEST, EDWARD J.....	3430 Cornell Pl.
WULFF, ADOLPH GEORGE.....	2475 Paris St.
WULFF, IDA ELIZABETH.....	2475 Paris St.
YOCUM, GILBERT GASTON.....	350 Terrace Ave.
YOUMANS, HAROLD NORTH.....	1118 Locust St.
ZUGELTER, JR., FRANK LOUIS.....	913 Charlotte St.

COLLEGE FOR TEACHERS

Graduates

ALLEN, HELEN JEANETTE.....	2404 Auburn Ave.
ANDREW, AGNES KNOX.....	3600 Shaw Ave.
AULICK, EDWIN C.....	18 E. Seventh St.
BAKER, ESTHER MARY.....	3510 Zinsle Ave., Kennedy
BINGMAN, CARL WILSON.....	914 Hawthorne St.
BOGLE, ELIZABETH.....	2313 Wheeler St.
BROWN, JANET BEGGS.....	183 Grand Ave., Ft. Thomas, Ky.
CANTOR, ETHEL.....	18 Landon Court
CONNER, MARJORIE MILLER.....	711 Woodbine Ave., Hartwell
DAVIDSON, CHARLES LOWELL.....	3 Leroy Court
EGARTNER, ZACHAEUS THOMAS.....	1914 Harrison Ave.
EMESHOFF, HILDA.....	802 Delhi Ave.
EVANS, WILLIAM ANDERS.....	Newport, Ky.
FURNESS, MARY BAKER.....	26 The Barclay
GILBERT, MARY ALICE.....	4408 Erie Ave.
GOSLING, THOMAS WARRINGTON.....	559 Evanswood Ave.
HECKLER, RUBY MAY K.....	219 Bodman Ave.
HEISEL, EMMA ELIZABETH.....	308 Shillito St.
HOWE, CLAYTON MORGAN.....	508 Riddle Rd.
HYNDMAN, ELIZABETH.....	324 Mills Ave., Wyoming, O.
HYNDMAN, RUTH.....	324 Mills Ave., Wyoming, O.
KENDALL, DOROTHY C.....	4 St. James Pl.
KIEL, ANNA.....	2400 E. Montana Ave.
KOEHLER, KATHERINE LOUISE.....	2807 Bellevue Ave.
KOHNKY, EMMA.....	Cor. Crown St. and Essex Pl.
KROGER, LUCILE IDA.....	768 N. Crescent Ave.
LEVI, ISABELLE J.....	3469 Trimble Ave.
LOEBMAN, ELISE REIS.....	524 Hickman St.
LOGAN, HELEN.....	3492 Cheviot Ave.
LONDON, HENRIETTE.....	3579 Bogart Ave.
LORENZ, ELEANOR.....	E. North Bend Rd.
LOTTER, FREDERICK D.....	2425 McMicken Ave.
MARCH, CORA.....	Wyoming, O.
NUTE, MARY LOUISE.....	5 The Marguerite, Norwood, O.
PLIMPTON, MARGARET BEACH.....	731 Grand Ave., Price Hill
RICKEL, GILBERT JOHN.....	2185 Harrison Ave.
ROUNDS, CHARLES RUFUS.....	6108 Epworth St., Madisonville
SEARS, ISABEL.....	Glendale, O.

STANLEY, HELEN ABIGAIL.....	3576 Zumstein Ave.
STEVENSON, PAUL RAYMOND.....	3228 Wold Ave.
THORNDYKE, ELIZABETH.....	533 Camden Ave.
VANWINKLE, EDWIN C.....	2930 Carthage Ave., Pleasant Ridge
WAITE, MARY GLOYD.....	4 The Delmoor
WALKER, ALFRED MARSHALL.....	577 Considine Ave.
WARTCKI, SARAH M.....	815 Oak St.
WIEDEMER, LOTTIE.....	4821 Linden St., Norwood, O.
WOELLNER, FREDRIC.....	1617 Dudley St.
YANCEY, ROBERT LEE.....	36 W. Tenth St., Covington, Ky.
ZELLER, ELSIE M.....	729 Considine Ave.

Seniors

ACKERSON, ESTELLE.....	307 Grove Ave., Wyoming, O.
BRUMLEVE, CAMILLE.....	123 Hosea Ave.
CLARK, HAZEL JUNE.....	3242 Epworth Ave., Westwood
COWELL, JANE.....	3015 Woodburn Ave.
CUMMINS, MARY DOROTHY.....	3453 Cornell Pl.
D'AMOUR, MARTHA PAULA.....	7 The Elstun
D'ARCY, FRANCES ELIZABETH.....	454 E. Fifth St.
DAVIS, MARGUERITE.....	235 Albion Pl.
DEAN, ADELAIDE.....	826 W. Liberty St.
DONES, ELIZABETH JANE.....	5915 Sierra St.
ELHOFF, EDNA AMANDA.....	3251 Vine St.
EPINGER, JEANETTE.....	2242 Vine St.
FAY, SARAH HELEN.....	325 Reilly Ave., Wyoming, O.
FORTHMAN, WILLIAM.....	3033 Percy Ave.
GEOGHEGAN, MARGUERITE.....	2108 Fulton Ave.
GILBERT, GRACE M.....	328 Albany Ave.
GOODHART, SADIE ISABEL.....	506 Hale Ave.
INSKEEP, HAROLD ELWOOD.....	1328 Scott St., Covington, Ky.
JACOBS, FREDERICK RUDOLPH.....	1266 Iliff Ave.
JENKINS, RUTH LE MARIAN.....	839 Washington Ave., Newport, Ky.
JONES, ARTHUR DAVID.....	Cleves, O., and 3143 Jefferson Ave.
JONES, GRACE ELIZABETH.....	2215 Cameron Ave., Norwood, O.
KAUTZ, MARY.....	1209 Walnut St.
KEISER, MADELINE.....	245 McCormick Pl.
LINNARD, ELIZABETH CHARLOTTE.....	2550 N. Ingleside Ave.
LOEB, MARTHA.....	829 Rockdale Ave.
LOUIS, IRENE LUCILE.....	420 Elizabeth St.
MCKEE, FLORENCE LOUISE.....	2201 Nelson Ave.
MILLER, GRACE EVA.....	Highland and Beech Aves., Norwood, O.
MOMBACH, BLANCHE ALTHOF.....	70 Albany Ave.
MONTGOMERY, CHARLOTTE F.....	2325 Maryland Ave.
O'HARA, ETTA MARIE.....	3047 Hackberry St.
ORTH, HELEN.....	1925 Crown Ave., Norwood, O.
PAGE, MARY KATHERINE.....	1344 Locust St.
PHILLIPS, ANNETTA.....	Bodman Ave. and Young St.
PHILLIPS, KATHERINE.....	2525 Gilbert Ave.
RABENSTEIN, RUTH MARGHERITA.....	3429 Boudinot Ave.
SCHUEER, IRMA.....	1522 Blair Ave.
SEE, OSCAR FRANKLIN.....	Blue Ash, O.
SILVER, MAXWELL.....	New York City, and 1358 Burdette Ave.
SIMON, MARY EMMA.....	457 Considine Ave.
STIESS, LILLIAN E.....	2327 Burnet Ave.
STRUKE, NORMA LOUISE.....	3334 Jefferson Ave.
TEDTMANN, MARTHA FLORENCE.....	414 Betts St.

VAN TYNE, ELIZABETH LUCY.....	212 Chelsea Pl., Delhi
WAGNER, EARL WILLIAM.....	1114 Draper St.
WILFERT, ELSIE.....	358 Bryant Ave.
WISSEL, CLARA ANNA.....	Sta. K, Mt. Airy, O.
WOLFROB, GERTRUDE M.....	201 Maine Ave., Elmwood Pl., O.

Juniors

BRIDGE, AGNES HILL.....	1325 Yarmouth Ave.
CROZIER, HELEN EDITH.....	8 The Glenwood, College Hill
DURY, FLORENCE.....	529 W. Ridgeway Ave.
FOOTE, HELEN ALLEE.....	1773 Humboldt Ave.
GETZENDANNER, JESSIE TUMY.....	4540 Erie Ave.
HALBEN, MATILDA VON DER.....	3145 Bishop St.
HOFFMANN, CLARA EVA.....	2908 Urwiler Ave., Westwood
KYTE, MARGUERITE LOUISE.....	3430 Berry Ave.
RICHARDSON, RUTH KATHARINE.....	2632 Kemper Lane
VOLKERT, ESTHER FLORENCE.....	3502 Stacey Ave.
WUEST, ALMA MARIE.....	158 W. McMillan St.

Specials

MORTON, RUTH DUNHAM.....	2015 Hudson Ave., Norwood, O.
PIXLEY, MARIE LOUISE.....	2027 Auburn Ave.

Art Students

COOK, GRACE HELEN.....	1546 Dudley St.
FRANKE, EMMA DOROTHY.....	568 Mt. Hope Rd., Price Hill
HARING, LUCY.....	Aurora, Ind.
HINDMAN, PENELOPE R.....	940 Morris St.
HOHNECK, CLARA E.....	1369 Myrtle Ave.
HUMPHREYS, SUSANNAH HAMLIN.....	1553 Blair Ave.
HYDE, ROSELIND ROWE.....	814 Lincoln Ave.
KINNING, NORMA DOROTHY.....	North Bend Rd., College Hill
NICKLES, MARTHA EVELYN.....	1406 John St.
RAUCH, MILDRED RUTH.....	1924 State Ave.
SCHRADER, LOUISE E.....	2215 Ohio Ave.
WAGNER, EDNA A.....	S. E. Cor. Ninth and Linn Sts.

Kindergartners

ABRAMS, TRACY GERTRUDE.....	Urbana, O., and 3442 Hallwood Pl.
BROWN, ESTHER DORIS.....	Franklin, O., and 813 Oak St.
BUCKNER, LUCILLE.....	746 W. Eighth St.
BUTLER, AGNES MARIE.....	709 W. Fourth St.
EGLOFFSTEIN, SELMA C. VON.....	948 Grand Ave., Price Hill
EVANS, SARA MILDRED.....	4009 Floral Ave., Norwood, O.
FEID, FLORENCE.....	2156 Staebler St.
HARRISON, WILLA L.....	4259 Fergus St.
HAWTHORNE, VIOLA E.....	1224 London Ave.
HELLMUTH, MARIE ANN.....	Chillicothe, O., and 6 Linton St.
HELLMUTH, ELIZABETH MARY.....	Chillicothe, O., and 6 Linton St.
HUNT, HAZEL.....	3350 Carthage Ave.
LEWIS, LELIA.....	Jacksonville, Fla., and 813 Oak St.
MEYER, FLORENCE RUTH.....	216 Calhoun Ave.
MUSSMAN, ELSIE LILLIAN.....	2038 Pine St., Covington, Ky.
ORTMAN, CARRIE EDITH.....	2418 Shannon Ave., South Norwood, O.
REED, LENA AMELIA.....	941 Grand Ave., Price Hill
RICHARD, VIRGINIA DAVIS.....	3541 Burch Ave.
RICHMOND, J. MARGARET.....	Kings Mills, O., and 813 Oak St.

RIDD, ROSE ELLEN.....	834 York St., Newport, Ky.
SHELLEY, ELIZABETH GERTRUDE.....	239 Albion Pl.
SORIN, MARIE C.....	2612 Eden Ave.
TUDOR, MARGARET BLANCHE.....	660 Gholson Ave.
WILSON, EVES MARTHA.....	Kings Mills, O., and 813 Oak St.
WOLTER, ETHEL A.....	933 York St.

Home Economics

BROSIUS, RUTH.....	511 Prospect Pl.
BROWN, LUCY ATWATER.....	183 Grand Ave., Ft. Thomas, Ky.
BRUNHOFF, ELSIE.....	215 Forest Ave.
COLLINS, STELLA LEE.....	2 The Navarre
DEITEMEIER, WILHELMINA.....	2519 Homestead Pl.
FISHER, ADELAIDE PEALE.....	404 Crestline Ave., Price Hill
GILLHAM, OLIVE LOUISE.....	217 Sterritt Ave.
JOHNSON, DELLA MARTHA.....	2343 Park St.
KROGER, LUCILLE.....	768 N. Crescent Ave.
MESSERSMITH, EDNA MYRTLE.....	408 Highland Pl., Elmwood, O.
SELLEW, GLADYS.....	2515 Auburn Ave.
SHEEHY, KATHLEEN.....	928 York St., Newport, Ky.
SKINNER, MRS. JULIA.....	2626 May St.
SMITH, RUTH LENORE.....	227 Section Ave., Hartwell
SNODGRASS, MARY BLANCHE.....	334 McGregor Ave.
SOWARDS, GARNET WILSON.....	838 Hutchins Ave.
SPEARS, JULIA MAE.....	1333 Russell Ave., Covington, Ky.
STOCKMAN, LOUISE MAY.....	2302 Norwood Ave., Norwood, O.
VICKERY, HELEN.....	Evansville, Ind., and 3749 Rosedale Ave.
WELLER, MARY PURDUE.....	257 Hosea Ave.
WILLIAM, FRANCIS CORINNE.....	3415 Paxton Rd.
WILSON, GLADYS.....	4235 Forest Ave., Norwood, O.
WILSON, RUTH EVELYN.....	287 McGregor Ave.

Teachers

ANDERSON, JANE HOLMES.....	4811 Winton Rd.
APPEL, LOUIS KARL.....	264 Calhoun St.
AUSTIN, JENNIE.....	1110 Lincoln Ave.
BALDRIDGE, EDWARD HOLMES.....	4 Oak Ave., Hartwell
BECHT, ISABEL N.....	3402 Clifton Ave.
BECK, MARGUERITE.....	Mt. Washington
BECKER, LILLIE.....	416 Hawthorne Ave.
BELL, MAGGIE ELOISE.....	1357 Lincoln Ave.
BIELER, FLORA.....	240 E. University Ave.
BILLIAN, AUGUSTA.....	308 W. McMillan St.
BOLENDER, EDWARD L.....	Monroe, O.
BOYD, EMMA.....	2876 Montana Ave.
BURDGE, ALICE VIRGINIA.....	1873 Kinney Ave.
CALLON, ALBERT.....	Milford, O.
CHALKER, LEONIDAS R.....	5715 Arnsby Pl.
CHIDLAW, WILLIAM M.....	Cleves, O.
CLAASSEN, CLARA M.....	4025 Elsmere Ave.
CLEPHANE, ULYSSES DAVID.....	1553 Dixmont Ave.
CRAGG, ELSIE M.....	732 Sturgis Ave., Hartwell
DEARNESS, FREDERICK WILLIAM.....	2654 Harrison Ave.
DECKEBACH, ELLA M.....	1518 Fairfax Ave.
DUNN, JESSE K.....	3458 Cheviot Ave.
FLICK, CATHERINE.....	721 W. Ninth St.
FRIASON, CAMILLE.....	1021 Foraker Ave.

FULLMAN, SUSIE.....	7 S. Harrison Ave., Mt. Healthy, O.
GIBSON, ALICE J.....	3222 Harrison St.
GOULD, CATHERINE MAY.....	9 Walnut Ave.
GREGG, NELLIE A.....	1930 Williams Ave.
GRIESER, ADOLPHUS LOUIS.....	3039 Montana Ave.
HAEHNLE, ELMER C.....	830 York St.
HARTING, CAROLINE.....	228 Wayne Ave., Lockland, O.
HAUER, FRANK J.....	3254 Montana Ave.
HAYES, IRENE.....	6780 Parkland Ave., Saylor Park
HAYES, ROYAL.....	Saylor Park
HECKERMANN, RUTH.....	642 Monroe St., Newport, Ky.
HERRLE, KARL.....	3240 Bishop St.
HILL, EDITH ANNA.....	3 The Roanoke
HOSKINSON, ELIZABETH A.....	1355 Locust St.
HOTTENDORF, ELIZABETH.....	810 Richmond St.
HOUSH, WILLIAM K.....	238 Gilman Ave.
HOUSTON, IRENE WILLIAM.....	Alexandria, Ky.
HUGHES, ALLIE.....	Warsaw, Ky.
HUGI, ELIZABETH.....	505 Cooper Ave., Lockland, O.
HUMMEL, STELLA M.....	922 E. McMillan St.
JOHNSON, CHARLES WILLIAM.....	235 Williams Ave., Norwood, O.
JOHNSON, CLIFFORD V.....	4918 Roanoke Ave.
JOHNSTON, JOHN B.....	1719 Hewitt Ave.
JONES, WINIFRED.....	922 Nassau St.
KAEFER, WILLIAM.....	407 Ludlow Ave.
KIESTER, MURIEL.....	3244 Gaff Ave., Walnut Hills
LACKEY, MARGARET.....	6 The Brittany, Ninth and Race Sts.
LAMARRE, LOUISE.....	1436 Marlowe Ave., College Hill
LEE, CHARLES MARSTON.....	2 Park Pl.
LEVY, HATTIE MINNETTE.....	2623 Stanton Ave.
LINSEY, IRENE.....	Batavia, O.
LYONS, M. ETHEL.....	426 Greenup St., Covington, Ky.
MCCORMICK, CLAIRE A.....	806 Oak St.
MEININGER, FRED.....	1638 Pulte St.
MINKS, FLOYD GROVER.....	232 Calhoun St.
MYERS, CALLIE.....	3200 Mozart Ave.
NAGEL, AMELIA J.....	Cherry Grove, O.
NAGEL, CHARLES F.....	R. D. 2, Newtown, O.
OEHLER, MARIE ELIZABETH.....	717 Elberon Ave.
O'NEAL, CARRIE.....	110 Foote Ave., Bellevue, Ky.
ORR, HAZEL C.....	The New Westminster
OSBORN, VIRGINIA A.....	3439 Whitfield Ave.
PARKS, NETTIE M.....	405 E. McMillan St.
PEACE, MINNIE E.....	1007 Rittenhouse St.
PERIN, KATE PRESOCIA.....	4613 Central Ave.
POWERS, JAMES P.....	205 Emma St., Covington, Ky.
REEMELIN, ISABELLE.....	3417 Cheviot Ave.
REGENSTEIN, ANNA BELLE.....	24 Highland Ave., Ft. Thomas, Ky.
RESZKE, FELIX EUGENE.....	2230 Spring Grove Ave.
RICHARDS, DANIEL SMITH.....	1036 Wesley Ave.
RIESNER, ANNA.....	2358 Stratford Ave.
ROETKEN, EMMA L.....	Ft. Mitchell, Ky.
RUDOLPH, HARRISON H.....	2664 Harrison Ave.
RUSH, OLIVE.....	4145 Hamilton Ave.
RUSSELL, MAUDE M.....	135 Mills Ave., Hartwell
SAVAGE, EMMA A.....	512 Oak St., Wyoming, O.
SCHIEL, LOUIS M.....	540 Terrace Ave.

SCHLOTMAN, R. C.....	3443 Pleasant View Ave.
SCHOEPFEL, CORA.....	832 Clinton St.
SCHRIEFER, ELSIE.....	2358 Wheeler St.
SCHRIEFER, VERONA LOUISE.....	2358 Wheeler St.
SCHROER, CATHERINE E.....	3022 Junietta Ave., Westwood
SEARS, RUBY.....	Glendale, O.
SEAT, ELIZABETH F.....	2303 Park Ave.
SHAW, AGNES J.....	1550 St. Clair St., Covington, Ky.
SIEFERT, ELLA.....	Station L
SPOONER, BEATRICE.....	Glendale, O.
STEWART, W. B.....	Silverton, O.
SUTER, MAUD.....	The New Westminster
SWAIM, HARRIET.....	Montgomery, O.
TELKER, MINNA JOHANNA.....	220 Fosdick St.
THAYER, WARREN NELSON.....	Spring St., Norwood, O.
TRISLER, ANNA H.....	Plainville, O.
TRISLER, EARLY CLINTON.....	Plainville, O.
WARNKING, MAY.....	Rosemont and Andrews Aves.
WEST, FLORENCE VIRGINIA.....	6123 Navarre Pl., Madisonville
WILLIAMS, KATHERINE MEREDITH.....	4425 Station Ave., Winton Pl.
WILLIS, CLARA G.....	1332 Lincoln Ave.
WILSON, ARTHUR LAURENCE.....	Newtown, O.
WRIGHT, FLORENCE M.....	3519 Beechmont Ave.
WUEST, EDWARD J.....	3430 Cornell Pl.

COLLEGE OF ENGINEERING

Seniors

ANDERSON, YEATMAN, B. C. E.....	Cleveland, O., and Riddle Rd.
ANDREW, JAMES PETER, B. CH. E.....	3600 Shaw Ave.
BLOOM, CHARLES LOUIS, B. CH. E.....	1038 Wesley Ave.
FENKER, CLEMENT MEADE, B. E. E.....	448 Considine Ave.
GERSTLE, JOHN, B. CH. E.....	20 The Crescent
HYNDMAN, JR., ROBERT, B. E. E.....	324 Mills Ave., Wyoming, O.
MARKS, HENRY ALBERT, B. CH. E.....	113 Garfield Pl.
MITCHELL, MIRON ALLEN, M. E.....	213 Worth Ave.
MONAGHAN, WALTER I., M. E.....	1908 Kinney Ave.
NIERMANN, THEODORE H., B. C. E.....	3552 Woodburn Ave.
RAIT, CHARLES C., B. E. E.....	1875 Fairfax Ave.
SALKOVER, BENEDICT, B. CH. E.....	256 Ehrman Ave.
SIVE, BENJAMIN ELLIOTT, B. CH. E.....	1722 Fairfax Ave.
WARRINGTON, CHARLES MITCHELL, B. E. E.,	Zanesville, O., and 3018 Woodside Ave.

Sophomores

ALLEN, TOM MORRIS, B. CH. E.....	416 E. Eighth St., Newport, Ky.
GOETZ, ROBERT ALFRED, B. M. E.....	151 W. McMillan St.
HAKE, ELMER CHARLES, B. M. E.....	4216 Sullivan Ave., St. Bernard
JONES, DOUGLAS CLYDE, B. CH. E.....	2320 Kemper Lane
KRUG, JR., FRANK STANLEY, B. E. E.....	3352 Jefferson Ave.
LANGHAMMER, ANTHONY JOHN, B. M. E.....	713 Crescent Ave., Covington, Ky.
MITCHELL, ROBERT BAKER, B. E. E.....	6371 Rockway Ave.
KAPETANSKY, MAURICE, B. CH. E.....	823 Richmond St.

Freshmen

CROAKE, WILLIAM THOMAS, B. E. E.....	928 Armory Ave.
DIVINE, LAURENCE A., B. CH. E.....	27 Worthington Ave., Wyoming, O.
JAMES, DAVIS LAWLER, B. M. E.....	310 Oak St.

KRUSLING, J. ALBERT, B. E. E.....	2561 Erie Ave.
LUTZ, JOSEPH NIXON, B. CH. E.....	128 Wilmuth Ave., Wyoming, O.
McHUGH, ROBERT JAMES, B. M. E.....	3444 Cornell Pl.
MILLER, LEROY ROBERT, B. E. E.....	139 Washington Ave., Bellevue, Ky.
SPILLS, JOHN HERMAN, B. C. E.....	3439 Zumstein Ave.

Fifth Year Co-operative Students

BISHOP, JAMES STANLEY, E. E.....	2345 Kemper Lane
CHALKLEY, CURTIS RATHBONE, M. E.....	1712 Scott St., Covington, Ky.
CHISHOLM, JAMES CARPENTER, E. E.....	Glendale Ave., Madisonville
DARTNALL, THOMAS WILLIAM, C. E.....	Lockland, O.
ENGAHL, FREDERICK WILLIAM, C. E.....	Ortonville, Minn., and 2558 Eden Ave.
GRAEF, AUGUST PHILLIP, M. E.....	2911 Webster Ave., Hyde Park
HARDING, EDWARD CRITTENDEN, C. E.....	Milford, O.
HURXTHAL, ALPHONSE O., M. E.....	Rouceverte, W. Va., and 127 Calhoun St.
KIHN, WILLIAM JOHNSON, CH. E.....	Hamilton, O., and 116 Parker St.
KLEIN, CHESTER THOMAS, C. E.....	Hot Springs, Ark., and 2841 Melrose Ave.
LANGE, CHARLES HENRY LOUIS, C. E.....	Ortonville, Minn., and 116 Parker St.
PLUEDDEMANN, EDWARD WESTLEY, M. E.....	2564 Euclid Ave.
RACE, RICHARD MANN, M. E.....	Covington, Ky., and 2319 Stratford Ave.
REED, ROBERT FINDLEY, CH. E.....	844 Oak St.
SHARKEY, WILLIAM EDWARD, M. E.....	Middletown, O., and 845 Dayton St.
SHERIFF, JOHN WATERS, E. E.....	Williamsport, Pa., and 2558 Eden Ave.
STEWART, JOHN HAROLD, E. E.....	2558 Eden Ave.
STORY, EDWARD, B. MET. E.....	4413 Eighth St.
STRAIT, CLAY MORTIMER, E. E.....	Homer, N. Y., and 213 Calhoun St.
TILDEN, CHAUNCEY MORGAN, C. E.....	Vernon, Mich., and 2558 Eden Ave.
WESTENHOFF, ALPHONSE MUELLER, C. E.....	2621 Fenton Ave.
WIANT, PAUL PRINCE, C. E.....	238 McCormick Pl.
WOOD, CHARLES ESTES, CH. E.....	634 Glenway Ave., Wyoming, O.

Fourth Year Co-operative Students

ALEXANDER, LOWELL MELVILLE, E. E.....	3427 Middleton Ave.
AMES, JOHN HUBBARD, CH. E.....	2304 Madison Ave.
BINNS, H. STANLEY, M. E.....	Herndon, Ky., and 2407 Kenton St.
BLACKFORD, RALPH E., M. E.....	Middletown, O., and 844 Oak St.
BURNS, FRANCIS ORMSBY, M. E.....	1804 Larch Ave., College Hill
BURRHUS, HAROLD CLOUDE, C. E.....	Riverdale, Md., and 3231 Bishop St.
CARPENTER, HAROLD D., M. E.....	Bellevue, Ky., and 3427 Middleton Ave.
CHACE, CLYDE BURGESS, C. E.....	3231 Bishop St.
CRISSINGER, LLOYD CHARLES, C. E.....	76 Linden St., Ludlow, Ky.
DA CAMARA, JR., WILLIAM HARLEY, C. E., W. Palm Beach, Fla., and 3231 Bishop St.	
DOLLMAN, JOHN WILLET, M. E.....	759 Richmond St.
ERICKSON, ALVIN JOHN, M. E.....	Winona, Minn., and 2304 Victor St.
FELTON, STEPHEN JACOB, CH. E.....	Towanda, Pa., and 108 E. University Ave.
FILLMORE, HERBERT WORTH, E. E.....	Terrace Park, O.
GILMORE, ROBERT WILLIS, B. C. E.....	754 Epworth Ave.
HALSEY, GEORGE DAWSON, C. E.....	DeLand, Fla., and 2336 Wheeler St.
HARNED, MARK LAFAYETTE, E. E.....	Chickasha, Okla., and 116 Parker St.
HARTMANN, CARL, M. E.....	3798 Liston Ave.
HIGGINS, CHESTER LYON, C. E.....	Bellevue, Mich., and 3425 Middleton Ave.
KOHLHEPP, NORMAN, MET. E.....	Louisville, Ky., and 2210 Ohio Ave.
LEHNHOFF, RAYMOND S., E. E.....	475 Riddle Rd.
MAISH, ALBERT FREDERICK, C. E.....	1323 Laidlaw Ave., Bond Hill
METZGER, GEORGE D., B. E. E.....	29 Section Ave., Hartwell
MONTGOMERY, THADDEUS JAMES, C. E.....	2325 Maryland Ave.

MYERS, RAYMOND PENDERY, M. E.....	619 Burns Ave., Wyoming, O.
OSTER, EUGENE ARTHUR, E. E.....	1065 Wade St.
OTTE, JR., CHARLES WILLIAM, M. E.....	2522 Hackberry St.
PERRY, ARLINGTON CLYDE, E. E.....	Erie, Pa., and 707 E. McMillan St.
PYNE, ROLAND RALPH, C. E.....	10 E. Front St., Newport, Ky.
SCHAEFERKLAUS, LOUIS HENRY A., C. E.....	1384 Harrison Ave.
SCOFIELD, F. LESLIE, C. E.....	Mason, O., and 2304 Victor St.
SWINNEY, STUART LA FORCE, M. E.....	Ottumwa, Iowa, and 4708 Eastern Ave.
SYLVESTER, WILLIAM LAPP, C. E.....	Buffalo, N. Y., and 2614 Stratford Ave.
TOMS, CHARLES LAWSON WILDEY, CH. E.....	223 Calhoun St.
VINNEDGE, EARLE WALTER, M. E.....	34 Walnut St., Wyoming, O.
VOGELSANG, WALTER ANDREW, C. E.....	1649 Clayton St.
VOSS, RAYMOND FRANK, M. E.....	3447 Whitfield Ave.
WALLACE, BRUCE HINDS, C. E.....	3576 St. Charles Pl.
WILLIAMS, BERKELEY, M. E.....	Middletown, Conn., and 272 McCormick Pl.
WOLIUNG, WILLIAM EDWARD, CH. E.....	4346 Tower Ave., St. Bernard
WULFEKOETTER, BURT HENRY, C. E.....	1317 Myrtle Ave.
YOCUM, GILBERT GASTON, E. E.....	Steubenville, O., and 350 Terrace Ave.

Third Year Co-operative Students

BAER, BERNARD EDWARD, C. E.....	3465 Reading Rd.
BIEHL, JOHN FRED, E. E.....	1510 Bremen St.
BLACK, AMBROSE CHARLES LUKE, M. E.....	126 Main Ave., Elmwood Pl.
CLYDE, EDGAR ADAM, B. C. E.....	523 Considine Ave.
FISHBURN, CHARLES CYRUS, C. E.....	108 Huntington Pl.
FOSTER, RALPH FIRBANK, M. E.....	36 Mills Ave., Wyoming, O.
FRANKLIN, JACOB, C. E.....	2702 Hackberry St.
GOOSMAN, HERBERT JOHN, M. E.....	730 Froome Ave., Winton Pl.
HAYES, WILLIAM LEONARD, M. E.....	Medford, Mass., and 3646 Carthage Ave.
HECHT, VERNON GEORGE, C. E.....	Mt. Healthy, O.
HOWARD, WILLIAM RAPPE, C. E.....	Preston, Minn., and 3427 Middieton Ave.
JEWETT, JOSEPH FRANKLIN, E. E.....	507 Springfield Pike, Wyoming, O.
JOHNSTON, PAUL KENNEDY, E. E.....	1719 Hewitt Ave.
KIEFER, ABE, MET. E.....	511 Howell Ave.
KRUSE, RALPH HENRY, B. E. E.....	Sixth and Main Sts., Carthage
LEE, MAYNARD DE WILTON, C. E.....	Lima, N. Y., and 127 Calhoun St.
LEIGHTON, FRANK C., C. E.....	307 Ludlow Ave.
LINEAWEAVER, FERNLEIGH CYRUS, M. E.....	3616 Eastern Ave.
McKEE, CHARLES CLINTON, E. E.....	Findlay, O., and 307 Ludlow Ave.
McKINNEY, EARL CHAPIN, M. E.....	216 Woolper Ave.
MESSINGER, HENRY CALVERT, M. E.....	267 Calhoun St.
MIZNER, RALPH ADAM, C. E.....	Wheatland, Pa., and 3427 Middleton Ave.
MOFFETT, JOHN HARRISON, MET. E.....	Rushville, Ind., and 2718 Wagner St.
MOULD, ALEC FOWLER, C. E.....	Niagara Falls, N. Y., and 272 McCormick Pl.
NORTON, FAY ARTHUR, E. E.....	Piqua, O., and 3542 Trimble Ave.
OBERSCHMIDT, FRED HERMAN, E. E.....	2515 Addison St.
O'LOUGHLIN, JOSEPH J., C. E.....	Naugatauk, Conn., and 127 Calhoun St.
PEMBERTON, HAROLD VERNON, CH. E....	Buffalo, N. Y., and 2614 Stratford Ave.
PEPINSKY, BERNARD, C. E.....	1358 Lincoln Ave.
PHARES, HUGH KINZEL, C. E.....	3719 Terrace Pl.
PHELPS, STEPHEN B., M. E.....	Green Hill, Pa., and 707 E. McMillan St.
RETTICH, PAUL FREDERICK, CH. E.....	205 Oak St.
RICKWOOD, ROWLAND LEE, M. E.....	Evansville, Ind., and 2407 Kenton St.
ROBINSON, WILLIAM, C. E.....	3119 Imperial Ave.
RODGERS, THOMAS FRANKLIN, C. E.....	Lockland
RUSSO, PROSPER, C. E.....	2512 Chatham St.

SCHNEIDER, BEN ROSS, C. E.	Summit Hill, Pa., and 2558 Eden Ave.
SCHREIBER, WILLIAM AUGUST, C. E.	626 June St.
SCHROTH, HERBERT HENRY, C. E.	2966 Henshaw Ave.
SEAMANDS, EARL ARNETT, C. E.	Tucson, Ariz., and 3427 Middleton Ave.
SHEPARD, MORTON BRADLEY, C. E.	Beloit, Wis., and 2614 Stratford Ave.
STENGER, EDWIN PETER, CH. E.	Harrison, O., and 2614 Stratford Ave.
STEWART, WILBUR ALBIO, E. E.	1852 Columbia Ave.
TANGNEY, THOMAS JAMES, E. E.	Seattle, Wash., and 3427 Middleton Ave.
THOMPSON, GUY, E. E.	Lebanon, O., and 2516 Ravine St.
VALERIO, GIACINTO, C. E. E.	907 Elberon Ave.
WILHELMY, ODIN, B. CH. E.	3345 Woodburn Ave.

Second Year Co-operative Students

ALLEN, JR., WILLIAM MORRIS, E. E.	3548 Wabash Ave.
AUCH, RALPH HENRY, CH. E.	Chillicothe, O., and 370 Howell Ave.
AVERY, ALBERT ROLLINS, E. E.	Alexandria, S. Dak., and 3231 Bishop St.
BAILEY, ADDISON SHAW, CH. E.	Port Arthur, Tex., and 36 W. McMillan St.
BAKER, JAMES LEOPOLD, CH. E.	Pleasant Ridge
BEHLE, HOWARD FRANKLIN, MET. E.	829 Betts St.
BOWER, RAYMOND BERNARD, M. E.	Marine City, Mich., and 4708 Eastern Ave.
BRYANT, LESLIE EDWIN, M. E.	LaPorte, Ind., and 2614 Stratford Ave.
BUCKTON, ROBERT TOMLINSON, M. E.	2312 Washington Ave., Norwood, O.
CONWAY, OLIVER HAROLD, C. E.	Mt. Healthy, O.
COWELL, WARNER TUTTLE, M. E.	Westfield, N. Y., and 370 Howell Ave.
CRADDOCK, ALFRED JOHN, CH. E.	1038 Saratoga St., Newport, Ky.
CURRY, CHAUNCEY JAMES, M. E.	Milford, O.
DEQUASIE, LACEY GLENN, M. E.	Deepwater, W. Va., and 4224 Brownway Ave.
DOUGHERTY, SIDNEY SWAIN, M. E.	Liberty, Ind., and 2657 Dennis St.
ELLS, JR., WILLIAM HARTSHORNE, C. E.	2461 Grandin Rd.
ELMORE, PAUL WILLIAMSON, E. E.	Chattanooga, Tenn., and 2330 Wheeler St.
ERNST, HENRY SAMUEL, M. E.	Tiffin, O., and 208 Calhoun St.
FARAN, JR., JAMES JOHN, M. E.	2920 Observatory Rd.
FEHLMANN, ALFRED OTTO BERNHARD, M. E.	1937 Harrison Ave.
FELDMAN, EDMUND BURKE, C. E.	3591 Wilson Ave.
FISCHER, OSWALD, M. E.	Fitchburg, Mass., and 309 Ludlow Ave.
FORDE, JR., CHARLES WILLIAM, M. E.	Milford, O.
FREY, LESLIE L., E. E.	2442 Kennilworth Ave., Norwood, O.
FULLER, JOHN EMORY, M. E.	Senoia, Ga., and 2354 Flora Ave.
GENZMER, PAUL ERNEST RAYMOND, C. E.	Pittsfield, Mass., and 2700 Park Ave.
GEORGE, HERBERT, M. E.	Fitchburg, Mass., and 2330 Wheeler St.
GERST, WILLIAM JOSEPH, E. E.	658 W. McMicken Ave.
GIEBEL, ROBERT, E. E.	526 Howell Ave.
GORDON, MYRON BOYD, E. E.	309 Ludlow Ave.
GOUGH, ARTHUR CHARLES, M. E.	Fitchburg, Mass., and 309 Ludlow Ave.
GOWDY, EDWIN FINLEY, E. E.	Lebanon, O., and 2115 Auburn Ave.
GREEN, WILLIAM HARRISON, E. E.	2231 Burnet Ave.
GUEST, WARD EARL, M. E.	Hoopeston, Ill., and 127 Calhoun St.
HALL, JOSEPH MACFARLANE, E. E.	LaPorte, Tex., and 2363 Stratford Ave.
HAMILTON, HERBERT NORTH, E. E.	Cumberland Gap, Tenn., and 2366 Stratford Ave.
HARKNESS, EARL WILLIAM, E. E.	East Lynn, Ill., and 2210 Ohio Ave.
HARRINGTON, EARL LAWRENCE, C. E.	Westfield, N. Y., and 2432 Clifton Ave.
HERLINGER, HAROLD VAN CLEVE, CH. E.	607 Lexington Ave., Newport, Ky.
HOLZ, ROBERT, C. E.	3574 Edwards Rd.
HORN, SILAS H., E. E.	Richmond, Ind., and 208 Calhoun St.
HUBER, WILLIAM ROBERT, M. E.	Richmond, Ind., and 3018 Woodside Pl.
HUNT, LAWRENCE EDWIN, C. E.	5405 Central Ave., Madisonville

JANNECK, FRANK GEORGE, M. E.	Northport, Wash., and 520 Riddle Rd.
JOHNSTON, ROSWELL ARMSTRONG, M. E.	1028 Considine Ave.
KINCH, JOHN TAYLOR, C. E.	Clarksburg, W. Va., and 2341 Stratford Ave.
KRAPP, CLARENCE GEORGE, M. E.	6058 Oakwood Ave.
KUHLMAN, LEO GEORGE, E. E.	819 Barr St.
KUNKER, CHARLES EUGENE, C. E.	Morrow, O., and Wyoming, O.
LAIRD, GLOVER EUGENE, E. E.	Highland, O.
LANDIS, GEORGE HERMAN, E. E.	Tokyo, Japan, and 2210 Ohio Ave.
LANGENHEIM, RALPH LOUIS, C. E.	3543 Michigan Ave.
LAWTON, GEORGE WILMOT, E. E.	Lawton, Mich., and 374 Howell Ave.
LOYD, JOHN C., M. E.	Van Wert, O., and 2350 Clifton Ave.
MAHON, JAMES STEPHEN, C. E.	3370 Morrison Ave.
MONCE, EDWIN WALTON, C. E.	3558 Monteith Ave.
MORRIS, BURTON CLO, M. E.	2629 Park Ave.
MORRIS, JOSEPH GREEN, M. E.	Evanston, Ill., and 429 Resor Ave.
MORRISON, ARTHUR JULIUS, C. E.	3558 Beechmont Ave.
MORRISON, GARFIELD, M. E.	Bethel, Conn., and 2568 Euclid Ave.
MUELLER, STEPHEN KING, M. E.	1719 Central Ave.
NOE, OSCAR PERRINE, M. E.	4730 Winton Rd.
PALMER, ROY, M. E.	825 Chateau Ave.
PATTON, LABAN THEODORE, E. E.	Catlettsburg, Ky., and 2356 Auburn Ave.
PENDERY, HORACE FINDLAY, M. E.	3611 Zumstein Ave.
PENDERSON, HENRY ANDREW, M. E.	Berkeley, Cal., and 1309 Wheeler St.
PORTER, HAROLD MITCHELL, M. E.	Avery Lane, Hyde Park
RECK, NELSON, M. E.	Rockford, Ill., and 2616 May St.
REYNOLDS, CLIFFORD, C. E.	6 Linton St.
RUSH, THOMAS WILLIAM, C. E.	Niagara Falls, N. Y., and 2300 Wheeler St.
SCALLAN, PAUL, CH. E.	2824 Price Ave.
SCHNEIDER, ANTON WILHELM, M. E.	Summit Hill, Pa., and 2558 Eden Ave.
SCHOETTLE, GEORGE PAUL, C. E.	3941 Dickson Ave.
SEITZ, ARTHUR JOHN, CH. E.	705 Delhi Ave.
SOLLER, WALTER, M. E.	Talbott Ave., Sta. B
SPENCE, JAMES CARL, M. E.	Milford, O.
TAYLOR, JAMES WILLIAM, M. E.	Reedsville, Pa., and 526 Riddle Rd.
THOMPSON, WILLIAM PHIPPS, C. E.	2233 Frances Lane
UHLLEIN, HENRY CALMER, M. E.	2706 Cleinview Ave.
UTLEY, ROMEYN LATHROP, E. E.	Seneca Falls, N. Y., and 3014 Burnet Ave.
VOORHES, MARION I., CH. E.	Blue Ash, O.
WEEKES, CLIFTON L'ORIGINAL, C. E.	New York City, and 2210 Ohio Ave.
WALKER, SAMUEL WASHINGTON LUCCOCK, MET. E.,	Woodward, Okla., and 901 Chateau Ave.
WEBB, EDGAR MORRISON, M. E.	Reedsville, Pa., and 526 Riddle Rd.
WEIL, GORDON, M. E.	820 Hutchins Ave.
WILSON, LEW E., E. E.	Indianapolis, Ind., and 2833 Stanton Ave.
WUENKER, RALPH FREDERICK, M. E.	547 Ringgold St.

First Year Co-operative Students

ALEXANDER, DON FISK, E. E.	Dayton, O., and 2313 Stratford Ave.
ALTAMER, HAROLD MILLER, M. E.	1511 Groesbeck Rd., College Hill
ANDEREGG, RUPERT ANDREW, C. E.	Long Lake, Minn., and 2360 Clifton Ave.
ANDERSON, RAYMOND DESMOND, E. E.	Greensburg, Ind., and 57 Calhoun St.
ANDREW, WILLIAM, M. E.	Fitchburg, Mass., and 40 E. McMillan St.
AUG, GEORGE CHRISTIAN, C. E.	3740 Lueders Ave., Hyde Park
BAGEL, WALTER THOMAS, CH. E.	4237 Brookside Ave.
BERNARD, BYRON FRANKLIN, M. E.	Liberty, Ind., and 3231 Bishop St.
BAUDE, WALTER ANDREW, CH. E.	Louisville, Ky., and 2231 Bishop St.

BAUER, EDWIN FRANCIS, C. E.	Indianapolis, Ind., and 2363 Stratford Ave.
BISHOP, RUSSELL PERNE, E. E.	Ft. Duchesne, Utah, and 2360 Clifton Ave.
BOTTS, EARL ALBERT, M. E.	Anderson, Ind., and 514 E. Third St., Newport, Ky.
BRAUN, ERNST, C. E.	2434 Ingelside Ave.
BRETT, JAMES ARTHUR, E. E.	Lafayette Circle
BRITAIN, GLENN H., E. E.	El Douds, Kan., and 2711 Auburn Ave.
BROWN, DARWIN SCOTT, E. E.	228 Piedmont Ave.
BROWN, GEORGE CARLTON, E. E.	Williamsport, Pa., and 2309 Wheeler St.
BRUCK, ALBERT GEORGE, M. E.	Hamilton, O., and 4224 Brownway Ave.
BRUMBACK, DAVID LA DOYT, M. E.	Van Wert, O., and 3554 Flora Ave.
BURKETT, DILLARD, CH. E.	R. F. D. 1, Madisonville
BUTTERFIELD, ASA VAN WORMER, M. E.	5946 Belmont Ave.
CARR, LUCIEN STEVENS, C. E.	3534 Stettinius Ave., Hyde Park
CHAPMAN, HENRY GORDON, C. E.	R. F. D. 1, Madisonville
CLARK, CARLTON COBB, E. E.	Koshkonong, Mo., and 2309 Wheeler St.
CRANMER, RODNEY LOUIS, C. E.	Sheohequin, Pa., and 2700 Park Ave.
DAVIE, ROBERT, E. E.	Ozone Park, L. I., and 2210 Ohio Ave.
DELEHANTY, RUDOLPH DANIEL, C. E.	3839 Hopkins St., Norwood, O.
DELL, GEORGE W., M. E.	1820 Race St.
DICER, CLYDE GILLFORD, E. E.	Griffith, Ind., and 58 E. McMillan St.
DIKEMAN, HOWARD WILBUR, E. E.	Chickasha, Okla., and 3231 Bishop St.
DORAN, JOHN EDWARD, E. E.	3074 Sidney Ave.
DU MARS, CHARLES VINCENT, E. E.	Kennard, Pa., and 312 Straight St.
EARLEY, RAYMOND EMMETT, E. E.	60 Mt. Claire Ave., Ludlow, Ky.
EHLERS, WILLIAM DONALD, C. E.	4208 Brookside Ave.
ELHOFF, ERWIN JOHN, E. E.	3251 Vine St.
ELY, LAWRENCE STERLING, E. E.	955 Nassau St.
FIALCO, HARRY, CH. E.	539 W. Eighth St.
FISHER, CLINTON GEORGE, CH. E.	2384 Rohs St.
FISHER, JOHN HOWARD, C. E.	6212 Erie Ave., Madisonville
FORTLAGE, CARL ERNST, C. E.	838 Monroe St., Newport, Ky.
FRIES, DANIEL GUSTAV, E. E.	1826 Garrard St., Covington, Ky.
FULLER, ROBERT BENJAMIN, C. E.	Senoia, Ga., and 3231 Bishop St.
GABRIEL, LOUIS SUMMERS, C. E.	4007 Elvin Ave., Norwood, O.
GAUS, ELMER EDWARD, M. E.	Anderson, Ind., and 1132 Main St., Covington, Ky.
GARDNER, GREYSON CURTIS, E. E.	Cottage Grove, Ind., and 2079 Lawrence Ave., Norwood, O.
GARVIN, HUGH, M. E.	Santiago, Chile, S. A., and 2354 Flora St.
GEILE, WILFRED GEORGE, C. E.	Seymour, Ind., and 306 Northern Ave.
GERSTLE, JOSEPH PETER, M. E.	3558 Beechmont Ave.
GLENN, EARL CLIFFORD, C. E.	4242 Chambers St.
GRANDIN, JOHN JONAS, E. E.	Lorenzo, Idaho, and 136 W. McMillan St.
GREENLEAF, FRANK MOUNT, M. E.	Kingman, Kan., and 2519 Auburn Ave.
GREENMAN, RALPH GRIGGS, C. E.	Pond Creek, Okla., and 1764 Fairmount Ave.
GREIWE, HUBERT BERNARD, C. E.	1757 Williams Ave., Norwood, O.
GRISARD, JOHN KEELAR, E. E.	3870 Ivanhoe Ave., Norwood, O.
GROSSIUS, WILLIAM HENRY, C. E.	2906 Woodburn Ave.
HALL, WALTER WILLIAM, M. E.	La Porte, Tex., and 2363 Stratford Ave.
HALLER, HERBERT LUDWIG JACOB, E. E.	2313 Victor St.
HAMILTON, WILLIAM WALTER, C. E.	2429 Fairview Ave.
HAND, CARL ANNEN, E. E.	Rockford, Ill., and 127 Calhoun St.
HARRELL, ROBERT JESSUP, C. E.	Cleves, O.
HASLETTE, GEORGE GOODMAN, M. E.	Altoona, Pa., and 32 Hollister St.
HARTMAN, SAMUEL MATTHEW, M. E.	Indianapolis, Ind., and 2334 Kemper Lane
HENLEIN, HERBERT GEORGE, CH. E.	2941 Marshall Ave.
HILL, JOHN HOWARD, C. E.	5023 Ward St., Madisonville
HODAPP, GEORGE HENRY, C. E.	7100 Carthage Ave.

HODTUM, JOSEPH BERNHARDT, E. E.	505 Milton St.
HOGUE, EDMUND BURKE, E. E.	Altoona, Pa., and 32 Hollister St.
HOWLAND, HERMAN CHAMBERS, C. E.	2365 Kemper Lane
JUDKINS, ROBERT CHARLES, C. E.	130 Fairfield Ave., Bellevue, Ky.
KANE, HERBERT WILLIAM, M. E.	New Orleans, La., and 2657 Dennis St.
KATKER, WILLIAM CORTMUN, C. E.	3229 Glendora Ave.
KAUFMAN, BENEDICT, CH. E.	541 Clinton St.
KEMP, GEORGE LAWRENCE, M. E.	26 N. Crescent Ave., Hartwell
KENYON, SAMUEL ALBERT, M. E.	Fitchburg, Mass., and 40 E. McMillan St.
KIHN, EDGAR JOSEPH, CH. E.	Hamilton, O., and Woodside Ave.
KINCAID, EARL BELMONT, CH. E.	Glenrose, O.
KING, CLINTON BURTON, E. E.	1767 Chase St.
KINYON, HAROLD ALONZO, CH. E.	211 Bodman Ave.
KREMIS, EDWARD HENRY, E. E.	Greenville, Pa., and 108 E. University Ave.
KREUZER, CHARLES PERCIVAL, M. E.	Schenectady, N. Y., and 312 Straight St.
KROEGER, GUSTAV HENRY, M. E.	1837 Clarion Ave.
KYSOR, KARL DANIEL, M. E.	Blytheville, Ark., and 3231 Bishop St.
LAIR, JACK REYNOLDS, E. E.	Dayton, O.
LEARY, JOHN FRANCIS, M. E.	Little Falls, N. Y., and 350 Terrace Ave.
LEHRER, WILLIAM KEYSER, E. E.	Rushsylvania, O., and Glendale, O.
LINDSLEY, ALLEN MOORE, M. E.	4546 Edgewood Ave., Winton Pl.
LYNN, HARRY WILLIAM, M. E.	Grand Rapids, Wis., and 3231 Bishop St.
MCCOMAS, DONALD RICHARD, E. E.	2152 Alpine Pl.
MCCORMICK, HAROLD VOORHEES, E. E.	3110 Woodburn Ave.
MCDONALD, WILLIAM JOHN, CH. E.	3257 Southside Ave.
MCGILL, MAX PITTEGER, C. E.	Albion, Neb., and 309 Ludlow Ave.
MCCNEILL, JOHN PEHRSON, C. E.	5530 Covington Ave., Madisonville
MACKAY, ADAM MACDONALD, C. E.	Buffalo, N. Y., and 3231 Bishop St.
MADDOX, HARRY EDWARD, E. E.	Mt. Carmel, O., and 2132 Colerain Ave.
MARKGRAF, CARL ALEXANDER, C. E.	50 Graham St.
MARLATT, HUSTON REESE, E. E.,	Richmond, Ind., and 130 Fairfield Ave., Bellevue, Ky.
MARQUIS, EDWARD GIVEN, E. E.	Marietta, O., and 4215 Smith Rd., Norwood, O.
MAULEN, HENRY, CH. E.	Vine and Rochelle Sts.
MILLER, ABE JACK, CH. E.	6 Waldamar Flats
MILLS, PELLHAM EUGENE, M. E.	McCombs, Miss., and 2521 Auburn Ave.
MITCHELL, ESKER RADFORD, C. E.	Dayton, O., and 2313 Stratford Ave.
MOCH, JAMES LOWMAN, M. E.	3704 Reading Rd.
MONTGOMERY, JAMES WILLIAM, E. E.	2214 Highland Ave.
MORSE, JR., WELLSLAKE DEMAREST, C. E.	Pasadena, Cal., and 370 Howell Ave.
MOURAD, OSCAR ANDREWS, M. E.	Hartford, Conn., and 2207 Auburn Ave.
MUENZENMAIER, ALBERT GEORGE, CH. E.	Lebanon, O., and 2444 Harrison Ave.
MURPHY, DON CARLOS, C. E.	Lincoln, Ill., and 85 W. Fourth St., Covington, Ky.
MYERS, ROBERT WILLIAM, M. E.	5024 Forest Ave., Norwood, O.
NELSON, ORIEL BENSON, C. E.	4712 Ward St., Madisonville
NEWBIGGING, ALFRED BUCKINGHAM, E. E.	3424 Stettinius Ave.
NEWTON, HAROLD WILSON, M. E.	Elmira, N. Y., and 2521 Auburn Ave.
NYCUM, HOMER CLARKE, E. E.	Keota, Iowa, and 127 Calhoun St.
O'CONNELL, JOHN, E. E.	627 Hawthorne Ave.
ODGEN, CHAUNCEY MCCALL, C. E.	Franklin, N. Y., and 3231 Bishop St.
OSTERBROCK, WILLIAM CARL, E. E.	119 West 15th St.
OTTENJOHN, RALPH FETTA, M. E.	3552 Mooney Ave.
PARSONS, TREMAINE, C. E.	Lenox, Mass., and 2141 Clifton Ave.
PEASE, WILLIAM PAGE, E. E.	Rutland, Vt., and 3231 Bishop St.
PECK, FERDINAND, CH. E.	2341 Stratford Ave.
PETERMAN, WILLIAM ARTHUR, C. E.	5725 Prentice Ave.
PHILLIPS, M. S., CH. E.	524 S. Main St., Middletown, O.

PINCHARD, FRANK, E. E.....	Georgetown, O., and 723 Delta Ave.
PORTER, CHARLES HAROLD, C. E.....	2210 Ohio Ave.
PROCTOR, LELAND MANNING, CH. E.....	Everett, Wash., and 2657 Dennis St.
QUINLAN, JOSEPH ALONZO, E. E.....	Georgetown, O., and 723 Delta Ave.
RICHARDSON, ARTHUR FOX, M. E.....	2632 Kemper Lane
RIEHLE, ARTHUR PHILLIP, E. E.....	2315 Victor St.
RITCHIE, ANDREW OSCAR, C. E.....	34 Elm St., Ludlow, Ky.
ROOT, EMERY NELSON, C. E.....	Lenox, Mass., and 2700 Park Ave.
RYBOLT, WALTER LAWRENCE, M. E.....	1965 Fairfax Ave.
RUCKSTUHL, EDWIN WILLIAM, CH. E.....	3068 Wardell Ave.
SADLER, DUDLEY KARKALITZ, C. E.....	New Orleans, La., and 317 Straight St.
SCHAKEL, WALTER CHARLES, C. E.....	Indianapolis, Ind., and 2148 Kindle Ave.
SCHNEIDER, ARTHUR HENRY, C. E.....	4283 Hamilton Ave.
SCHOLLE, CLARENCE GEORGE, C. E.....	1563 W. Sixth St.
SCHRODER, FREDERICK FRANK, C. E.....	526 York St.
SCHUH, LESTER STEPER, E. E.....	Marietta, O., and 4215 Smith Rd., Norwood, O.
SEGAL, HARRY, CH. E.....	643 Cutter St.
SELLORS, CARL, E. E.....	Greenville, Pa., and 108 E. University Ave.
SHAW, MICHAEL GERALD, E. E.....	St. Claire, Mich., and 208 Calhoun St.
SHEPHARD, GEORGE BARNEY, E. E.....	El Reno, Cal., and 312 Straight St.
SHULER, TOM CRAWFORD, C. E.....	Arcanum, O., and 2863 Stratford Ave.
SILVA, LEROY FRANCIS, C. E.....	316 Overton St., Newport, Ky.
SISSON, HARRY ELWOOD, E. E.....	Marietta, O., and 58 E. Auburn Ave.
SMITH, GEORGE HOLCOMBE, E. E.....	1048 Pine St.
SMITH, JOHN EDWIN, E. E.....	Dayton, O., and 2217 Clifton Ave.
SORENSEN, JAMES CARLYLE, C. E.....	Omaha, Neb., and 2141 Clifton Ave.
STEBBINS, SAM STATHAM, M. E.....	McComb, Mich., and 2521 Auburn Ave.
STECK, HOWARD, CH. E.....	Rushville, Ind., and 3320 Linden Ave.
STEEN, JOHN M., C. E., Memphis, Tenn., and N. E. Cor. Clifton and McMillan Aves.	
STENGER, BERNARD HENRY, CH. E.....	Harrison, O., and 2614 Stratford Ave.
STRATMOEN, ALBERT, E. E.....	Boyd, Minn.
SULLIVAN, JOHN THOMAS, C. E.....	1922 Greenup St., Covington, Ky.
SUMMER, TULLY H., C. E.....	Springfield, Ill., and 3427 Middleton Ave.
TALCOTT, HAROLD PLATT, C. E.....	Lanesboro, Mass., and 2700 Park Ave.
TAYLOR, HALL ACTON, CH. E.....	347 Sims Ave., Wyoming, O.
THOMAS, SAM MORGAN, E. E.....	Catlettsburg, Ky., and 2657 Dennis St.
THUM, EDWIN JOHN GEORGE, M. E.....	Dayton, O., and 2217 Clifton Ave.
TODD, FRED CHARLES, C. E.....	3920 Hazel Ave., Norwood, O.
TUCKER, HAROLD SCOTT, C. E.....	85 W. Fourth St., Covington, Ky.
TULL, LAWRENCE EMERSON, C. E.....	939 Chateau St.
VAN EATON, JOHN WALLACE, M. E.....	R. R. 4, Xenia, O.
VENOSA, PHILLIP, C. E.....	860 Buena Vista Pl.
WALTAMATH, ALVAH HENRY, M. E.....	Pittsfield, Mass., and 2700 Park Ave.
WATERS, WILLARD SINGLER, M. E.....	Georgetown, O., and 2313 Stratford Ave.
WEED, STANLEY V., C. E.....	Bellevue, Mich., and 3427 Middleton Ave.
WEIRICH, JOHN LEROY, E. E.....	Rockford, Ill., and 127 Calhoun St.
WERFELMAN, ELMER HENRY, E. E.....	3422 Liston Ave.
WIDEMER, MAURICE BECHT, E. E.....	4821 Linden Ave., Norwood, O.
WILLIAMS, SAUL AUGUSTUS, M. E.....	Cumberland, Md., and 2519 Auburn Ave.
WITTENMYER, PAUL FREDERICK, E. E.....	Arcanum, O., and 2363 Stratford Ave.
WITTICH, WILLIAM, C. E.....	523 McAlpin Ave.
WUEST, FRANK WAGNER, M. E.....	3430 Cornell Pl.
ZULL, CHARLES LOUIS, C. E.....	Portsmouth, O., and 350 Terrace Ave.

Co-operative Engineers—Specials

BACKHERMS, ALVIN BERNARD.....	1026 W. Liberty St.
BAKER, EDGAR HUBBARD.....	Pleasant Ridge, and 2210 Ohio Ave.
VAIL, RALPH W.....	Canton, O., and 2304 Robs St.

COLLEGE OF MEDICINE

Seniors

CARR, HAVILAND.....	Claysville, Ky.
COPPOCK, FRANK MARION.....	1350 Locust St.
FOERTMEYER, WILLIAM ADOLPHUS.....	401 Fairfield Ave., Bellevue, Ky.
GARDNER, MABEL E.....	Middletown, O.
GOLDENBERG, FRANK.....	12 The Poinciana
HART, ROBERT WATSON.....	German Deaconess Hospital
HAWLEY, PAUL RAMSEY.....	College Corner, O.
JOHNSTON, DOUGLAS ALEXANDER.....	802 Barr St., Fort Wayne, Ind.
KELLY, THOMAS HENSHAW.....	1006 Madison Ave., Covington, Ky.
MCCARTHY, MERRICK FIEFIELD.....	Wyoming Ave., Wyoming, O.
MCGOWAN, JOHN VINCENT.....	24 Section Ave., Hartwell, O.
RATTERMAN, HELENA TERESA.....	1532 Elm St.
SCOTT, MURAT HALSTEAD.....	Harrison, O.
STEWART, PAUL MORTON.....	Belle Center, O.

Irregular Students

NORMAN, JOHN WARREN.....	St. Paris, O.
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Juniors

ADAMSON, ELIZABETH INGRAM.....	Maysville, Ky.
BETZNER, CLARENCE WILFORD.....	2627 Vine St.
CLARK, SAMUEL CRAWFORD.....	West Union, O.
FISK, HARLEY B.....	Falmouth, Ky.
FREYHOF, WILLIAM LOUIS.....	Glendale, O.
HOFMANN, ALBERT PETER.....	51 W. Corry St.
LAMB, BENJAMIN H.....	3302 Eastside Ave.
LOWE, HENRY HUFFMAN.....	709 McMakin Ave., Winton Pl.
METZGER, FRANK CURRY.....	29 Section Ave., Hartwell, O.
MILLER, CHARLES LAMONT.....	Middletown, O.
MOORE, HAZELFEET ANDREW.....	1138 California Ave.
NORRIS, JR., BENJAMIN.....	426 Stanley Ave.
OLIVER, WADE WRIGHT.....	2233 Park Ave.
PADEN, RUSSELL HOMER.....	714 Juliens St., Parkersburg, W. Va.
WEISS, HIRAM BERTRAM.....	314 Perkins Ave.

Sophomores

BIELER, HENRY GEORGE.....	Milford, O.
CAROTHERS, RALPH GOLDSMITH.....	409 Broadway
COCHRAN, HELEN FINNEY.....	245 Gilman Ave.
GERINGER, ALBERT CONNELL.....	3485 Colerain Ave.
GOLDBERG, OTTO LEON.....	St. Paris, O.
GORDON, JOHN WHITLOCK.....	Fernbank, O.
HAUSER, SELMAR FREDERICK.....	811 Main St., Covington, Ky.
HEATH, JOHN F.....	Hamilton, O.
HOFFMANN, JOHN NEAL.....	Pesotum, Ill.
HUERKAMP, JOSEPH MARTIN.....	866 Rockdale Ave., Avondale
LINDENBERGER, LAUREN NORTON.....	Troy, O.
STARK, JOHN REIS.....	1108 E. McMillan St.

Freshmen

ALBERS, FRANK JOSEPH.....	1320 Broadway
BLACKFORD, HENRIETTA VIRGINIA.....	1021 Windsor St.
COLEMAN, JOHN MCFERREN.....	Loveland, O.

DENSER, CLARENCE HUGH.....	62 S. Warren Ave., Columbus, O.
ERVIN, DWIGHT M.....	709 Terrace Ave., Dayton, O.
HESS, BEECHER EARL.....	Taylorville, O.
JENKINS, WALTER ISAAC.....	St. Paris, O.
JOHNSTON, ALEXANDER ROBERT.....	Lore City, O.
MATUSKA, ANTHONY.....	2129 Rice St.
MEHAN, GEORGE TRACY.....	322 W. Fourth St.
PAYNE, FOY CLAWSON.....	Dayton, O.
POGGENDICK, PHILIP.....	2707 Van Kirk St.
POPPE, JOHN FREDERICK.....	Rockford Pl., Cincinnati
PRUGH, GEORGE SHIPLEY.....	2115 Eastern Ave.
ROUSEY, SCHUYLER COLFAX.....	1037 Madison Ave., Covington, Ky.
SCHELAND, WALTER CHARLES.....	1017 Wells Ave., Price Hill
SHARKEY, JOHN THOMAS.....	Excello, O.
SMITH, PARK GILLESPIE.....	Oxford, O.
WHEELER, ALFRED GUY.....	2391 Warsaw Ave.

COLLEGE OF COMMERCE

AUSTIN, EDGAR C.....	Cincinnati Hospital
BAER, SIGMUND.....	3465 Reading Rd.
BAIER, GEORGE ALBERT.....	2215 Nelson Ave.
BAUMGARTNER, ALBERT.....	32 W. Sixth St.
BECKER, FRED.....	4018 Taylor Ave.
BECKER, JOHN.....	4136 Jerome Ave.
BETTS, JR., ALBERT.....	2851 May St.
BLACKBURN, ALEXANDER J.....	1708 Brewster Ave.
BLOCH, MARTIN.....	528 Ridgeway Ave.
BOLCE, EDWARD L.....	3554 Michigan Ave.
BRAUN, ROBERT GODFRIED.....	1829 Logan St.
BRETHAUER, GUS.....	2248 Bogan St.
BRONSON, CHARLES WINSLOW.....	57 Hollister
BURGOYNE, MICHAEL H.....	2842 St. Charles Pl.
CARR, PHILLIP DAVID.....	3534 Stettinius Ave.
CASSIN, JOHN WILLIAM.....	North Bend, O.
CHAMBERS, ELEANOR.....	4445 Brazeo St.
COLTER, CHARLES R.....	2311 Kemper Lane
CREMINS, WALTER EDWARD.....	3251 Bishop St.
DECHARMS, ALICE.....	4210 Brookside Ave.
DICKENS, MERVIN.....	3770 Drake Ave.
DIXON, FRANK EUGENE.....	127 Wilmuth Ave., Wyoming, O.
DOUGLAS, FREEMAN S.....	2229 Kemper Lane
DUBELL, EDWARD J.....	3620 Edwards Rd.
DUBELL, GEORGE.....	3562 Burch Ave.
ECHERT, A. DAVID.....	644 E. Third St.
FARBACH, ELMER.....	3434 Telford Ave.
FERGER, ROGER HENRY.....	270 McGregor Ave.
FISHER, TEASDALE.....	1330 Chapel St.
FRANK, WILLIAM.....	2540 Homestead Pl.
FULLER, FREDERICK WILLIAM.....	2331 Clifton Ave.
FULNER, EMILIE A.....	925 Columbia St., Newport, Ky.
GOLDMAN, J. ALBERT.....	Fourth and Elm Sts.
HARDIG, GEORGE P.....	2418 Miami Canal
HARRIS, LEON J.....	921 Blair Ave.
HELM, AUGUST.....	Aurora, Ind., and 419 Plum St.
HERESTREIT, EARL D.....	Sayler Park Sta.

HEY, ANNA MARIE.....	1049 Rittenhouse St.
HIENER, HARRY ANTHONY.....	2958 Colerain Ave.
HITNER, STANLEY A.....	2518 Vine St.
HOGAN, JAMES CLIFFORD.....	3943 Spring Grove Ave.
HYER, J. ALLEN.....	25-7 W. Sixth St.
JORDAN, GEORGE M.....	4645 Edgewood Ave.
KEMPER, GILBERT L.....	N. E. Cor. Dana and Dakota Sts.
KINDERMAN, FRANK M.....	3823 Spencer Ave.
KNOFF, WILLIAM.....	3054 McHenry Ave., Westwood
KOENIG, JR., HENRY F.....	2846 May St.
KOEPKE, JOHN A.....	1914 Linn St.
KUNKLER, MAX ADOLPH.....	2611 Essex Pl.
LAHKE, CHARLES FREDERICK.....	2829 Erie Ave.
LAMMERS, FRED W.....	2823 Eden Ave.
LEWIN, HARRY.....	2238 Loth Ave.
LIBBERT, JOHN C.....	1680 State Ave.
LOBITZ, CARL H.....	2559 Fairview Ave.
LUESSEN, HENRY.....	2539 Marsh Ave., Norwood, O.
MCCARTY, L. F.....	633 Neave St.
MCCHRISTIE, MINOR EVERET.....	2322 Nelson Ave.
MCMILLAN, OLIVE G.....	2840 Observatory Ave.
MANNBECK, GEORGE.....	1506 Dempsey St.
MEINERS, EDMUND B.....	1532 Race St.
MERSMANN, LEO H.....	3568 Epworth Ave.
MILLER, ANNA.....	627 June St.
MILLER, GEORGE W.....	2336 Clifton Ave.
NAISH, CHARLES A.....	723 Hopkins St.
OBERHELMAN, HENRY BERNARD.....	2947 Colerain Ave.
PETER, CARL A.....	1114 Poplar St.
PIERLE, EDWIN F.....	3439 Middleton Ave.
POTTENGER, WILLIAM T.....	1641 Larch Ave., College Hill
RICHARDS, JAMES S.....	3541 Burch Ave.
RICHEY, CARL.....	451 Strafer St.
RIECKHOFF, HERBERT.....	1342 Broadway
ROELKER, CHARLES F.....	109 Corwin St.
ROSENBAUM, DAVID NATHAN.....	1333 Locust St.
SAMUELS, MORRIS.....	McMillan and Copeland Sts.
SCHMID, ROBERT GEORGE.....	110 Peete St.
SCHNEIDER, FREDERICK J.....	2114 Freeman Ave.
SCHOOK, KATHERINE HENRIETTA.....	6601 E. Ledge, Madisonville
SHREVE, ALBERT LOREE.....	Second National Bank Bldg.
SHREVE, J. H.....	1534 Pullan Ave.
SCHWEIN, STELLA.....	6612 Poplar St., Madisonville
SIMLICK, WILLIAM NELSON.....	3766 Isabella Ave., Hyde Park
SLEEVEYS, JENNIE LOUISE.....	1546 Jonathan St.
SMICKLER, SAMUEL.....	1326 Locust St.
SMITH, CLARA M.....	655 Linn St.
SNOW, JAMES C.....	1324 Russell Ave., Covington, Ky.
SPOHR, WALTER C.....	3841 Borden St.
STAAB, ALBERT.....	3120 Glendora Ave.
STANLEY, JR., WILLIAM HENRY.....	288 Ludlow Ave.
STURLA, HARRY LAWSON.....	3372 Hillside Ave.
TODD, DELBERT.....	Montgomery, O., and 617 First National Bank Bldg.
VAN DUSEN, GORDAN.....	924 Hawthorne Ave.
VON BREMEN, LILLIAN RUTH.....	2613 Bevis Ave.
WAGONER, EDITH.....	The Roanoke
WEILER, ARTHUR.....	1142 Putnam St., Newport, Ky.

WEISS, HARRY WILLIAM.....	4915 Ash St., Norwood, O.
WEISS, WILLARD CHARLES.....	4915 Ash St., Norwood, O.
WILLIG, LAWRENCE H.....	3025 Murdock Ave.
WILSON, LEROY.....	932 E. McMillan Ave.
WILSON, ROBERT BENTLEY.....	Stovall, N. C., and Cor. Fourth and Main Sts.
WILSON, WARNER CULBERTSON.....	728 Greenup St., Covington, Ky.
WOLF, CHRISTINE M.....	4235 Brookside Ave.
WOLFF, W. H.....	3915 Spencer Ave., Norwood, O.
WREDE, WALTER O.....	1904 Hewitt Ave.

SUMMARY OF STUDENTS

End of Academic Year, 1912-1913

The Graduate School..... 127

The McMicken College of Liberal Arts:

Seniors	100
Juniors	104
Sophomores	106
Freshmen	228
Irregulars	11
Specials	64
	— 613
Classes for Teachers.....	71
Evening Academic Classes.....	555

The College for Teachers:

Graduates	28
Seniors	65
Juniors	17
Sophomores	3
Art Students	10
Kindergartners	22
Home Economics	25
Teachers	127
	— 297

The College of Engineering:

Regular Students:

Seniors	8
Juniors	14
Sophomores	6
Freshmen	18

Co-operative Students:

Fifth Year	20
Fourth Year	32
Third Year	47
Second Year	63
First Year	122
Specials	5
	— 335

The College of Medicine:

Seniors	26
Juniors	9
Sophomores	12
Freshmen	16
Specials	3
Irregulars	14
	— 80
College of Commerce.....	96
	—
Gross Total (Regular Departments).....	2174
Twice Counted.....	219
	—
Net Total (Regular Departments).....	1955

Affiliated Department:

Clinical and Pathological School of the Cincinnati Hospital	44
Twice Counted	26
	—
Net Total (Affiliated Department).....	18
	—
* Net Total (All Departments).....	1973

* This does not include the group of auditors in the External Courses, numbering 342.

REGISTRATION OF STUDENTS

Beginning of Academic Year, 1913-1914

The Graduate School..... 168

The McMicken College of Liberal Arts:

Seniors	87
Juniors	100
Sophomores	129
Freshmen	229
Irregulars	19
Specials	54
	----- 618
Classes for Teachers.....	57
Evening Academic Classes.....	492

The College for Teachers:

Graduates	49
Seniors	49
Juniors	11
Sophomores	2
Art Students.....	12
Kindergartners	25
Home Economics.....	23
Teachers	105
	----- 276

The College of Engineering:

Regular Students:

Seniors	14
Sophomores	8
Freshmen	8

Co-operative Students:

Fifth Year.....	23
Fourth Year.....	42
Third Year.....	47
Second Year.....	87
First Year.....	174
Specials	3

----- 406

The College of Medicine:

Seniors	14	
Juniors	15	
Sophomores	12	
Freshmen	19	
Irregular	1	
		61
College of Commerce.....	103	
		2181
Gross Total (Regular Departments).....		2181
Twice Counted.....		252
		1929
Net Total (Regular Departments).....		1929

Affiliated Department:

Clinical and Pathological School of the Cin- cinnati Hospital.....	77	
Twice Counted	37	
		40
Net Total (Affiliated Department).....		40
* Net Total (All Departments).....		1969

* This does not include the group of auditors in the External Courses, numbering 362.

ALUMNAL ASSOCIATIONS OF THE UNIVERSITY OF CINCINNATI

COLLEGES OF LIBERAL ARTS AND ENGINEERING, AND COLLEGE FOR TEACHERS

Alumni

STANLEY T. HENSHAW, '97,	President
SAMUEL IGLAUER, '95,	Vice-President
WALTER HYMAN, '01,	Secretary-Treasurer
THOMAS K. SCHMUCK, '08,	} Executive Committee
ALEXANDER HILL, '06,	

Alumnae

MRS. G. EDWARD SMITH, '08 (VIOLA PFAFF),	President
LUELLA LATTA, '06,	Vice-President
LYDIA M. SAMMET, '09,	Secretary-Treasurer
MRS. DANIEL LAURENCE, '94,	} Executive Committee
(REBECCA ROSENTHAL),	
ELSA RASCHIG, '02,	

* COLLEGE OF MEDICINE

(OHIO-MIAMI MEDICAL COLLEGE)

WALTER R. GRIESS, M. D.,	President
THOMAS A. DICKEY, M. D.,	First Vice-President
<i>Middletown, O.</i>	
A. L. LIGHT, M. D.,	Second Vice-President
<i>Dayton, O.</i>	
HERSCHEL FISCHER, M. D.,	Third Vice-President
<i>Lebanon, O.</i>	
ALEXANDER H. BEAN, M. D.,	Fourth Vice-President
<i>Hillsboro, O.</i>	
MARTIN H. URNER, M. D.,	Secretary
ARTHUR C. BAUER, M. D.,	Treasurer
WALTER R. GRIESS, M. D.,	} Executive Committee
FRANK H. LAMB, M. D.,	
MARTIN H. URNER, M. D.,	
ARTHUR C. BAUER, M. D.,	

* This Alumnal Association includes in its membership all graduates of the Medical College of Ohio, of the Miami Medical College, of the Laura Memorial Medical College, and of the Cincinnati College of Medicine and Surgery. Upon receipt of the annual dues of one dollar and a half, the Treasurer will send the applicant a card of membership.

SCHEDULE OF LECTURES, SECOND SEMESTER, 1913-14

Courses which are starred are open to Freshmen

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SAT
8.30 A. M.	Biol. 21 *Chem. 3b Chem. 18b Educ. 14 Eng. 6 *Geol. 1 Geol. 7 (9.00) *Hist. 15 *Math. 1-S. i Phil. 6b Pol. Sc. 11b	Biol. 27b *Eng. 1-S. ii Eng. 8b *French 1-S. ii French 26 Geol. 9 *Ger. 1-S. i *Hist. 29 *Lat. 1-S. i *Math. 1-S. i *Phys. 22b-S. i Pol. Sc. 4b	Biol. 21 *Chem. 3b Chem. 18b Educ. 14 Eng. 6 *Geol. 1 Geol. 7 *Hist. 15 *Math. 1-S. i Phil. 6b Pol. Sc. 11b	Biol. 27b *Eng. 1-S. ii Eng. 8b *French 1-S. ii French 26 Geol. 9 *Ger. 1-S. i *Hist. 29 *Lat. 1-S. i *Math. 1-S. i *Phys. 22b-S. i Pol. Sc. 4b	*Chem. 3b Chem. 18b Educ. 16 Eng. 6 *Geol. 1 *Hist. 15 *Math. 1-S. i Phil. 6b Pol. Sc. 11b	*Eng. Eng. *Fren. Geol. Geol. *Ger. Geol. *Lat. 1 Phil. Phys.
9.30 A. M.	*Biol. 3b Biol. 21 Chem. 14b Educ. 2 *Eng. 1-S. i Eng. 5 Eng. 15 *French 2-S. i *French 2-S. ii Geol. 2 Geol. 7 *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Greek 9 *Hist. 1 Lat. 2-S. ii *Math. 1-S. ii *Math. 1-S. iv Math. 9b Phil. 2b *Soc. Sc. 15	*Biol. 4b-S. iii Biol. 35 Biol. 27b Chem. 14b Econ. 11 *Eng. 3 Eng. 21 *French 2-S. iii French 4 *Geol. 1-S. ii Geol. 2 *Ger. 21 Greek 20b Lat. 2-S. i *Math. 1-S. ii *Math. 1-S. iv *Phys. 22b-S. i *Soc. Sc. 5	*Biol. 3b Biol. 21 Chem. 14b Econ. 13b Educ. 2 *Eng. 1-S. i Eng. 5 Eng. 15 *French 2-S. i *French 2-S. ii Geol. 2 Geol. 7 *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Greek 9 *Hist. 1 Lat. 2-S. ii *Math. 1-S. ii *Math. 1-S. iv *Phys. 22b-S. i *Soc. Sc. 5	*Biol. 4b-S. iii Biol. 35 Biol. 27b Chem. 14b Econ. 11 *Eng. 3 Eng. 21 *French 2-S. iii French 4 *Geol. 1-S. ii *Ger. 21 Greek 20b Hist. 20 Lat. 2-S. i *Math. 1-S. ii *Math 1-S. iv *Phys. 22b-S. i *Soc. Sc. 5	*Biol. 3b Econ. 13b Educ. 2 *Eng. 1-S. i Eng. 5 Eng. 15 *French 2-S. i *French 2-S. ii *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Greek 9 *Hist. 1 Lat. 2-S. ii *Math. 1-S. ii *Math. 1-S. iv Math 9b Phil. 2b	*Fren. Geol. Geol. Ger. Hist. Lat. 1 Math. Math. Phil. Phys.
10.30 A. M.	*Astron. 1b Biol. 7b Biol. 21 Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 French 11 *Ger. 2-S. ii *Ger. 4-S. i *Greek 2 Greek 3 *Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii *Math. 1-S. iii Math. 5-S. i Phil. 18b-S. i Pol. Sc. 1 Soc. Sc. 7 *Span. 6	*Biol. 4b-S. iii Biol. 35 Biol. 26b Biol. 27b Eng. 25-S. i *Geol. 1-S. ii *Ger. 3 Greek 12 Greek 13 Hist. 25 Lat. 6 *Math. 1-S. iii Math. 5-S. i *Phys. Ed. 1-S. i (Men) *Phys. 22b-S. i Soc. Sc. 20 Span. 8	Biol. 7b Biol. 21 Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 French 11 Geol. 2 Geol. 7 *Ger. 2-S. ii *Ger. 4-S. i Greek 3 *Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii *Math. 1-S. iii Phil. 18b-S. i Pol. Sc. 1 Soc. Sc. 7 *Span. 6	*Biol. 4b-S. iii Biol. 35 Biol. 27b Eng. 25-S. i *Geol. 1-S. ii *Ger. 3 Greek 12 Greek 8 Hist. 20 Hist. 25 *Math. 1-S. iii Math. 5-S. i *Phys. Ed. 1-S. i (Men) *Phys. 22b-S. i Soc. Sc. 20 Span. 8	*Astron. 1b Biol. 7b Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 French 11 *Ger. 2-S. ii *Ger. 4-S. i Greek 3 *Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii *Math. 1-S. iii Math. 5-S. i Phil. 18b-S. i Pol. Sc. 1 *Span. 6	Fren. Geol. Geol. Geol. Ger. Hist. Math. Phys.
11.30 A. M.	Chem. 32b Chem. 22b *Econ. 1-S. i (Men) Educ. 20 Eng. 10 *French 1-S. i *Ger. 1-S. ii *Ger. 2-S. iii Greek 15 Hist. 21 Ital. 7 Lat. 3 Phil. 10b Phil. 15b *Phys. Ed. 1-S. ii (Men) *Phys. 27b Pol. Sc. 2b Psy. 1b	Bib. Lit. 8b *Biol. 4b-S. iii Biol. 35 *Econ. 2 Eng. 12 Eng. 25-S. ii French 3 *Geol. 1-S. ii (12.00) Ger. 20 Greek 17 Hist. 40 Phys. Ed. 2-S. ii (Men) Phys. 18b Soc. Sc. 21	Chem. 32b Chem. 22b *Econ. 1 Educ. 20 Eng. 10 *French 1-S. i Geol. 2 *Ger. 1-S. ii *Ger. 2-S. iii Greek 15 Hist. 21 Ital. 7 Lat. 3 Phil. 10b Phil. 15b *Phys. Ed. 1-S. ii (Men) *Phys. 27b Pol. Sc. 2b Psy. 1b	Bib. Lit. 8b *Biol. 4b-S. iii Biol. 35 *Econ. 2 Eng. 12 Eng. 25-S. ii French 3 *Geol. 1-S. ii (12.00) Ger. 20 Greek 17 Hist. 40 Phys. Ed. 2-S. ii (Men) Phys. 18b Soc. Sc. 21	Chem. 32b Chem. 22b *Econ. 1-S. ii (Women) Educ. 4 Eng. 10 *French 1-S. i *Ger. 1-S. ii *Ger. 2-S. iii Greek 15 Hist. 21 Ital. 7 Lat. 3 Phil. 10b Phil. 15b *Phys. 27b Pol. Sc. 2b Psy. 1b	Eng. S. Geol. (11) Geol. Geol. Hist. Phys. 8b

SCHEDULE OF LECTURES, SECOND SEMESTER, 1913-14—Continued

Courses which are starred are open to Freshmen

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Biol. 4b-S. i Biol. 10b Chem. 4b-S. ii Chem. 7b Chem. 14b Chem. 22b Eng. 1-S. v Eng. 1-S. vi Eng. 1-S. iii Phil. 13 Phys. 18b-S. ii Phys. Ed. 1-S. i (Women) Span. 9	*Biol. 4b-S. ii *Biol. 8b *Biol. 13b *Chem. 4b-S. i Chem. 6 Chem. 17 Eng. 13 Eng. 18 *Geol. 1-S. iv Phil. 19(12.30) Phys. Ed. 2-S. i (Women) *Phys. 22b-S. ii Span. 18	*Biol. 4b-S. i *Biol. 10b *Chem. 4b-S. ii Chem. 7b Chem. 22b *Eng. 1-S. v *Eng. 1-S. vi French 5 *Ger. 1-S. iii Phil. 18b-S. ii *Phys. Ed. 1-S. i (Women) *Hist. 13 Span. 9	*Biol. 4b-S. ii *Biol. 8b *Biol. 13b *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 33b Eng. 18 *Geol. 1-S. iv Phil. 21 Phys. Ed. 2-S. i (Women) *Phys. 22b-S. ii Span. 18	Chem. 7b Chem. 17 Chem. 22b Chem. 33b *Eng. 1-S. v *Eng. 1-S. vi French 5 *Ger. 1-S. iii *Hist. 13 Phil. 18b-S. ii Phys. Ed. (vol.) Span. 9	
Biol. 4b-S. i Biol. 10b Chem. 4b-S. ii Chem. 7b Chem. 14b Chem. 22b Eng. 1-S. i Eng. 9 (Lab.) Phys. Ed. 1-S. ii (Women) Span. 2b	*Biol. 4b-S. ii *Biol. 8b *Biol. 14b *Chem. 4b-S. i Chem. 6 Chem. 17 Eng. 13 Eng. 22 *Geol. 1-S. iii *Geol. 1-S. iv Greek 18 Math. 6 Phil. 19 (2.30) Phys. Ed. 2-S. ii (Women) *Phys. 22b-S. ii	Astron. 3b *Biol. 4b-S. i *Biol. 10b *Chem. 4b-S. ii Chem. 7b Chem. 22b *Geol. 1-S. i Lat. 5 *Phys. Ed. 1-S. ii (Women) Psy. 2b	*Biol. 4b-S. ii *Biol. 8b *Biol. 14b *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 33b Eng. 22 *Geol. 1-S. iii *Geol. 1-S. iv Greek 18 Phil. 21 *Phys. 22b-S. ii Phys. Ed. 2-S. ii (Women)	Chem. 7b Chem. 17 Chem. 22b Chem. 33b *Phys. Ed. Lec- ture (Men) *Phys. Ed. Lec- ture (Women) Psy. 2b	
Biol. 4b-S. i Biol. 10b Chem. 4b-S. ii Chem. 7b Chem. 14b Chem. 22b Eng. 1-S. i Eng. 9 (Lab.) Phys. Ed. 1-S. ii (Women) Span. 2b	*Biol. 4b-S. ii *Biol. 8b *Biol. 14b *Chem. 4b-S. i Chem. 6 Chem. 17 Eng. 20 (3.30) *Geol. 1-S. iii *Geol. 1-S. iv (3.30) Greek 18 Math. 6 *Phys. 22b-S. ii	*Biol. 4b-S. i *Biol. 10b *Chem. 4b-S. ii Chem. 7b Chem. 22b *Geol. 1-S. i Greek 5 Psy. 2	*Biol. 4b-S. ii *Biol. 8b *Biol. 14b *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 33b *Geol. 1-S. iii *Geol. 1-S. iv (3.30) Phil. 14 *Phys. 22b-S. ii	Chem. 7b Chem. 17 Chem. 22b Chem. 33b Greek 6 Psy. 2b	
Eng. 1-S. i (4.30) Eng. 9 (Lab.) Eng. 26 Eng. 7 Math. 34 Phys. 17b Phys. Sc. 25b Phys. 2b (4.30)	Biol. 14b Eng. 20 French 10 French 24 *Geol. 1-S. iii (4.30) Ger. 12 Phys. Ed. 2-S. i (Men) Phys. 10	Eng. 24 *Geol. 1-S. i (4.30) Geol. 16 Phys. 17b Pol. Sc. 3 Psy. 2b (4.30)	Biol. 14b *Geol. 1-S. iii (4.30) Ger. 6 Math. 34 Math. 11b Phil. 14 Phys. Ed. 2-S. i (Men)	Greek 6 Psy. 2b (4.30)	
Eng. 26 Math. 34 Math. 26 Phys. Sc. 25b	Eng. 20 (5.30) French 10 French 24 Ger. 12	Eng. 24 Geol. 16 Pol. Sc. 3	Ger. 6 Math. 34 Math. 11b		

HOURS TO BE ARRANGED

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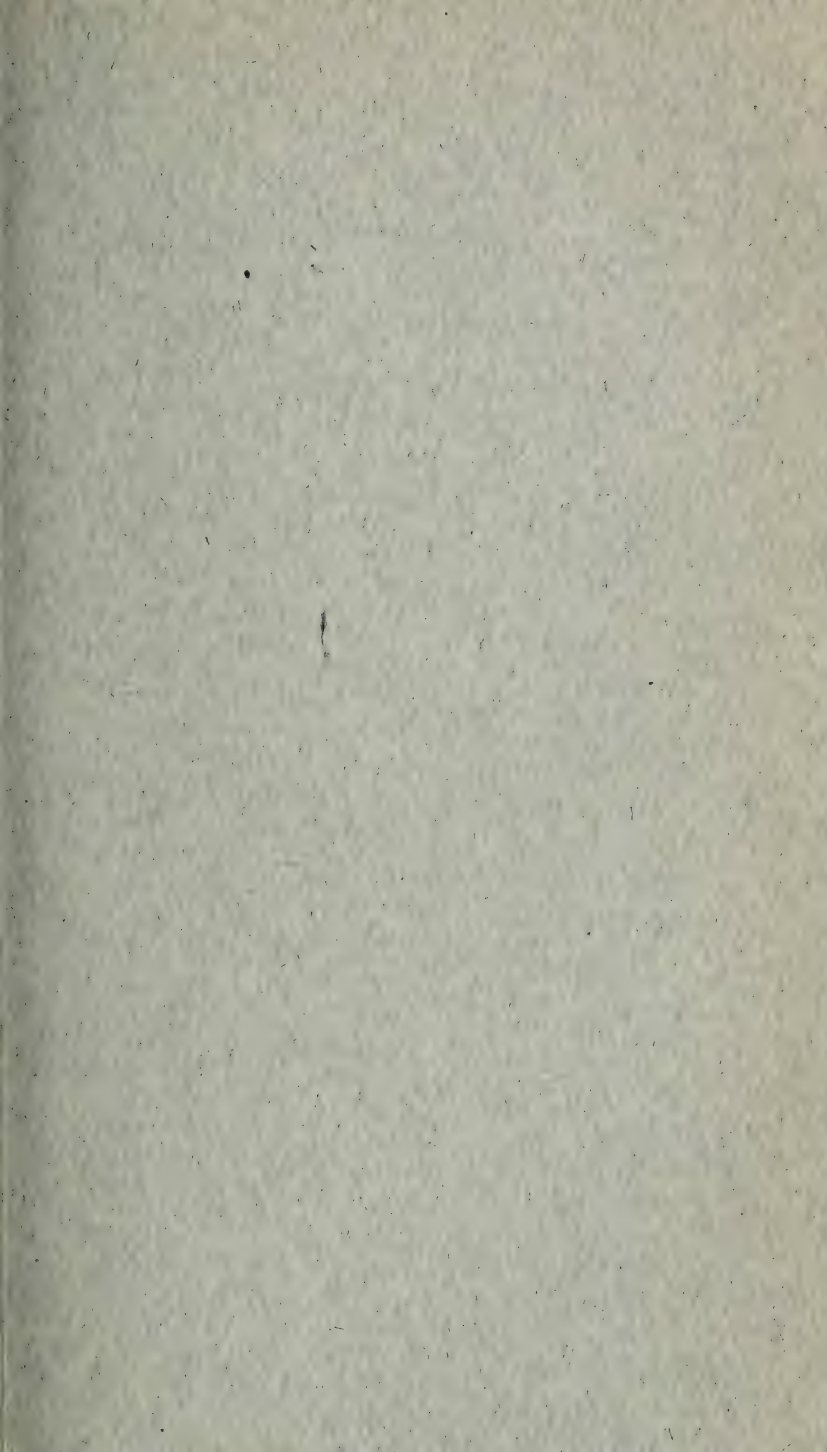
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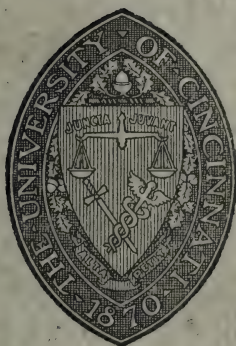
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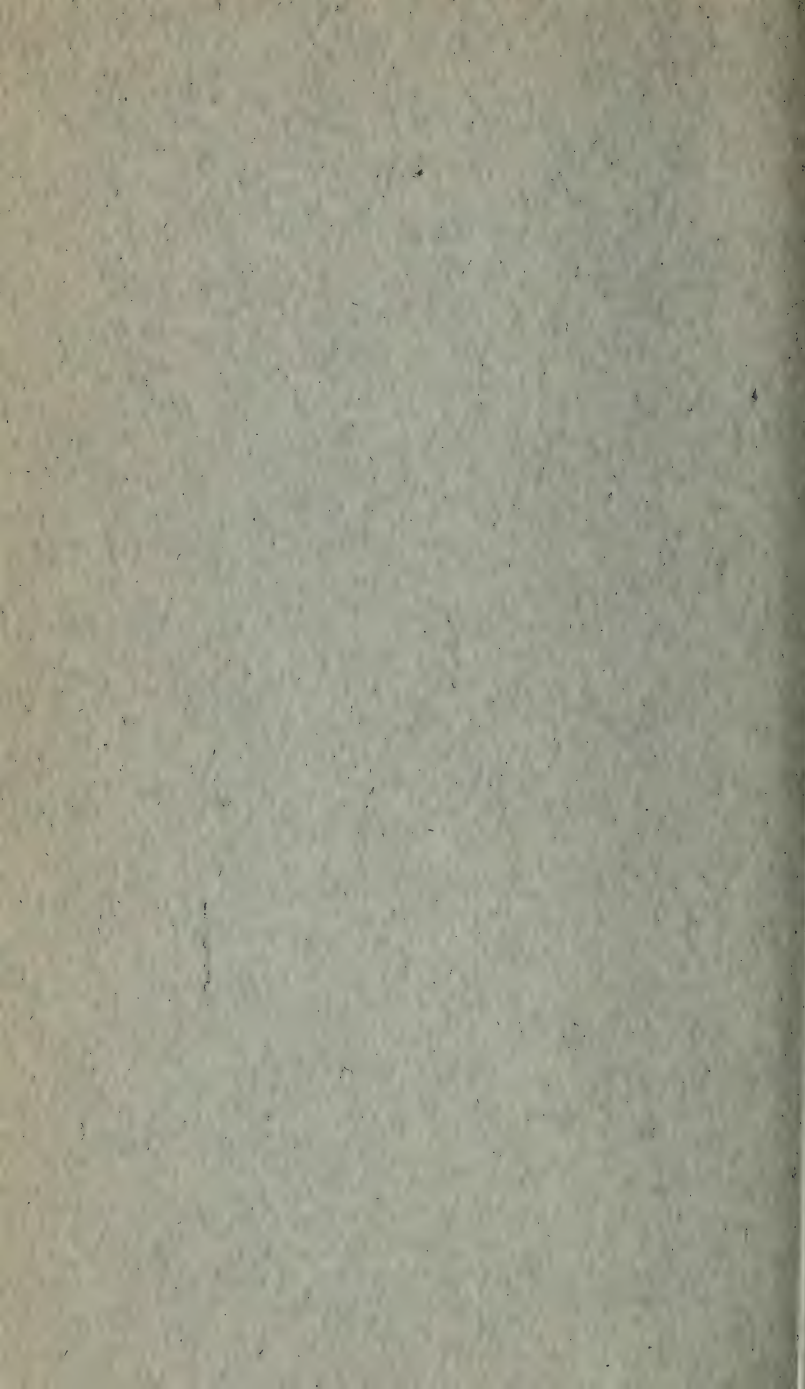
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AT CINCINNATI, OHIO, UNDER THE ACT OF AUGUST 24, 1912

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UNIVERSITY CALENDAR

1914

- SEPT. 14, MONDAY. { Entrance examinations to all departments of the University began.
- SEPT. 17, THURSDAY.
SEPT. 18, FRIDAY.
SEPT. 19, SATURDAY. { Registration days for the Colleges of Liberal Arts, Engineering, Commerce, the College for Teachers, and the School of Household Arts.
- SEPT. 19, SATURDAY. Entrance examinations ended.
- SEPT. 21, MONDAY. { First semester began for the Colleges of Liberal Arts, Engineering, Commerce, the College for Teachers, and the School of Household Arts.
- SEPT. 21, MONDAY. { First registration day for the Graduate School.
- SEPT. 24, THURSDAY.
SEPT. 25, FRIDAY.
SEPT. 26, SATURDAY. { Registration days for the College of Medicine.
- SEPT. 26, SATURDAY. { Last registration day for the Graduate School.
- SEPT. 29, TUESDAY. { First semester began for the College of Medicine.
- OCT. 5, MONDAY. { First registration day for the External Courses.
- OCT. 17, SATURDAY. { Last registration day for the External Courses.
- NOV. 26, THURSDAY. { Thanksgiving Day: a holiday. Recess of three days.

RECESS, MONDAY, DECEMBER 21, 1914, TO SATURDAY, JANUARY 2,
1915, INCLUSIVE

1915

JAN. 4, MONDAY.	{	Classes resumed in all departments of the University except in the College of Commerce. Entrance examinations begin.
JAN. 9, SATURDAY.		Entrance examinations end.
JAN. 11, MONDAY.		Classes resumed in the College of Commerce.
JAN. 25, MONDAY.		First semester examinations begin.
JAN. 30, SATURDAY.	{	First semester ends for the College of Medicine.
FEB. 1, MONDAY.	{	Second semester begins for the College of Medicine.
FEB. 4, THURSDAY.		First semester examinations end.
FEB. 5, FRIDAY.	{	Registration day for the second semester of the Colleges of Liberal Arts and Engineering, the College for Teachers, and the School of Household Arts.
FEB. 6, SATURDAY.		No classes.
FEB. 8, MONDAY.	{	Second semester of the Colleges of Liberal Arts, Engineering, Commerce, the College for Teachers, and the School of Household Arts begins.
FEB. 8, MONDAY.	}	Registration day for the second semester of the Graduate School.
FEB. 9, TUESDAY.		
FEB. 10, WEDNESDAY.		
FEB. 22, MONDAY.		Washington's Birthday: a holiday.
EASTER RECESS FOR THE COLLEGE OF MEDICINE, MONDAY, MARCH 29, TO SATURDAY, APRIL 3, INCLUSIVE		
MAY 7, FRIDAY.		Oratorical contest for Jones Prizes.
MAY 31, MONDAY.		Second semester examinations begin.
JUNE 11, FRIDAY.		Second semester ends.
JUNE 12, SATURDAY.		University Commencement Day.
JUNE 14, MONDAY.		Entrance examinations begin.
JUNE 19, SATURDAY.		Entrance examinations end.

DEPARTMENTS OF THE UNIVERSITY

The University comprises the following departments:

GRADUATE SCHOOL,

McMICKEN COLLEGE OF LIBERAL ARTS,

COLLEGE FOR TEACHERS,

COLLEGE OF ENGINEERING: Departments of Chemical, Civil, Electrical, Mechanical, and Metallurgical Engineering,

COLLEGE OF MEDICINE (The Ohio-Miami Medical College and the Clinical and Pathological School of the Cincinnati Hospital),

COLLEGE OF COMMERCE,

SCHOOL OF HOUSEHOLD ARTS.

For special announcements of the various departments, except the Medical College, and for further information, address:

THE SECRETARY OF THE UNIVERSITY
CINCINNATI, OHIO

For special announcement of the Medical College, address:

THE DEAN of the College of Medicine
CLIFTON Ave., Cincinnati, Ohio

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Appointed by the Mayor of Cincinnati

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OF

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1914—15

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1914—15

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2619 Vine St. gineering.
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907 Mercantile Library Building.
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- SCHACHNE ISAACS, A. M., Assistant in Psychology.
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- RAPHAEL ISAACS, A. M., Assistant in Embryology and Zoology.
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- LEONORA NEUFFER, A. M., Assistant in Chemistry.
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- HAROLD H. WAGNER, Assistant in Physical Education.
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- ESTHER GODSHAW, Ph. B., Assistant in History.
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- TEASDALE FISHER, : Assistant in Accounting.
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- MIRIAM URBANSKY, D. A. R. Fellow in American History and
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- ELLIOTT SMITH, Ph. D., Second Astronomer and Instructor in the
3441 Observatory Pl. Observatory.
- FANNIE R. GASTON, Assistant in the Observatory.
3441 Observatory Pl.

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- FLORENCE STIMSON, In Charge of Circulation.
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- ANNA TEASDALE, Secretary to the Dean of the College of Engineering.
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- HELEN H. HISSEM, Secretary to the Dean of the College for
The Parkside, Clifton. Teachers.
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CHRISTIAN R. HOLMES, M. D., Professor of Otolaryngology and Dean of the
8 E. Eighth St. College of Medicine.
FRANK B. CROSS, M. D., Assistant Clinical Professor of Ophthalmology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
- J. C. MACKENZIE, M. D., Clinical Professor of Medicine, Emeritus.
624 W. Eighth St.
- CHAUNCEY D. PALMER, M. D., Professor of Obstetrics and Gynecology, Emeritus.
Reading Rd. and Forest Ave., Avondale.
- BYRON STANTON, M. D., Professor of Diseases of Women and Children, Emeritus.
Savannah Ave., College Hill.
- ALEXANDER GREER DRURY, A. M., M. D., Professor of Hygiene, Emeritus.
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4 W. Seventh St.
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- ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and Comparative Anatomy.
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- PAUL GERHARDT WOOLLEY, B. S., M. D., Mary M. Emery Professor
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22 W. Seventh St.

-
- JULIUS H. EICHBERG, Ph. G., Ph. D., M. D., Professor of Materia
55 Groton Building. Medica, Pharmacology, and Therapeutics.
- C. C. FIFE, M. D., Lecturer in Dietetics and Instructor in Thera-
19 W. Seventh St. (32) peutics.
- RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Thera-
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- WILLIAM C. HERMAN, Ph. G., M. D., Instructor in Materia Medica
19 W. Seventh St. and Pharmacology.
- SIDNEY LANGE, A. B., M. D., Lecturer and Demonstrator of Radiology.
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VICTOR RAY, M. D., Assistant Clinical Professor of Ophthalmology.
30 Groton Building.

WYLIE MCLEAN AYRES, A. B., M. D., Assistant Clinical Professor of
4 W. Seventh St. Ophthalmology.

FRANK B. CROSS, M. D., Assistant Clinical Professor of Ophthal-
mology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.

JOHN RANLY, M. D., . . . Clinical Instructor in Ophthalmology.
936 Clark St.

CLARENCE J. KING, M. D., . Clinical Instructor in Ophthalmology.
Groton Building.

- K. L. STOLL, M. D., . . . Clinical Instructor in Ophthalmology.
19 W. Seventh St.
- HORACE F. TANGEMAN, M. D., Assistant Clinical Instructor in
20 W. Ninth St. Ophthalmology.
- FRANK U. SWING, M. D., Assistant Clinical Instructor in Ophthal-
705-06 Livingston Building. mology.
- EDWARD KING, M. D., Assistant Clinical Instructor in Ophthalmology.
936 Clark St.

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- CHRISTIAN R. HOLMES, M. D., Professor of Otology and Dean of the
8 E. Eighth St. College of Medicine.
- JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryn-
Berkshire Building, 628 Elm St. gology.
- JOHN WESLEY MURPHY, A. M., M. D., Clinical Professor of Laryn-
4 W. Seventh St. gology and Otology.
- SAMUEL IGLAUER, B. S., M. D., . Associate Professor of Otology.
22 W. Seventh St.
- WALTER E. MURPHY, M. D., Associate Professor of Laryngology and
Clinical Instructor in Rhinology, Laryngology, and Otology.
Berkshire Building.
- WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- W. J. THOMASSON, M. D., Clinical Instructor in Rhinology,
942 York St., Newport, Ky. Laryngology, and Otology.
- GEORGE L. KRIEGER, M. D., Clinical Instructor in Laryngology and
4804 Central Ave., Madisonville. Otology.
- CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryngology
22 W. Seventh St. and Otology.

-
- JOHN HOWARD LANDIS, M. D., Professor of Hygiene.
City Hall.

LECTURER ON SPECIAL TOPICS

- OTIS H. FISK, Ph. D., Dr. Juris., LL. B., . Medical Jurisprudence.
Mercantile Library Building.

OTHER OFFICERS

- J. DEWITT SCHONWALD, M. D., Director of Dispensary.
5654 Hamilton Ave., College Hill.
- L. M. PRINCE, Optician.
108 W. Fourth St.
- FRANK B. CROSS, M. D., Secretary of the Medical Faculty.
4 W. Seventh St.

- DANIEL LAURENCE, B. S., Secretary of the University.
Office, 6 McMicken Hall, Burnet Woods.
- FRANCES CURRIE, Secretary and Librarian of the Medical College.
111 E. Auburn Ave.
- ANNA L. HOOK, Secretary to the Dean of the Medical College.
2123 Sinton Ave.

TECHNICAL ASSISTANTS

- HENRY LOUHIER, Anatomy.
McMicken Cottage.
- DAISY CLARK, Pathology.
40 E. McMillan St.
- JOSEPH KUPKA, Physiology.
2221 Victor St.

ADDRESSES AND LECTURES, 1913-14

The speakers at Convocation during the year 1913-14 were as follows:

Charles W. Dabney, Ph. D., LL. D., president of the University; Frank W. Chandler, Ph. D., dean of the College of Liberal Arts; A. M. Wilson, M. E., professor of Electrical Engineering; Miss Dora Stevens, of Dayton, O.; Benjamin C. Van Wye, A. M., assistant professor of Public Speaking and English; Emilie W. McVea, A. M., assistant professor of English and dean of women; Mr. Frank Garrett, of the University of Nanking, China; President Robert Chambers, Bithynia Collegiate, Turkey; Mr. Herbert Bigelow; Joseph E. Harry, Ph. D., dean of the Graduate School; Claude M. Lotspeich, Ph. D., assistant professor of German; Arthur Kinsella, A. M., instructor in Greek; Louis T. More, Ph. D., professor of Physics; Miss May Robson, the actress; Clarence D. Stevens, A. M., assistant professor of English; S. J. M. Allen, Ph. D., associate professor of Physics.

A series of public lectures was given at the University during the year 1913-14, the speakers being as follows:

Mr. John C. Kennedy, lecturer and writer: "The Mission of Socialism." (Under the auspices of the Intercollegiate Socialist Society.) November 20, 1913.

Mr. Frank Allaben, editor of *The Journal of American History*: "Perry's Flagship and Its Reconstruction." December 4, 1913.

Benjamin C. Van Wye, A. M., assistant professor of Public Speaking and English, a reading of Dickens' "A Christmas Carol." December 20, 1913.

Mr. A. Parker Nevin, of New York: "Some Problems in American Industry." February 19, 1914.

Dr. Robert G. Boville, president of the Vacation Bible Association of America: "The Work of Bible Schools." April 28, 1914.

Mr. Ethan Viall, editor of *The American Machinist*: "Contributions to Publications." May 5, 1914.

Other public addresses were given as follows:

Dr. William H. Welch, Johns Hopkins University: "The Relation of the University Medical College to the Hospital." (Delivered at the installation of Dr. Holmes as Dean of the Medical College.) January 6, 1914.

Edward L. Thorndyke, Ph. D., Columbia University: "Retardation and Elimination in High Schools." (Delivered at the Tenth Annual Conference of the Secondary School Principals and Teachers of the Accredited Schools Affiliated with the University of Cincinnati.) February 21, 1914.

The following public lectures were given under the auspices of the College of Commerce:

Frederick L. Hoffman, statistician, Prudential Insurance Company of America: "History of Life Insurance." September 30, 1913.

Henry Moir, actuary, Home Life Insurance Company of New York: "Principles and Theory of Life Insurance." October 28, 1913.

Mr. J. A. Jackson, Literary Bureau, Mutual Life Insurance Company of New York: "Calculation of the Premium." December 9, 1913.

Dr. William Muhlberg, assistant medical director of the Union Central Life Insurance Co.: "Medical Selection." January 27, 1914.

Mr. Edward A. Woods, president and manager of the Edward A. Woods Agency of the Equitable Life Assurance Society: (a) "State Laws;" (b) "Taxation." February 10, 1914.

Mr. G. H. Noyes, general counsel of the Northwestern Mutual Life Insurance Co.: "Legal Phases of Life Insurance." March 31, 1914.

Dr. Lee Frankel, vice-president of the Metropolitan Life Insurance Co.: "Conservation as Applied to Life Insurance." April 21, 1914.

Mr. Ernest J. Clark, president of the National Association of Life Underwriters: "The Field and the Agent." May 12, 1914.

The following lectures were delivered under the auspices of the Student Branch of the A. S. M. E.:

Mr. H. M. Wood, of the Lodge & Shipley Machine Tool Co.: "Special Machine Operations." November 11, 1913.

Mr. J. I. Lyle, of the Carrier Air Conditioning Co., New York: "Air Conditioning Machinery." February 12, 1914.

The following lectures were delivered under the auspices of the Student Branch of the A. I. E. E.:

Mr. C. A. Powell, district representative of the lamp division of the General Electric Co.: "Illumination." November 18, 1913.

Mr. Parker H. Kemble: "The Public Utilities Commission and the Company." February 17, 1914.

Mr. J. H. Hunt, research engineer of the Delco plant in Dayton, O.: "The Delco Starter." March 24, 1914.

The following lecturers appeared at the University under the auspices of the Alliance Française:

M. Paul Vitry, professeur d'histoire générale et d'histoire de l'art à l'école nationale des arts décoratifs: "La renaissance classique en France." November 19, 1913.

M. André Bellessort: "Le cosmopolitisme et l'esprit Français." February 12, 1914.

The following papers were among those read at the University during the sessions of the central division of the Modern Language Association on December 29, 30, and 31, 1913:

"Interdependence in English Fiction." Prof. Robert N. Whitford, Toledo University.

"Scholarship and Public Spirit." Prof. Thomas A. Jenkins, University of Chicago.

"Sens et Matière in the Works of Crestien de Troyes." Prof. William Albert Nitze, University of Chicago.

"Cultural Movements in Germanic Mythology." Prof. Paul H. Grumann, University of Nebraska.

"The Present Crisis in the Science of Literature in Germany." Prof. Julius Goebel, University of Illinois.

"The Early English Translations of Bürger's *Lenore*." Prof. Oliver F. Emerson, Western Reserve University.

"A Modification of the Theory of Prose Rhythm." Dean Joseph V. Denny, Ohio State University.

"Shakespeare and Thomas Heywood." Prof. Daniel Ford, University of Minnesota.

"Chrétien de Troyes and Hue de Rotelande's *Ipomédon*." Prof. Lucy Maria Gay, University of Wisconsin.

"Colonial Theatres in Charleston, South Carolina." Prof. Robert A. Law, University of Texas.

"Dryden's Relation to the German Lyric in the Eighteenth Century." Prof. Milton D. Baumgartner, University of Nebraska.

Under the auspices of the Cincinnati Section of the American Chemical Society and the Cincinnati Medical Research Society, Dr. Wolfgang Ostwald, of the University of Leipzig, gave the following lectures on January 5, 6, 7, 8 (two lectures), and 9, 1914:

"What Are Colloids? Elements of Qualitative Colloid Analysis. Formation and Preparation of Colloids."

"Mechanical, Optical, Electrical, Chemical Properties of Substances in the Colloid State. Classification of the Colloids."

"Changes in the Colloid State. Internal Changes of State, Swelling, Setting, Syneresis, Adsorption, Coagulation, Peptisation."

"A General Survey of the Field of Colloid-Chemistry."

"Scientific Applications of Colloid-Chemistry."

"Technical Applications of Colloid-Chemistry."

The following lectures were delivered in the auditorium of the University during the sessions of the American Chemical Society:

"The Chemical Problems of an Active Volcano." Arthur L. Day. April 7, 1914.

"The Chemical Fitness of the World for Life." L. J. Henderson. April 7, 1914.

"Flame Reactions." W. D. Bancroft. April 7, 1914.

"Chemical Reactions at Low Pressures." Irving Langmuir. April 7, 1914.

In addition to the above, about 150 papers were read at the meetings of divisions and sections held on April 8 and 9.

The following speakers addressed the student body:

Mr. Richard Bennett, the actor: "The Stage as a Teacher." November 6, 1914.

Dr. Thomas Briggs, head of Secondary Education, Teachers College, Columbia University: "The Teaching of Reading and Literature." (Under the auspices of the Teachers College.)

Mr. Norman Angell, lecturer: "The Economic Aspect of War." March 12, 1914.

Mr. Frederick H. Rindge, Jr., New York: "The Industrial Service Movement among College Men." March 20, 1914.

Dean Emil Rath, of the Normal College of the North American Gymnastic Union: "Physical Training: Why We Should Exercise." March 20, 1914.

Miss Helen Bennett, director of the Intercollegiate Vocational Bureau of Chicago: "Vocations for College Women." (Under the auspices of the Woman's League.) April 17, 1914.

The following lectures were delivered before the men of the University:

"The Care of the Eyes." Dr. Walter Forchheimer. April 17, 1914.

"The Hygiene of the Ear, Nose, and Throat." Dr. Samuel Iglauer. April 24, 1914.

"Sex Hygiene." Dr. M. L. Heidingsfeld. May 1, 1914.

"Sex Hygiene." Dr. Martin Fischer. May 8, 1914.

"Narcotics." Dr. Edmund M. Baehr. May 5, 1914.

"Narcotics." President Charles W. Dabney. May 22, 1914.

GENERAL INFORMATION

FOUNDATION

On his death, in 1858, Charles McMicken gave to the city of Cincinnati by will almost the whole of his estate, valued at about \$1,000,000, for the purpose of establishing and maintaining "two colleges for the education of white boys and girls."

He had "long cherished the desire to found an institution where white boys and girls might be taught not only a knowledge of their duties to their Creator and their fellow men, but also receive the benefit of a sound, thorough and practical English education, and such as might fit them for the active duties of life, as well as instruction in the higher branches of knowledge, except denominational theology, to the extent that the same are now or may hereafter be taught in any of the secular colleges or universities of the highest grade in the country."

Nearly half of the property devised by Mr. McMicken was situated in the state of Louisiana. This was entirely lost, in 1860, by a decision of the Supreme Court of that state, annulling that part of the devise. The court refused to recognize the validity of bequests of real estate to institutions controlled by non-resident trustees upon perpetual trusts. The remainder of the property, lying in Cincinnati and its vicinity, did not yield a sufficient income to warrant the establishment of the proposed colleges. For ten years, therefore, the revenue derived from the estate was applied to its improvement.

In 1869, the trustees provided for a School of Design, which they maintained, with aid from Joseph Longworth, until 1884, when they transferred it to the Cincinnati Museum Association. Meanwhile, an attempt was made to unite the various, educational trusts in Cincinnati. To this end, in 1870, the General Assembly of Ohio passed an act "to aid and promote education," under which, almost a year later, the University of Cincinnati was established. Bonds were soon issued by the city to provide funds for the erection of a suitable building, which was ready for use in the fall of 1875. But students were received in 1873, and instruction was given temporarily by the teachers of Woodward High School. In 1874, the Academic Department, now known as the McMicken College of Liberal Arts, was organized by the appointment of three professors and two instructors, who met classes during that year in a school building on Franklin street.

The effort to unite other trust funds with those given by Charles McMicken having failed, the income remained long inadequate to the needs of such an institution as he had intended to found. At

length the city undertook to support the University in part by public taxation, the tax for this purpose being limited at first to three-tenths of one mill. In 1906 the General Assembly of Ohio authorized the levying of an increased municipal tax for the University—five-tenths of a mill, instead of three-tenths as heretofore.

In 1913 a law was passed providing that the levy for University and Observatory purposes shall not be "subject to any limitations of rates of taxation or maximum rates provided by law" except the maximum of five-tenths of a mill for the University and three-tenths of a mill for the Observatory, and the "further exception that the combined maximum rate for all taxes levied in a year in any city or taxing district shall not exceed fifteen mills." This law further provides that the levy shall include the amount necessary to pay interest on and sinking fund for all bonds issued for the University subsequent to June 1, 1910. The situation produced by the Smith one per cent tax law, under the provisions of which the income of the University was limited to the amount received in the year 1910, made this law necessary.

In the course of time additional funds for the maintenance of the institution were provided by individual citizens, the most important being the bequest of property, valued at \$130,000, by Matthew Thoms in 1890, the gift of \$100,000 by David Sinton in 1899, and the recent bequest of Mary P. and Eliza O. Ropes, of Salem, Massachusetts, amounting to \$100,000, for the endowment of a chair of Comparative Literature, as a memorial to their father, Nathaniel Ropes, for many years a citizen of Cincinnati. Then, in 1910, the friends of Dr. Joseph Eichberg, for many years an eminent Professor of Physiology in the Miami Medical College, who lost his life through a lamentable accident in the summer of 1908, presented the University with the sum of \$45,000, to establish in the University the Joseph Eichberg Chair of Physiology. In 1911, Dr. Francis Brunning bequeathed his entire estate, with the exception of a few minor bequests, to the Endowment Fund Association of the University of Cincinnati, for the College of Medicine. This estate has yielded about \$80,000. In 1912, Mrs. Floris A. Sackett made a bequest to the University, which amounts to the income on \$30,000. This money has been set aside to endow the "Floris Armstrong Sackett Chair of Domestic Arts." In the same year, Mrs. Frances W. Gibson bequeathed to the University the sum of \$31,500. This money has been used to establish the "Thomas Gibson Medical Endowment Fund."

In 1912, Mr. Harry Levy presented to the Board of Directors of the University of Cincinnati for the Endowment Fund of the College of Medicine, the sum of \$50,000, to be known as "The Julie Fries

Levy Endowment." Mr. Levy made this gift in honor of his mother and wishes the income used in furthering and disseminating medical knowledge.

In 1913, Mrs. Mary M. Emery presented to the Endowment Fund Association of the University of Cincinnati, the sum of \$125,000, to be used to endow the Chair of Pathology in the College of Medicine.

In 1913, Mrs. Henrietta Moos bequeathed \$25,000 to the Endowment Fund of the University of Cincinnati for the College of Medicine, as a memorial to her husband, Herman M. Moos. This fund is called the "Herman M. Moos Memorial Fund," and has been used to establish the Moos scholarship for research in internal medicine, to support a technical laboratory assistant, and to provide laboratory equipment in the Department of Medicine.

New departments were also added. In 1872, the Cincinnati Astronomical Society (founded in 1842) transferred its property on Mt. Adams to the city, which agreed, as a condition of the gift, to sustain, in connection with the University, on a new site provided by John Kilgour, an Observatory,* to be built with funds given by him. In 1896, the Medical College of Ohio (founded in 1819) became the College of Medicine of the University, though still retaining its original title conjointly with its new one. In 1908, an invitation was extended to the Miami Medical College to become a department of the University. In accordance with this invitation the Miami Medical College and the Medical College of Ohio (the College of Medicine of the University) have recently been united into a single medical department, known as "The Ohio-Miami Medical College of the University of Cincinnati."

Out of a professorship of Civil Engineering in the College of Liberal Arts has developed the College of Engineering. It was organized under that name in 1900, and became a distinct department in 1904.

Since its organization, in 1887, the Clinical and Pathological School of the Cincinnati Hospital has been affiliated with the University, being designated as the Medical Department, until 1896, and afterwards as the Department of Clinical Medicine.

The College for Teachers was organized in 1905, in co-operation with the Board of Education of the City of Cincinnati.

In 1906 the Graduate School was separated from the McMicken College of Liberal Arts and a distinct organization with a dean at its head effected.

In 1912 the College of Commerce was organized for the purpose of providing opportunity for higher commercial education.

* For this purpose the city levies annually a special tax of one-twentieth of one mill.

Evening Classes in the College of Liberal Arts were opened in 1912 in order that those persons whose occupations prevented them attending the day classes might have an opportunity to take college courses at night.

In 1912 a Bureau of City Tests was established in the Engineering College in connection with the Engineer's office of the Department of Public Service of the City. It will make all the tests of materials and supplies required by this and other city departments. A technical chemist has been employed to take direction of this work, and, as far as possible, it will be utilized to train students in the methods of such tests. It is hoped in this way to develop a course in municipal engineering.

The School of Household Arts was established in 1908 under the auspices of the Cincinnati Kindergarten Association; on July 1, 1914, it became a part of the University of Cincinnati. The School aims to give scientific instruction in the fundamental principles and practices of activities growing out of private and institutional house-keeping, with a view to increasing the efficiency of those desiring to enter a vocation or engage in a business dependent upon a knowledge of such subjects.

BUILDINGS AND SITE

From 1875 to 1895, the Academic Department occupied the building erected on the grounds of the McMicken homestead, as required by the will of the founder. This site proving altogether unsatisfactory, application was made to the courts for permission to remove to a more suitable location in Burnet Woods Park. The desired permission having been granted by the court of last resort in March, 1893, steps were immediately taken for the construction of a main building, called McMicken Hall, which was completed in two years. This building stands on high ground at the southern end of the park, forty-three acres having been set apart as a site for the University. During 1895-96, the north wing, known as Hanna Hall, was built for the Departments of Chemistry and Engineering, with funds amounting to about \$70,000, provided by Henry Hanna. The south wing, called Cunningham Hall, was built in 1898-99 by Briggs S. Cunningham, at a cost of \$60,000. This wing is occupied by the Departments of Physics, Botany, and Zoology. The Van Wormer Library, costing about \$60,000, the gift of Asa Van Wormer, was built during 1898-1900. The Observatory, built in 1873 with \$10,000 given by John Kilgour, stands on Mt. Lookout, at a distance of several miles from the other University buildings. A smaller structure, the O. M. Mitchel Building, was added in 1904 to house the old telescope. In 1912 this building was enlarged by the addition of a lecture room,

a library, and another small dome. Since 1896, the building on the McMicken homestead site has been used by the College of Medicine. A Dispensary, erected in that year, is situated on the lower part of the grounds. A gymnasium, power plant, and engineering building, provided by the city, at a cost of \$550,000, were completed in December, 1911.

A bond issue of \$550,000 has been authorized to provide for the construction of a chemical laboratory, a woman's building, a stadium, and for making extensive repairs in McMicken Hall. These bonds have been sold, and the plans for the new buildings will soon be ready.

BENEFACTORS OF THE UNIVERSITY

Besides those whose names have already been mentioned, the following persons have contributed to the endowment or to the equipment of the University: William A. Proctor, Samuel J. Browne, William J. Odell, Julius Dexter, Frank J. Jones, Moses F. Wilson, Eugene F. Bliss, James T. Whittaker, Mrs. William E. Merrill, Theodore A. Bruehl, Andrew Hickenlooper, Christian Moerlein, Laura Seasongood, Lewis Seasongood, S. Lilienthal, Mrs. Nannie Fechheimer, A. G. Wetherby, Charles F. Windisch, C. T. Webber, P. Robertson, the Lane & Bodley Company, James E. Mooney, John Kilgour, Chas. Kilgour, C. H. Krippendorf, Julius Fleischmann, Lucien Wulsin, Samuel Pogue, Edward Miles Brown, Nathaniel Pendleton Dandridge, Mrs. Howard Breen, Robert William Hochstetter, Mrs. R. N. Hollingshed, Davis L. James, Catherine M. James, Ellen W. James, Annie A. James, Mr. and Mrs. O. J. Renner, Mrs. Antonia Wendte, Mary E. Dandridge, Mrs. Joseph Eichberg, the alumni of the University, Harry M. Levy, J. G. Schmidlapp, the Class of 1907, the estate of John B. Peaslee, Alice L. Kuhn, Dr. Louis Grossman, Mrs. A. A. Long, Mr. Max Senior, Mr. John Bowers, of New York City, and Mrs. A. Howard Hinkle.

ENDOWMENT FUND ASSOCIATION

The Endowment Fund Association of the University of Cincinnati was incorporated on April 21, 1905, by a number of prominent citizens of the municipality. The purpose of the corporation, as stated in its Code of Regulations, is "to secure property, including money, or the income from the same, for the use of the University of Cincinnati, and for that purpose to solicit, collect, accept, hold, manage, invest, or pay over such property, money, or income, whether such property, money, or income arises by way of gift, devise, or purchase, for the benefit of said University." Its affairs are managed

by a Board of Trustees consisting of nine members. The officers of the Endowment Fund Association are:

Rufus B. Smith, President.
 Jacob G. Schmidlapp, Vice-President.
 Charles F. Windisch, Treasurer.
 Howard C. Hollister, Secretary.

BENEFACTIONS

For the guidance of those who may wish, during life or by bequest, to make benefactions to the University, the following information is given:

FORM OF BEQUEST TO THE UNIVERSITY OF CINCINNATI:—

I bequeath and devise to the City of Cincinnati as Trustee for the University of Cincinnati, to hold in trust forever for said University, the following property:.....

FORM OF BEQUEST TO THE ENDOWMENT FUND ASSOCIATION:—

I bequeath and devise to the Endowment Fund Association of the University of Cincinnati, for the use of the University of Cincinnati, the following property:.....

The sum of one hundred and fifty thousand dollars would erect a section of a Natural History Museum.

The sum of one hundred thousand dollars is the amount necessary to found a full professorship in any one of the departments. The donor has the privilege of naming the professorship.

Fifty thousand dollars would be required for a dormitory, and the contributor of such a sum would be privileged to name the building. There is nothing which the University needs more than a dormitory system.

Twenty thousand dollars endows an instructorship in a department. The donor has the right to name it.

Ten thousand dollars is the principal required to establish a fellowship in any one of the departments; the income being paid to the Fellow, who devotes his time to original research combined with a little teaching.

Three thousand dollars endows a free scholarship, the income from this sum remitting all fees and giving the donor the right during life to nominate to the scholarship, subject to the rules of the University.

The President of the University would be glad to give full information upon any question relating to foundation to any person or persons who may desire more detailed knowledge.

THE UNIVERSITY LIBRARY

The Van Wormer Library Building is of stone, fire-proof throughout, and is built in accordance with the most approved modern plans of library construction. The library is open from 8 A. M. to 9:30 P. M., on Monday to Friday; Saturday, 8 A. M. to 5 P. M.

The University Library, in this building, contains about 72,000 volumes and 10,000 pamphlets. In the Reference Room about 2,000 volumes are arranged on open shelves, to which the students have free access. The Periodical Room contains the current numbers of 400 periodicals. The library is provided with a card catalogue of its own books, and also with a card catalogue of the books (non-fiction) received since 1905, by the Public Library of Cincinnati.

The Library contains some valuable special collections:

The Robert Clarke Library, comprising 6,761 volumes, was given by William A. Procter. This collection is especially rich in Americana, and contains some rare first editions.

The Enoch T. Carson Shakespeare Library, 1,420 volumes, was also given by William A. Procter.

The Bruehl Library, of about 2,000 volumes, contains many rare and valuable works on the history, archæology, and ethnology of Mexico and Central America. This collection was made by Dr. Gustav Bruehl, and presented to the Library by his son, Mr. Theodore A. Bruehl.

The Wilson Library, consisting of works of English, French, and Italian literature, 810 volumes, was given by Judge Moses F. Wilson.

The Merrill Library of engineering works, 876 volumes, 478 pamphlets, and 185 maps, charts, and photo-lithographs, was given by Mrs. William E. Merrill.

The Whittaker Medical Library, the bequest of Dr. James T. Whittaker to the Medical College of Ohio, comprises 1,547 volumes and 538 pamphlets.

The Thoms Library, miscellaneous works, was part of the bequest of the late Matthew Thoms.

The Brown Philological Library, containing the English philological library of the late Professor Edward Miles Brown, was presented to the University by Mrs. Edward Miles Brown. It consists of 318 bound volumes, 51 unbound volumes, and 83 pamphlets.

The Charlotte Hillebrand Memorial Library consists of French and German books, at present about 1,500 volumes, purchased from the proceeds of an endowment recently established in memory of the late Charlotte Hillebrand.

The library has many volumes on history and economics, purchased from the proceeds of an endowment provided in 1894 by the will of Laura Seasingood.

The Library of the American Association for the Advancement of Science has been placed under the charge of the University of Cincinnati, by the terms of an agreement with the Association, entered into on September 14, 1895. This collection consists at present of 6,000 volumes, for the most part periodical publications of foreign scientific societies.

The Historical and Philosophical Society of Ohio has space for its valuable collection of books, pamphlets, and other articles in the Van Wormer Library. This collection comprises over 25,400 volumes and 69,000 pamphlets, pertaining chiefly to the history of the Ohio Valley, and contains valuable collections of original letters and other manuscripts. Students of the University have access to this library and may withdraw books from it under certain conditions.

The total number of books, including duplicates, in the Van Wormer Library Building is about 103,000 volumes and 79,000 pamphlets.

To these collections must be added the libraries of departments of the University, situated in other parts of the city. These are:

The Library of the Observatory.....	4,000 volumes
The Library of the College of Medicine.....	3,200 volumes
The Library of the Municipal Reference Bureau.....	400 volumes and 5,000 pamphlets

Total	7,600 volumes and 5,000 pamphlets

The libraries of the University, excluding those of the Historical and Philosophical Society of Ohio and the American Association for the Advancement of Science, contain 79,600 volumes and 15,000 pamphlets.

The Public Library, 458,876 volumes; the Mercantile Library, containing about 84,264 books; and the Lloyd Library and Museum, consisting chiefly of scientific works, as well as those of the Lane Theological Seminary, the Hebrew Union College, the Art Museum and the College of Music, are open to University students.

MUNICIPAL REFERENCE BUREAU

The Municipal Reference Bureau was organized in 1913 under the Department of Political Science of the College of Liberal Arts. Its quarters in the City Hall are adjacent to the Council Chamber and the rooms of the Board of Education. The library of this Bureau contains material relating to all phases of city government and municipal activities. This Bureau is primarily for the use of Council and the administrative officers of the city, but is available to the general public and students as well. Through this agency,

students in political and social science are enabled to familiarize themselves more intimately with the actual operation of both the city government and the organizations and institutions working for political and social betterment.

PUBLICATIONS

The official publications of the University are as follows:

THE UNIVERSITY RECORD. This publication is issued at intervals during the year and comprises the President's Annual Report, the Annual Catalogue, and Announcements of the Graduate School, College of Liberal Arts, College for Teachers, College of Engineering, College of Medicine, College of Commerce, and School of Household Arts.

THE UNIVERSITY STUDIES. This publication is issued in parts and contains the results of research by members of the faculty or by other persons connected with the University of Cincinnati. A price list of the different numbers of this publication may be obtained by addressing the office of the Press.

Student publications of the University are as follows:

THE CINCINNATIAN. The Cincinnati is the University Annual, and is edited and published by the members of the Junior Class.

THE UNIVERSITY WEEKLY NEWS. This paper is the official student bulletin, and is issued every week during the University year by a student board of editors.

THE SCRIBE. This magazine appears once a month and is literary in tone. The students of the University are the contributors.

MUSEUMS

The Museum of Natural History consists of a number of geological and biological collections. Among others are specimens donated from the Zoological Garden from time to time, the Balke natural history collections, chiefly of mammals, birds and insects, the Huntington collection of shells, the Fillmore and Schneider collection of Philippine relics; the Fechheimer collection of igneous rocks; the Wetherby collection of rocks and minerals; and lastly, a series of specimens illustrating the chemical industries. The Department of Geology and Geography has also on exhibition a part of its working collections of maps, models, minerals, rocks, and fossils. Other valuable collections are the U. P. James collection of fossils and minerals, the Carl Holmes collection of Greenland birds, permanently loaned by Dr. and Mrs. C. R. Holmes; donations by Mr. E. Meyer and Dr. Arch I. Carson; and several group mounts of large animals.

In 1912 the heirs of the late Samuel A. Miller loaned to the University his large collection of fossils (more than 8,000 labels), gathered from various parts of America and Europe. In return for the use of this collection for educational purposes, the University has provided for its exhibition in specially adapted show-cases in a large well-lighted room devoted especially to that purpose. The collection is for sale and is open at all times for inspection by prospective buyers. Inquiries from prospective purchasers will be transmitted promptly to the owners. It is earnestly hoped that some friend may purchase it for this institution. The University has also on loan and similarly exhibited the H. M. Norris collection of Indian implements.

The Greek Room contains reproductions of the most noted works of Greek art. There were added to this collection recently a cast of the "Winged Victory," "Aphrodite of Melos," "Faun Playing the Flute," "Esquiline Venus," "Capitoline Venus," and a pediment of the temple of Zeus at Olympia. Two additional statues (Minerva Giustiniani and the Lateran Sophocles) have been installed in the main corridor of McMicken Hall. These, together with the large carbon pictures of the Parthenon, Erechtheum, Acropolis, Corinth, and Paestum in the same hall, form a valuable adjunct to the collection of casts in the Art room.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

THE GRADUATE SCHOOL

THE D. A. R. FELLOWSHIP IN AMERICAN HISTORY. This fellowship was established in 1900 by the Daughters of the American Revolution, and yields an income of \$100 per year.

THE HANNA FELLOWSHIP IN PHYSICS. This fellowship was established by Mrs. Henry Hanna and Miss Mary Hanna in 1906. Its value is \$500 a year.

THE ALLIANCE FRANÇAISE SCHOLARSHIP, of \$300, was established in 1904 by the Alliance Française of the City of Cincinnati. It is awarded to the student in the Department of Romance Languages showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

THE ARMSTRONG-HUNTER MEMORIAL FUND, valued at \$1,000, was established in 1910 in memory of Miss Sarah J. Armstrong and Miss Clara Hunter, by eighty of their former pupils. This fund will be used to found a scholarship in the Department of English Literature in the Graduate School, for a woman who is a graduate of the University.

In addition to the above, the University offers ten scholarships in several departments which exempt their holders from the payment of tuition fees.

THE McMICKEN COLLEGE OF LIBERAL ARTS

THE CORNELIUS GEORGE COMEGYS SCHOLARSHIP, with an income of fifty dollars, was founded in 1899 by the Old Endowment Fund Association, which was composed of the alumni of the University. This scholarship is awarded annually to a meritorious undergraduate.

THE McMICKEN HONORARY SCHOLARSHIPS are awarded annually to the five Juniors who have the best scholastic standing, according to the records in the Registrar's office.

THE THOMS HONORARY SCHOLARSHIPS are awarded annually to the six Sophomores and the six Freshmen who have the best scholastic records.

THE JULIUS FLEISCHMANN SCHOLARSHIPS. Thirteen scholarships of \$75 each, offered for the years 1909-10, 1910-11, 1911-12, 1912-13, 1913-14, 1914-15, by ex-Mayor Julius Fleischmann. They cover the first year's tuition, in the College of Liberal Arts, of thirteen non-residents, who are members of the graduating classes of the accredited schools outside of Cincinnati.

THE JONES PRIZES. The first Jones Prize of forty dollars was founded in 1892 by the Honorable Frank J. Jones, and is awarded annually to that member of the Senior class in the College of Liberal Arts who writes and pronounces the best English oration. The subjects are chosen by the Dean and the Chairman of the Board of Directors. A committee consisting of three citizens of Cincinnati is appointed by the Chairman of the Board of Directors to judge the contest. The second Jones Prize of twenty dollars was founded by Mr. Jones in 1901. It is awarded to that member of the Senior class whose oration is judged by the committee to be second in merit. These prizes are permanently endowed.

THE EDWARD MILES BROWN PRIZE FOR EXCELLENCE IN ENGLISH. This prize of fifty dollars was established in 1908, by a provision of the will of the late Professor Edward Miles Brown. It is awarded annually to that member of the Senior class who has attained the highest excellence in English during his four years' undergraduate course.

THE HENRY HOCHSTETTER PRIZE IN CHEMISTRY. This prize was established in 1909 by Mr. Robert Hochstetter, of the Class of 1895, in memory of his brother, Henry Hochstetter. It is to be awarded annually for the best graduating thesis in Chemistry, and is open to both students of Liberal Arts and Engineering. The successful candidate is nominated by a committee consisting of the head of the Department of Chemistry and two members of the Cincinnati Section of the American Chemical Society.

THE ROBERT PATTERSON MCKIBBIN MEMORIAL PRIZE, a gold medal of the value of twenty-five dollars, was established in 1911 by

the Reverend William McKibbin and family, in memory of their son Robert Patterson McKibbin, who died in 1910, while a member of the Junior class of this University. This prize aims to hold up before the male students of the University the ideals of manhood. It will be awarded to that young man of the Senior class who, in the judgment of the faculty, is the best embodiment of these ideals.

THE CINCINNATI PRIZE. This prize, of the value of \$20, was established in 1912 by the National Municipal League. It is awarded to that student in the University who submits the best original essay dealing with the municipal government or the civic life of Cincinnati.

THE UNION BETHEL SCHOLARSHIPS IN SOCIAL SCIENCE. Four scholarships of \$50 each, offered for the years 1913-14, 1914-15, by Mr. J. O. White, resident director of the Union Bethel Settlement. These scholarships are awarded to four advanced students in the Department of Social Science who carry on sociological investigations at the Union Bethel.

THE CINCINNATI LAW SCHOOL SCHOLARSHIP. A scholarship open to Seniors who intend to enter the Cincinnati Law School the year after graduation.

THE TAFT SCHOLARSHIP This scholarship of \$75 was established in May, 1914, with the proceeds of the sale of the press equipment, which was originally donated by Mr. Charles P. Taft. It is awarded to a worthy student selected by the President of the University.

For the fellowships, scholarships, and prizes of the various colleges, consult their several announcements.

THE COLLEGE OF ENGINEERING

In the year 1906, the Lodge and Shipley Machine Tool Company donated two loan scholarships of the amount of one hundred dollars each to two students of the Co-operative Course in Engineering for the payment of their University fees.

THE COLLEGE OF MEDICINE

Through the generosity of some of the professors of the Medical College, six scholarships, of the value of \$150 a year each for four years, have been established. These scholarships, available in September, 1914, will be awarded to worthy students in the College of Medicine, who enter without conditions and need help. In order to retain one of the scholarships for successive years, a student must maintain a high scholastic record.

THE ALLIANCE FRANÇAISE

The Alliance Française, a national association, officially recognized by a decree of the President of the French Republic, October

23, 1886, aims to promote the study of the French language and literature in foreign lands.

The Cincinnati branch of the Alliance Française, in co-operation with the University of Cincinnati, has arranged for a number of lectures to be given during the year by some of the most eminent French writers of the day. To these lectures students of the University of Cincinnati are admitted by season tickets free of charge.

In 1904 the Alliance Française of Cincinnati established a Scholarship of three hundred dollars in the University, to be awarded to the student showing the greatest proficiency in French. The successful candidate is required to attend the summer course of instruction given by the Alliance Française in Paris.

ATHLETICS

Athletics are so controlled in the University that they play an important part in the college life of the student without seriously interfering with his interest in class-room work.

All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: three hours per week for all members of the Freshman class, and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed only under exceptional conditions, for which special permission must be secured from the Dean in advance.

A large part of the work is done out of doors during good weather, and such games as football, baseball, basket ball, tennis and track athletics are a part of the students' training. Lessons in boxing, wrestling, and fencing are also given to students interested in this form of exercise.

All athletics and gymnastics are in charge of the Director of Physical Education and his assistants.

CARSON FIELD

An Athletic Field has recently been provided, which is one of the best college athletic fields in the country. It contains a baseball diamond, a football gridiron, and a quarter-mile cinder track, with a one hundred and twenty-four straight-away extending in front of the new grand stand. The proximity of this field to the gymnasium makes it a particularly valuable addition to the athletic equipment of the University. Its location between three hilltops, which form a natural amphitheater, affords opportunity for thousands of people to view the games.

The new gymnasium with its modern equipment—cork-covered running track, white-tiled swimming pool, and spacious locker rooms—is the most complete institution of its kind in the West.

PHYSICAL TRAINING FOR WOMEN

A special instructor has charge of the work in Physical Training for young women, which is required during the Freshman and Sophomore years. The work in the gymnasium is supplemented during the fall and spring with outdoors games.

STUDENT ORGANIZATIONS

The following student organizations met regularly throughout the academic year, 1914-15.

The Academic Club, composed of the men of the College of Liberal Arts; The Athletic Council; Blue Hydra, a permanent organization devoted to the study of Biology; The Chemical Engineer's Club; The Chemist's Club; The Co-op Club; The Debating Council; The Dramatic Club; The French Club; The Freshman Girl's Club; The German Club; The History Club; The Junior Girl's Club; The Literary Society; Menorah Society (a branch of the Intercollegiate Menorah Association); Men's Glee and Mandolin Clubs; Men's Pan Hellenic Association; The Phrenecon Society; The Senior Girl's Club; The Sophomore Girl's Club; The Speaker's Club, an oratorical and debating society composed entirely of young men; The Student Section of the American Society of Mechanical Engineers; The Student Section of the American Institute of Electrical Engineers; The University Club, composed of representatives from the student clubs, the fraternities, and the four classes; Women's Glee Club; Women's Pan Hellenic Association; a chapter of the Y. W. C. A.

The Woman Student's League is an organization open to all women students of the University and to the women of the faculty. Regular meetings are held, at which lecturers of note address the members on subjects connected with the general and economic interests of women.

A Student Tribunal for Self-Government exists in the College of Engineering. It consists of five members—three Seniors and two Juniors.

Membership in the Three Arts Club of Cincinnati is open to women students in the College of Liberal Arts.

ADMISSION

SPECIAL STUDENTS.—Persons at least twenty years of age and qualified to do University work may be admitted as special students

to lectures and laboratory courses in the College of Liberal Arts, the College of Engineering, and in the College for Teachers. They will be required to furnish documentary evidence to the Director of School Affiliation and Dean of the College of Engineering, respectively, and to satisfy the heads of the departments concerned, of their ability to carry on successfully the courses which they desire to enter.

Before any special student may become a candidate for a degree he must satisfy the entrance requirements. All special students are amenable to the same regulations as apply to regular students in matters of examination, probation, discipline, etc.

STUDENTS ENTERING FROM OTHER COLLEGES AND UNIVERSITIES.—An undergraduate of a college or university desiring to enter the McMicken College of Liberal Arts, the College for Teachers, or the College of Engineering, must present to the Director of School Affiliation, or the Chairman of the Board of Admission of the College of Engineering, satisfactory evidence that he has done a sufficient amount of preparatory work to meet the regular entrance requirements, together with a certificate of honorable dismissal from the college or university last attended. He will be given credit for work of university grade in accordance with the provision for "Admission to Advanced Standing."

ADMISSION TO ADVANCED STANDING.—Students may be admitted to advanced standing upon presentation of a certificate from a college of approved standing. All applications for advanced standing must be made within three weeks after matriculation to the Director of School Affiliation, and must be accompanied by a statement of the work done, signed by the proper officials of the college from which the applicant comes, and by a marked copy of the catalogue or by a written description in detail of the courses for which advanced credits are desired. In courses where note books or drawings or both are required, these also must be presented. The students applying for advanced standing must first have satisfied the entrance requirements the same as regular students.

REGISTRATION

New students registered in 1914 on Thursday and Friday, September 17 and 18; upper classmen on Saturday, September 19. In 1915 they should register on Friday, February 5. Students registering on any other days than those designated above will be required to pay a registration fee of one dollar.

No person will be admitted to any course after the beginning of the semester, unless a good and sufficient excuse for not entering

at the opening of the semester be presented to the Dean; and *in no event will any person be permitted to enter the work of any semester after the close of the third week of that semester.* In accordance with this regulation no person was admitted to the work of the first semester of 1914-15 after October 10, 1914; for the second semester, the last day of admission will be February 27, 1915.

DIRECTIONS FOR REGISTRATION

Freshmen

1. Take to the Advisory Committee for the Election of Studies the Certificate of Admission received from the Director of School Affiliation, and receive from the Committee a Course Card; after consultation, fill out the Course Card in accordance with the rules and regulations of the Advisory Committee (see page 100);
2. Take the Certificate of Admission, the Registration Blank, and the Course Card to the Registrar;
3. Pay the library fee (also tuition and laboratory fees when such are required) to the Clerk of the Board;
4. Receive from the Clerk of the Board a receipt for matriculation;
5. File the Course Card received from the Advisory Committee in a box prepared for that purpose in the Registrar's office.

Sophomores

Every Sophomore must Register with his own Adviser in accordance with the rules and regulations of the Advisory Committee (see page 100). He must then fill out the Registration Blank and present that and his Course Card to the Registrar, who will give in exchange a Card of Matriculation Fees, which must in turn be presented to the Clerk.

Upper Classmen

Every upper classman must fill out his Course Card under the direction of his Adviser (see page 101). He must then fill out the Registration Blank and present that and his Course Card to the Registrar, who will give in exchange a Card of Matriculation Fees, which must in turn be presented to the Clerk.

Special Regulations

On the Course Card each course must be designated by the department and the number of the course, especial title, and the number of hours' credit, e. g.:

English 1: Rhetoric and Composition.....	3
Mathematics 1: Algebra, Trigonometry, and Analytical Geometry	4

In filling out election blanks especial care should be taken to

note the advertised hours of courses, in order that conflicts may be avoided.

All students who expect to become teachers should confer with the Dean of the College for Teachers before filling out their Course Cards.

No change will be permitted on the Course Card after the expiration of three days from the last day of registration.

All Course and Schedule Cards must be filled out and deposited in the boxes provided for that purpose before four o'clock on the last registration day.

GENERAL REGULATIONS

Each student shall, at the beginning of the year, leave his local address at the office of the Registrar and shall promptly report all subsequent changes of address.

UNIT OF INSTRUCTION.—The unit of instruction is one hour per week for one semester. Two and one-half hours of actual work in the laboratory, shop, or drafting-room, are considered equivalent to one recitation hour and the preparation therefor. Credit will be given for the number of hours officially published with the course, and for no more. University work not regularly registered is forbidden.

ABSENCES IN THE COLLEGE OF LIBERAL ARTS.—All absences of students, from any cause whatsoever, are recorded in the Registrar's office. If thirty or more absences are recorded against a student, two extra credits must be made in order to obtain the A. B. degree. No absences are excusable except those incurred by students representing the University in some public exercise outside of the city. Application for these excuses must be made to the Dean in advance.

ABSENCES IN THE COLLEGE OF ENGINEERING.—All absences of regular students from class work must be accounted for to the head of the department concerned. A student who has been absent must report it within a week after returning to the University, or his absence shall rank as unexcused.

PROBATION.—A student in the College of Liberal Arts who receives a grade below "D" in one-half of his work at the mid-term, or at the end of any semester, shall be put upon probation with restricted work for the next half semester of college work. Such probation cannot be removed until the student has obtained a passing grade in all subjects that he is permitted to carry. If a student so probationed fails to secure this passing grade after two successive semestral periods, he shall cease to be a member of the University.

READMITTANCE AFTER SUSPENSION.—Students in the College of Liberal Arts suspended for inefficient work during the Freshman

year may not return to the University as Freshmen until they have passed the entrance examinations of that year.

GRADES.—The scale of marks for recording grades is as follows: A, 90-100; B, 80-89; C, 70-79; D, 60-69, passed; E, 50-59, conditioned; F, 0-49, failed.

In case a student withdraws from the University during any semester, credit will not be given for any of the work elected for that semester.

HONORABLE DISMISSAL.—It is required as a condition of honorable dismissal, that every student who wishes to withdraw from the University shall submit to the Registrar a written request to that effect.

A copy of the "Rules for the Guidance of Students" may be obtained at the Registrar's office.

FEES

Tuition in the Graduate School, the College of Liberal Arts, and the College for Teachers is free to regular students who are citizens of Cincinnati.

All fees must be paid *in advance* to the Clerk of the Board of Directors during the days of registration. If fees are not paid promptly, the Deans are authorized to exclude students from attendance upon their classes. *No University fees are refunded.*

TUITION FEES

All regular non-resident students in the College of Liberal Arts and in the College for Teachers, and all regular students in the College of Engineering, are charged a tuition fee of \$75.00 per year, payable in installments of \$37.50 per semester. If not paid during registration days, but if paid within the two weeks succeeding the last registration day, the fee is \$45.00 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$50.00 per semester. If not paid within four weeks after the last registration day, further attendance upon classes will be refused.

Students in the College of Liberal Arts who are residents of the city of Cincinnati, and elect any work whatsoever in the College of Engineering, are charged the full tuition fee of \$37.50 per semester.

All regular five-year co-operative students in the College of Engineering are charged a tuition fee of \$50.00 per year, payable in installments of \$25.00 per semester. If not paid during registration days, but if paid within the two weeks succeeding the last registration day, the fee is \$32.50 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$37.50 per semester. If not paid within four weeks after the last registration day, further attendance upon classes will be refused.

All regular students in the College of Medicine (except those who entered the College previous to September, 1913) are charged a tuition fee of \$150.00 per year, payable in installments of \$75.00 per semester. If not paid during registration days, but if paid within two weeks succeeding the last registration day, the fee is \$82.50 per semester. If not paid as above, but if paid within the following two weeks, the fee is \$87.50 per semester, and if not paid within four weeks after the last registration day, further attendance upon classes will be refused. This fee entitles students in the College of Medicine to attend all didactic and clinical lectures and recitations, except the clinics of the City Hospital, which the members of the advanced classes are required to attend, and for which they pay an additional fee of \$10.00 to the Hospital.

Students in the College of Commerce are charged a tuition fee of \$50.00 for a full year's work of five courses. Those taking less than a full year's work are charged \$6.00 per recitation hour per year. Thus the tuition for one two-hour course is \$12.00 a year.

Tuition in the University Evening Courses is free (a) to all citizens of Cincinnati; (b) to all teachers* who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of \$3.00 per course, per year. Non-residents, other than teachers, are charged tuition at the rate of \$3.00 per credit hour per semester. A credit hour is one hour's work a week carried through a semester or half year. Laboratory fees will be charged for courses in the laboratory sciences.

All regular students in the School of Household Arts are charged a tuition fee of \$100.00 per year, payable in installments of \$50.00 per semester.

FEES FOR SPECIAL AND IRREGULAR STUDENTS.

All special students, and irregular students (i. e., students who have satisfied the entrance requirements, but take less than twelve hours a week by special permission), in the College of Liberal Arts and Engineering, and in the College for Teachers, and all non-resident students in the Graduate School, are charged tuition at the rate of \$3.00 per credit hour, per semester, in advance. A credit hour is one hour's work a week carried through a semester or half year. For instance, tuition for a three-hour course would amount to \$9.00 a semester, or \$18.00 a year. If not paid within one week after the last registration day, an additional fee of \$1.00 will be charged. If not paid within four weeks after the last registration day, attendance upon classes will be refused.

* Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

All special and irregular students in the College of Medicine or the School of Household Arts are charged tuition at the rate of \$5.00 per credit hour, per semester, in advance. A credit hour is one hour's work a week carried through a semester or half year. Three laboratory hours are the equivalent of one credit hour. If this tuition is not paid within one week after the last registration day, an additional fee of \$1.00 will be charged, and if not paid within four weeks after registration, further attendance upon classes will be refused.

EXTERNAL COURSES

A fee of five dollars will be charged for admission to *each* External Course.

SPECIAL COURSES FOR TEACHERS*

Teachers enrolled in *Special Courses for Teachers* in the University, pay the regular library fee of \$5.00 per year. Tuition in these courses is free (a) to all teachers in public schools who are residents of the city; (b) to all teachers who, although non-residents, are engaged in teaching in the public schools of the city. All other teachers are charged tuition at the rate of \$3.00 per course, per year, payable in advance.

The laboratory fee in a teacher's course is \$5.00 per year.

LABORATORY FEES

All laboratory fees are payable strictly *in advance*.

A student shall not be permitted to enter a laboratory course until he presents to the instructor in charge a receipt for the payment of his laboratory fee.

Art, \$5.00 per semester.

Biology, \$10.00 per semester; \$5.00 per semester for a course having but one laboratory period per week.

Cement, \$5.00 per semester.

Chemistry, \$15.00 per semester; breakage deposit, \$10.00.

Drawing, \$1.00 per semester.

Foods and Nutrition, \$5.00 per semester.

Geology, \$5.00 per semester; \$2.50 per semester for a course having but one laboratory period per week.

Hygiene and Sanitation, \$2.00 per semester.

Metallurgy, \$7.50 per semester.

Physics, \$10.00 per semester; \$5.00 per semester for a course having but one laboratory period per week.

* Librarians or assistants in the Public Library are given the same rates as teachers in the public schools.

Psychology, \$5.00 per semester.

Textiles and Clothing, \$5.00 per semester.

Cutting, Millinery, and Laundering, \$2.00 per semester.

ENGINEERING LABORATORY.—Regular students in the College of Engineering pay \$5.00 per period per week per semester in advance. Co-operative students pay \$2.50 per period per alternate week per semester in advance.

COLLEGE OF MEDICINE LABORATORIES.—A student who entered the College of Medicine before September, 1913, will be charged a fee of \$5.00 for each laboratory course.

GRADUATION FEES

All graduation fees must be paid at least two weeks before the day appointed for conferring the degree.

A graduation fee of \$5.00 is charged every candidate for the degree of bachelor of arts, for the degree of bachelor of arts in education, for an engineering degree, for the degree of bachelor of science, and for a diploma in household arts. A graduation fee of \$10.00 is charged a candidate for the degree of master of arts, and a fee of \$20.00 is charged for the degree of doctor of philosophy, and for the degree of doctor of medicine.

BREAKAGE DEPOSITS

At the beginning of the year, a breakage deposit of \$10.00 will be required of each student who takes chemistry. Five dollars of this amount must be kept permanently upon deposit until all accounts with the Department of Chemistry have been settled. For the remaining \$5.00 a coupon ticket will be issued, with which supplies and apparatus may be obtained at the store-room. Should this coupon-ticket become exhausted, the student must purchase a new ticket (\$5.00) before supplies will be issued to him at the store-room.

A deposit of \$5.00 will be required of all engineering students except those taking chemistry.

A deposit of \$10.00 will be required of each student in the College of Medicine at the opening of each session as a guarantee against breakage of apparatus, instruments, furniture, etc., to be renewed by each student whenever the breakage or damage amounts to \$10.00. This deposit will be returned at the end of the year after deductions for such damage have been made.

COURSE FOR TEACHERS OF ART

The fees in the Special Course for Teachers of Art are as follows: matriculation fee, \$5.00; tuition fee for non-residents, \$18.00 (for one year's instruction in psychology and the history of educa-

tion); laboratory fee, \$25.00 per year; tuition fee, payable at the Art Academy, \$25.00 per year.

MISCELLANEOUS FEES

Gymnasium Fee.—A gymnasium fee of \$5.00 per annum (\$2.50 per semester) will be charged all men in the College of Liberal Arts, in the College for Teachers, and in the College of Engineering, taking six or more hours of work per week. The same fee will be charged all men in the Graduate School who elect twelve hours of work per week.

A fee of \$5.00 per annum (\$2.50 per semester) will be charged all other men in the University who desire to avail themselves of the privileges of the gymnasium.

During the temporary use of the men's gymnasium by the classes for women, a gymnasium fee of \$1.00 per semester will be charged the women students.

Library Fee.—All students in the Graduate School, in the Colleges of Liberal Arts and Engineering, except fifth year co-operative students, in the College for Teachers, in the College of Commerce, in the School of Household Arts, and in the Evening Academic Courses, must pay a library fee of \$5.00 per year at the opening of the session.

Late Registration.—Students who apply for registration or submit schedules of study on days other than those designated will be required to pay a fee of \$1.00.

Matriculation and Library Fee.—All students in the College of Medicine must pay a University Matriculation and Library fee of \$5.00 per year. This fee entitles the student to matriculation in any College of the University, and also to the use of all of the libraries of the University.

Microscope Fee.—Each student in the College of Medicine must own a microscope approved by the professor of the department, or rent one from the College, at a cost of \$2.50 per session.

Special Examinations.—A fee of \$1.00 will be charged for each supplemental examination for the removal of conditions, and this fee must be paid even though the condition is removed without a supplemental examination. A fee of \$5.00 will be charged for entrance examinations on days other than those specified in the calendar. Every candidate who applies for the removal of a condition must present to the head of the department in which the condition occurred a receipt showing that the candidate has paid the fee of \$1.00, before the said head of department may report the removal of a condition to the Registrar.

Summer Course.—A fee of \$10.00 will be charged for the use of instruments in the summer courses in the College of Engineering.

EXPENSES

	Graduate School Liberal Arts, or College for Teachers	Engineering	Medicine
Tuition Fees	\$75 00	\$75 00	\$150 00
Library Fees	5 00	5 00	.....
Library and Matriculation Fee, payable each year....	.....	.....	\$5 00
Gymnasium Fee.....	5 00	5 00	
Laboratory Fees	*	\$35 to \$45	.....
Books	\$20 to \$25	\$25 to \$30	\$45 to \$60
Board and Room, per week..	\$5 to \$8	\$5 to \$8	\$5 to \$8
Total Expense per year.....	\$325 to \$450	\$350 to \$450	\$375 to \$500

The Secretary of the University will furnish information regarding suitable boarding places in the vicinity of the University.

* Laboratory fees vary according to the courses taken.

THE GRADUATE SCHOOL

FACULTY AND INSTRUCTORS

CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.

JERMAIN GILDERSLEEVE PORTER, Ph. D., Director of the Observatory
and Professor of Astronomy.

FREDERICK CHARLES HICKS, Ph. D., Sinton Professor of Economics
and Commerce.

HARRIS HANCOCK, Ph. D., D. Sc., . . . Professor of Mathematics.

JOHN MILLER BURNAM, Ph. D., . . . Professor of Latin.

MAX POLL, Ph. D., . . . Professor of the Germanic Languages.

JOSEPH EDWARD HARRY, Ph. D., Professor of Greek and Dean of the
Graduate School.

MERRICK WHITCOMB, Ph. D., . . . Professor of History.

LOUIS TRENCHARD MORE, Ph. D., . . . Professor of Physics.

BURTIS BURR BREESE, Ph. D., . . . Professor of Psychology.

WILLIAM PAXTON BURRIS, A. M.; L. H. D., Professor of the History
and Principles of Education.

JOHN WILLIAM HALL, A. M., Professor of Elementary Education.

STEPHEN ELMER SLOCUM, B. E., Ph. D., Professor of Applied
Mathematics.

NEVIN M. FENNEMAN, Ph. D., Professor of Geology and Geography.

LAUDER WILLIAM JONES, Ph. D., . . . Professor of Chemistry.

*GUY ALLAN TAWNEY, Ph. D., . . . Professor of Philosophy.

FRANK WADLEIGH CHANDLER, Ph. D., Professor of English and Ropes
Professor of Comparative Literature.

PHILLIP OGDEN, Ph. D., . . . Professor of Romance Languages.

PAUL GERHARDT WOOLLEY, B. S., M. D., . . . Professor of Pathology.

MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.

HENRY McELDERRY KNOWER, Ph. D., . . . Professor of Anatomy.

HARRIS MILLER BENEDICT, Ph. D., . . . Professor of Botany.

HENRY S. WEST, Ph. D., . . . Professor of Secondary Education.

SELDEN GALE LOWRIE, Ph. D., . . . Professor of Political Science.

_____, . . . Professor of Zoology.

HARRY SHIPLEY FRY, Ph. D., . . . Associate Professor of Chemistry.

WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor of
Bacteriology.

SAMUEL JAMES McINTOSH ALLEN, Ph. D., Associate Professor of
Physics.

* Absent on leave, 1914-15.

- ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.
- CLAUDE M. LOTSPEICH, Ph. D., . Associate Professor of German.
- HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial
Chemistry.
- HARRY LEWIS WIEMAN, Ph. D., . Assistant Professor of Zoology.
- EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.
- J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
- RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance
Languages.
- ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and
Comparative Anatomy.
- CLYDE WILLIAM PARK, A. M., . . Assistant Professor of English.
- WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of Eco-
nomics and Social Science.
- JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
- CYRUS DEWITT MEAD, Ph. D., Assistant Professor of Elementary
Education.
- HENRY G. HARTMANN, Ph. D., Assistant Professor of Philosophy.
- CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political
Science.
- CLARENCE D. STEVENS, A. M., . . Assistant Professor of English.
- WALTER H. BUCHER, Ph. D., Instructor in Geology.
- JAMES DYSART MAGEE, Ph. D., Instructor in Economics.
- MERTON JEROME HUBERT, A. M., Instructor in French and Italian.
- DEXTER PERKINS, Ph. D., Instructor in History.
- ERNEST LYNN TALBERT, Ph. D., . . . Instructor in Philosophy.

INFORMATION FOR STUDENTS

ADMISSION

The degree of Bachelor of Arts conferred by the University of Cincinnati entitles its holder to admission to the Graduate School. The University also offers its degrees of Master of Arts and Doctor of Philosophy to graduates of other institutions of high standing who shall complete their work in conformity with the regulations of the Graduate School. Students will not be admitted to the Graduate School after the third week of the semester.

INSTRUCTION

The work of each candidate for a graduate degree shall be under the direction of an Advisory Committee, composed of the Dean of the Graduate School and the heads of the departments in which the work is taken.

The unit of instruction in the Graduate School is one hour a week for one semester.

The nature of the graduate student's work will vary with the subjects pursued, but it is intended that the student's work shall require a regular attendance at class meetings or in the laboratory, and shall not be in any respect of that character of work known as "in absentia." No credit will be given toward a graduate degree for work done prior to the conferring of the degree of Bachelor of Arts or its equivalent. No course in which a student obtains a grade below "B" will count for credit in the Graduate School.

REQUIREMENTS FOR THE DEGREE OF MASTER
OF ARTS

The work for the Master's degree requires at least one full year's residence in the Graduate School. A candidate for this degree, at the time of his admission to the Graduate School, and with the approval of the head of the department in which he elects his major work, shall designate the subjects which he desires to pursue. The student must satisfy the Dean of the Graduate School that the courses offered have been approved by his Adviser (the head of the department in which he takes his major), as well as by the heads of the other departments in which he has elected courses. The courses offered for the Master's degree shall represent not less than twenty-four credit hours of graduate instruction, at least twelve of which shall be in the major study. In case the candidate elects a major in the same department in which he completed a major in fulfillment of the requirements for a degree in the College of Liberal Arts, he shall, under the direction of his Adviser, elect sufficient work in some allied department to complete the twelve credit hours. The requirement of a thesis shall be optional with the Adviser. Whenever a thesis for the Master's degree is required, it must be filed with the Registrar not less than six weeks before the close of the final semester of graduate study. Students taking work in courses open to graduates and undergraduates shall be required to complete an additional amount of work, estimated to be fifty per cent of the regular undergraduate requirements. Candidates for the degree of Master of Arts shall pass an oral examination before a committee of the faculty.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY

For the Doctor's degree, three years of graduate study will ordinarily be required. Where the student's college training has been defective or he cannot devote his whole time to the work, the period of study will be longer than three years. At least the last year of study must be spent in residence at the University of Cincinnati. Students may be permitted to count for the Doctor's degree work done for the Master's degree, provided that such work is of a satisfactory character.

A candidate for the Doctor's degree shall designate at the time of his admission to the Graduate School three subjects which he desires to pursue. These shall be known as a major and two minor subjects, not more than two of which shall be selected in one department, and the candidate shall satisfy the Dean of the Graduate School that his selection has received the approval of the heads of the departments in which the courses have been selected. These heads of departments, together with the Dean of the Graduate School, shall constitute an Advisory Committee, under whose direction the candidate shall pursue his graduate course.

A candidate for the Doctor's degree is expected to be able to read French and German. In order to receive the degree of Doctor of Philosophy, the candidate must have completed satisfactorily such courses as shall be prescribed by his Advisory Committee, representing not less than forty-eight units of instruction embodied in a major and two minor subjects, thirty units of which must be given to the major subject, and to pass such written examinations on his major and minor subjects as the Advisory Committee may indicate. The statement of the number of units required for the Doctor's degree is to be taken as a minimum requirement. The degree is given, not as a result of the completion of a certain number of units of study, but on the basis of long study and scientific accomplishment.

The candidate shall furthermore be required to present, in such form as the Advisory Committee may determine, a thesis which will give evidence of high attainment and power of independent research, and he shall pass satisfactorily an oral examination before the faculty.

All theses offered for the Doctor's degree must be filed with the Registrar not later than six weeks before the close of the final semester of graduate study. Moreover, each student upon whom the degree of Doctor of Philosophy is conferred, is required to deposit in the University Library one hundred printed copies of his thesis. The candidate may receive his diploma before the thesis is printed, pro-

vided a type-written copy is deposited with the Librarian and the sum of fifty dollars with the Registrar of the University. This sum will be returned upon presentation to the Library of the required number of printed copies of the thesis.

ADMISSION TO ADVANCED STANDING

Work done at other universities may be accepted as an equivalent for part of the work required for a graduate degree. All claims for such credit, together with all claims for advanced standing, must be filed with the Dean of the Graduate School within three weeks after the student enters upon his work at the University or resumes his work after a leave of absence for the purpose of carrying on work at another university.

At least twelve credits of the twenty-four required for the Master of Arts degree must be obtained through work done in residence at the University of Cincinnati.

SPECIAL ARRANGEMENT FOR GRADUATE STUDENTS IN LANE SEMINARY AND IN THE HEBREW UNION COLLEGE

With the approval of the Dean of the Graduate School and their Advisers, candidates may submit courses taken in Lane Seminary and in the Hebrew Union College in partial fulfillment of the requirements for the Master of Arts degree. Not more than twelve units may be so counted.

FELLOWSHIPS AND SCHOLARSHIPS

There are at present three fellowships, a traveling scholarship, and ten University scholarships open to students of the Graduate School. The fellowships and traveling scholarship carry a stipend of from one hundred to five hundred dollars. (For particulars see page 46). The emolument of the University scholarships is sufficient for the payment of tuition fees. Applications should be addressed to the Dean of the Graduate School.

COURSES OF INSTRUCTION

For detailed description of the courses given in the Graduate School, see the Announcements of the College of Liberal Arts and the College for Teachers.

ANATOMY

7. Those interested in post-graduate work in anatomy, histology, or gross human anatomy, are requested to apply to the head of the department.

Professor Knowler, Assistant Professor Malone.

ASTRONOMY

FOR COURSES OPEN TO GRADUATES SEE PAGE 103.

BOTANY

To pursue advanced courses in botany the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in botany students must have completed Courses 5a, 6a, 7b, 8b, 35, 24a, 25a, 26b, 27b, or their equivalents. (See Botany, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects toward the degree of Master of Arts by students who have elected majors in other departments. When botany is chosen as a minor for the Degree of Doctor of Philosophy, the work required approximates that of the full course for the degree of Master of Arts in botany. The requirements for a higher degree, when botany is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 62-63).

Primarily for Graduates

[40. Current Problems in Botany.] Professor Benedict.
Omitted in 1914-15.

31. Research. Hours to be arranged. Professor Benedict.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 105.

CHEMISTRY

SPECIAL REQUIREMENTS FOR HIGHER DEGREES

THE DEGREE OF DOCTOR OF PHILOSOPHY

A. Chemistry as the Major Subject.—All candidates who make chemistry their major subject must offer the following courses or their equivalents (see Chemistry, Liberal Arts): 1a, 2a, 3b, 4b, 5a, 6, 7b, 8a, 9a, 12a, 13a. In addition to these requirements, students who specialize in a certain branch of chemistry must complete the advanced courses required in connection with the choice made. The completion of these courses, however, does not satisfy the requirements made of the candidate for a higher degree; he must show a maturity acquired by personal intimacy with the literature and method of chemistry.

B. Chemistry as the Minor Subject.—It is not possible to state precisely those courses which may be required in each particular case. The choice will be made after consultation with the heads of the departments in which the major work falls. The usual requirements will be Courses 1a, 2a, 3b, 4b, 5a, 6, 7b. If the candidate has chosen one of the physical sciences as his major subject, Courses 12a and 13a (one semester) will be required; if one of the biological sciences has been made the major subject, Courses 8a and 9a will be taken.

THE MASTER'S DEGREE

A candidate for the Master's degree must present a thesis embodying the results of some experimental work, or a written account in some detail of a subject suggested by the instructor under whose direction the student has been placed.

Primarily for Graduates

30. Research.

Professor Jones, Associate Professor Fry,

Assistant Professor Goettsch,

Assistant Professor Aston.

35a. Some Special Problems and Theories of Organic Chemistry.
Professor Jones.

40. Journal Club Meetings. Papers by instructors and advanced students.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 109.

ECONOMICS

(The Sinton Professorship)

FOR COURSES OPEN TO GRADUATES SEE PAGE 112.

EDUCATION

Education 1, 3, 5, 7, 9, 11, and 12 are open to graduate students. Courses 1, 9, and 11 may be counted for credit towards a graduate degree, provided students do satisfactory pieces of independent work and embody the results of the same in acceptable written theses. For the number of credits allowed, the hours at which the courses are given, and the instructors having charge of the same, see Announcement of the College for Teachers.

ENGLISH**COMPARATIVE LITERATURE**

(The Nathaniel Ropes Foundation for the Comparative Study of Literature)

For Graduates Only

20. Seminary.—Elizabethan Literature in its Continental Relations. T., 4:00-6:00. Professor Chandler.

FOR COURSES OPEN TO GRADUATES SEE PAGE 117.

GEOLOGY AND GEOGRAPHY

FOR COURSES OPEN TO GRADUATES SEE PAGE 119.

GERMAN**Primarily for Graduates**

12. Interpretation of both parts of Faust and Study of the Legend.—T., 4:00-6:00. Professor Poll.

Course 12 is open to students who have passed in Course 5.

[11b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] *Second semester*, T., 4:00-6:00. Professor Poll.

Course 11b is open to students who have passed in Course 5 or 6. Omitted in 1914-15.

[7. Middle High German.] W., 4:00-6:00.

Associate Professor Lotspeich.

Omitted in 1914-15.

8. Old High German.—M., 4:00-6:00.

Associate Professor Lotspeich.

[13. Gothic.] W., 4:00-6:00. Associate Professor Lotspeich.
Omitted in 1914-15.

[26. Old Norse.] M., 4:00-6:00.
Omitted in 1914-15. Associate Professor Lotspeich.

[9b. German Seminary.] *Second semester*, T., 4:00-6:00.
Omitted in 1914-15. Professor Poll.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 122.

GREEK

Primarily for Graduates

5. Rapid Reading.—Th., 3:00-4:00. Professor Harry.

6. Practical Exercises in Greek.—M., 3:00-5:00.
Professor Harry.

[7. Greek Seminary.] The Historians (1914-15); The Attic Orators (1915-16). M., 3:00-5:00. Professor Harry.

Open to graduates and to those who have completed the undergraduate courses in Greek.

Omitted in 1914-15.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 125.

HISTORY

FOR COURSES OPEN TO GRADUATES SEE PAGE 127.

LATIN

Primarily for Graduates

(Hours in all cases to be arranged)

9. Latin and Romance Palæography.—Professor Burnam.
Prerequisite: Four years of undergraduate work and ability to read French and German.

10. Latin Seminary.—Virgil. Professor Burnam.

12. Graduate Study.—Credit according to the work elected and completed under the direction of the teaching staff of the Department.
Professor Burnam.

MATHEMATICS**Primarily for Graduates**

20. Theory of Maxima and Minima Involving Several Variables. The Calculus of Variations.—M., Th., 4:00-6:00.

Professor Hancock.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 130.

MATHEMATICS (APPLIED)**Primarily for Graduates**

11b. Fourier's Series and Spherical Harmonics.—*Second semester*, Th., 4:00-6:00; S., 9:30-10:30.

Professor Slocum.

10a. Theory of Errors and Method of Least Squares.—*First semester*, M., 4:00-5:00; W., 4:00-6:00.

Professor Slocum.

For Graduates Only

40. Seminary.—Theoretical and experimental research in some special topic of the mechanics of rigid, elastic, fluid or gaseous bodies.

Professor Slocum.

FOR OTHER COURSES IN MATHEMATICS SEE PAGE 130.

PATHOLOGY AND BACTERIOLOGY

8. Research.—Open to any qualified person after consultation with the head of the department.

Professor Woolley, Associate Professor Wherry.

PHILOSOPHY**Primarily for Graduates**

9. The Methods of Certain Ethical Systems.—Th., 1:00-3:00.

Assistant Professor Hartmann.

10. Plato and Aristotle.—T., 1:00-3:00.

Dr. Talbert.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 132.

PHYSICS**For Graduates Only**

7. Lectures on Theoretical Physics. Professor More.
- 25a. Theoretical Mechanics.—See under Applied Mathematics 16a.
Professor Slocum.
9. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the Mechanician.
Professor More and Associate Professor Allen.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 136.

PHYSIOLOGY**(The Joseph Eichberg Professorship)**

7. Research.—Open to any qualified person after consultation with the head of the department. Professor Fischer.
-

POLITICAL AND SOCIAL SCIENCE

FOR COURSES IN POLITICAL AND SOCIAL SCIENCE OPEN TO GRADUATES SEE PAGES 138, 140.

PSYCHOLOGY**Primarily for Graduates**

3. Research.—Special investigation in the psychological laboratory. Professor Breese.
- [4. Seminar.] A critical study of the most important problems in psychology. Th., 3:00-5:00. Professor Breese.
- [6a. Educational Psychology.] *First semester.* Hours to be arranged. Professor Breese.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 141.

ROMANCE LANGUAGES

FOR COURSES OPEN TO GRADUATES SEE PAGES 143, 145, 146.

ZOOLOGY

To pursue advanced courses in zoology, the student should have some training in physics and chemistry, and should be able to read French and German. Special facilities are afforded students pursuing courses of research.

REQUIREMENTS FOR DEGREES

To enter upon work for the degree of Master of Arts in zoology, students must have completed Courses 1a, 2a, 3b, 4b, 15, 17b, 18b, 19a, 13b, 14b, 20a, or their equivalents. (See Zoology, College of Liberal Arts.) Courses for "Undergraduates and Graduates" may be counted as graduate subjects toward the degree of Master of Arts by students who have elected majors in other departments. The requirements for a higher degree, when zoology is chosen as a major subject, are adequately stated under the general requirements for degrees (pages 62-63).

Primarily for Graduates

[30. Current Problems in Zoology.]

Omitted in 1914-15. Assistant Professor Wieman.

31. Research. Hours to be arranged.

Assistant Professor Wieman and
Assistant Professor Chambers.

FOR OTHER COURSES OPEN TO GRADUATES SEE PAGE 147.

McMICKEN COLLEGE OF LIBERAL ARTS

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph. D., LL. D., President of the University.
JERMAIN GILDERSLEEVE PORTER, Ph. D., Director of the Observatory
and Professor of Astronomy.
FREDERICK CHARLES HICKS, Ph. D., Sinton Professor of Economics
and Commerce and Supervisor of the Evening Academic Courses.
HARRIS HANCOCK, Ph. D., D. Sc., . . . Professor of Mathematics.
JOHN MILLER BURNAM, Ph. D., . . . Professor of Latin.
MAX POLL, Ph. D., . . . Professor of the Germanic Languages.
JOSEPH EDWARD HARRY, Ph. D., . . . Professor of Greek.
MERRICK WHITCOMB, Ph. D., . . . Professor of History.
LOUIS TRENCHARD MORE, Ph. D., . . . Professor of Physics.
BURTIS BURR BREESE, Ph. D., . . . Professor of Psychology.
STEPHEN ELMER SLOCUM, B. E., Ph. D., Professor of Applied
Mathematics.
NEVIN M. FENNEMAN, Ph. D., Professor of Geology and Geography.
LAUDER WILLIAM JONES, Ph. D., . . . Professor of Chemistry.
*GUY ALLAN TAWNEY, Ph. D., . . . Professor of Philosophy.
FRANK WADLEIGH CHANDLER, Ph. D., Professor of English, Ropes
Professor of Comparative Literature, and Dean of the
College of Liberal Arts.
PHILLIP OGDEN, Ph. D., . . . Professor of Romance Languages.
HARRIS MILLER BENEDICT, Ph. D., . . . Professor of Botany.
HENRY S. WEST, Ph. D., . . . Director of School Affiliation.
SELDEN GALE LOWRIE, Ph. D., . . . Professor of Political Science.
_____, . . . Professor of Zoology.
HARRY SHIPLEY FRY, Ph. D., . . . Associate Professor of Chemistry.
SAMUEL JAMES McINTOSH ALLEN, Ph. D., Associate Professor of
Physics.
ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.
CLAUDE M. LOTSPEICH, Ph. D., . . . Associate Professor of German.
EMILIE WATTS McVEA, A. M., Assistant Professor of English and
Dean of Women.
CHARLES NAPOLEON MOORE, Ph. D., Assistant Professor of Mathe-
matics.

* Absent on leave, 1914-15.

- HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial
Chemistry.
- BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Public
Speaking and English.
- HARRY LEWIS WIEMAN, Ph. D., . Assistant Professor of Zoology.
- WILLIAM TUNSTALL SEMPLE, Ph. D., Assistant Professor of Latin.
- J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
- RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance
Languages.
- ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and
Comparative Anatomy.
- BERTHA K. YOUNG, A. M., . . . Assistant Professor of English.
- CLYDE WILLIAM PARK, A. M., . . Assistant Professor of English.
- WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of
Economics and Social Science.
- JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
- HENRY G. HARTMANN, Ph. D., Assistant Professor of Philosophy.
- CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political
Science.
- CLARENCE D. STEVENS, A. M., . . Assistant Professor of English.
- ALFRED BRODBECK, Director of Physical Education.
- FLORENCE CAMERON LAWLER, B. S., . . Instructor in Mathematics.
- ARTHUR JAMES KINSELLA, A. M., Instructor in Greek.
- JOSEPH HENRY KINDLE, A. M., Instructor in Mathematics.
- PLATT BISHOP EVENS, Mechanician and Instructor in Laboratory Arts.
- CORA MAY BOX, A. M., Instructor in Zoology.
- ELEANOR KATHERINE NIPPERT, A. B., . . . Instructor in German.
- MARTIN LUDWICH, A. M., Instructor in German.
- ROBERT E. CLYDE GOWDY, Ph. D., Instructor in Physics.
- THOMAS LANSING PORTER, Ph. D., Instructor in Physics.
- EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.
- WALTER H. BUCHER, Ph. D., Instructor in Geology.
- JAMES DYSART MAGEE, Ph. D., Instructor in Economics.
- MERTON JEROME HUBERT, A. M., Instructor in French and Italian.
- DEXTER PERKINS, Ph. D., Instructor in History.
- LEVI ALEXANDER GIDDINGS, M. S., Instructor in Botany.
- ERNEST LYNN TALBERT, Ph. D., Instructor in Philosophy.
- WALTER WESLEY PLOCK, Instructor in English.
- WILLARD A. KINNE, A. B., . . Instructor in French and Spanish.
- RAY GOULD KNICKERBOCKER, M. A., . . Instructor in Metallurgy.
- , Instructor in Physical Chemistry.
- , Instructor in Physical Education.
- EDWARD MACK, A. M., D. D., . . Lecturer on Biblical Literature.
- ANATOLE LE BRAZ, Professor in the University of Rennes, Lecturer
on the Ropes Foundation for the Comparative Study of Literature.

Other Appointments for 1914-15

- SCHACHNE ISAACS, A. M., Assistant in Psychology.
 RAPHAEL ISAACS, A. M., . Assistant in Embryology and Zoology.
 ANNETTE FRANCES BRAUN, Ph. D., Assistant in Zoology.
 LEONORA NEUFFER, A. M., Assistant in Chemistry.
 HAROLD H. WAGNER, Assistant in Physical Education.
 ESTHER GODSHAW, Ph. B., Assistant in History.
 MADELAINE MAURY WRIGHT, A. B., Assistant in English.
 EDWARD JOSEPH LORENZ, A. M., Hanna Fellow in Physics.
 MIRIAM URBANSKY, D. A. R. Fellow in American History and
 Student Assistant in European History.
 EMMA ANDRIESEN, A. M., Graduate Assistant in German.
 E. LUCY BRAUN, Ph. D., Graduate Assistant in Botany.
 HYMAN BERNARD CANTOR, A. B., Graduate Assistant in Philosophy.
 JOHN D. ELLIS, A. B., LL. B., Graduate Assistant in Economics and
 English.
 MARTHA JANE GIBSON, A. M., Graduate Assistant in English.
 ELLA DAVIS ISAACS, A. M., Graduate Assistant in Economics.
 RALPH KREIMER, A. B., Graduate Assistant in English.
 LOWELL HOBART LUDWIG, A. B., Graduate Assistant in Economics.
 SAMUEL SPEIR MAYERBERG, A. M., Graduate Assistant in Social
 Science.
 AMY F. MIHALOVITCH, A. B., Graduate Assistant in Economics.
 HELEN A. STANLEY, A. M., Graduate Assistant in Latin and English.
 MARY DUNN WHITFIELD, A. B., Graduate Assistant in English.
 DOROTHY ANDERSON, Student Assistant in Chemistry.
 RALPH E. BELSINGER, Student Assistant in Physics.
 VIRGINIA BIDDLE, Student Assistant in English.
 LESTER BRAND, Student Assistant in Chemistry.
 WALTER BRILL, Student Assistant in Physics.
 STANLEY COOK, Student Assistant in Chemistry.
 HAROLD F. RICHARDS, Student Assistant in Physics.
 EDWARD STEVENS ROBINSON, Student Assistant in Psychology.

REQUIREMENTS FOR ADMISSION TO THE McMICKEN COLLEGE OF LIBERAL ARTS

Candidates for admission as undergraduates must be at least sixteen years of age. To secure unconditional admission, they must give evidence of having completed satisfactorily an amount of preparatory study represented by sixteen units, a unit being the quantity of work represented by a full year's study of a subject, with recitation time devoted to it aggregating the equivalent of 120 sixty-minute periods; laboratory, shop, drawing room, or field work to receive a double allowance of time when counted in the reckoning of units. Ordinarily, in order to fulfill this requirement,

a study must be pursued for five periods per week throughout an academic year; but in schools where the school year is long, for example, 40 weeks, and the recitation periods are not less than 45 minutes in length, four periods per week for a year may fulfill the time requirement for a unit. The sixteen units must be made up in subjects, selected according to directions, from those named below; and candidates must complete the assignment of work specified for each subject in the section headed "Definition of Units." Of these sixteen units every candidate for admission to the McMicken College of Liberal Arts must present the following:

ENGLISH—Three units, in which there can be no "condition."

MATHEMATICS—One unit in Algebra and one unit in Plane Geometry.

HISTORY—One unit.

LANGUAGE—Three units, from the five languages: Latin, Greek, French, German, Spanish; two units must be in the same language. Candidates who intend to pursue the study of Latin in the University must present four units in Latin.

In addition to these fixed requirements the candidate must offer a number of units selected from the list of subjects below, sufficient, with the units specified above, to amount to a total of sixteen. The number of units that may be offered in any subject is shown in the following table:

		NUMBER OF UNITS ACCEPTED FOR ADMISSION	
		Minimum	Maximum
English	.....	3	4
Latin	.....	1	4
Greek	.....	1	3
French	.....	1	4
German	.....	1	4
Spanish	.....	1	2
General or Medieval and Modern History	.....	1	1
Ancient	.....	1/2	1
English	.....	1/2	1
American	.....	1/2	1
American and Civics	.....	1	1
Economics	.....	1/2	1/2
Algebra	.....	1	2
Geometry, Plane	.....	1	1
Geometry, Solid	.....	1/2	1/2
Trigonometry	.....	1/2	1
Civics	.....	1/2	1/2
Physics	.....	1	1
Chemistry	.....	1	1
*Zoology	.....	1	1
*Botany	.....	1	1
Physical Geography	.....	1/2	1
Astronomy	.....	1/2	1/2

* One-half unit will be allowed in Zoology and one-half unit in Botany when these two subjects are presented together as one unit in the same year.

	NUMBER OF UNITS ACCEPTED FOR ADMISSION	
	Minimum	Maximum
Bookkeeping	1	2
Stenography-Typewriting....	1	1
Commercial Geography.....	½	½
Commercial Law.....	½	½
Drawing	1	1
Manual Training.....	1	or 2 or 3 or 4
Domestic Science.....	1	or 2 or 3 or 4

ENTRANCE CONDITIONS

Students who are deficient in not more than two units of the sixteen required for admission, provided their credit includes three units of English, may be admitted conditionally to the College of Liberal Arts. All such entrance conditions must be removed before the student is allowed to register as a regular student for a second year of residence at the University.

ENTRANCE EXAMINATIONS

Examinations for admission in 1915 will be held on January 4, 5, 6, 7, 8, 9; on June 14, 15, 16, 17, 18, 19; and on September 9, 10, 11, 13, 14, 15.

Students who desire to take these examinations must obtain permission beforehand from the Director of School Affiliation. All applications for permission to take the entrance examinations should be made at least two days before the first day of the examination period. Some of the examinations may be taken in the spring and the remainder in the fall if so desired. Students who apply for entrance examinations at times other than the days specified will be charged a fee of five dollars. Extra examinations, however, will not be furnished except for good and sufficient reasons.

Examinations for candidates without graduation certificates.—A candidate for admission to the University, coming from one of the accredited schools, who is not a graduate of such school, will not be admitted to the entrance examinations within one year after leaving such preparatory school, unless recommended for examination by the principal of the school from which he comes.

Students intending to take the entrance examinations should consult the statement of the entrance requirements, as printed on a preceding page, and arrange to take their examinations

- (a) in the fixed requirements, and
- (b) in enough additional subjects to make a total of sixteen units.

The work covered by each unit or group of units in the various subjects may be found on the following pages. Specimen entrance examination questions will be furnished free of charge on application to the Director of School Affiliation.

SCHEDULE OF ENTRANCE EXAMINATIONS IN 1915

January 4, June 14, and September 9:

8:30-11:00	English	First 3 units
11:00-12:00	English	Fourth unit
1:00- 3:00	Physics	1 unit
3:00- 4:00	Solid Geometry	$\frac{1}{2}$ unit
4:00- 5:00	Physical Geography	$\frac{1}{2}$ or 1 unit

January 5, June 15, and September 10:

8:30-10:30	Latin	First and second units
10:30-12:00	Latin	Third and fourth units
1:00- 3:00	Chemistry	1 unit
3:00- 4:00	Astronomy	$\frac{1}{2}$ unit
4:00- 5:00	Civics	$\frac{1}{2}$ unit

January 6, June 16, and September 11:

8:30-10:30	French	First and second units
10:30-12:00	French	Third and fourth units
1:00- 2:30	Plane Geometry	1 unit
2:30- 4:00	Algebra	First unit
4:00- 5:00	Advanced Algebra	$\frac{1}{2}$ or 1 unit additional

January 7, June 17, and September 13:

8:30- 9:30	Ancient History	$\frac{1}{2}$ or 1 unit
9:30-10:30	American History	$\frac{1}{2}$ or 1 unit
10:30-12:00	{ General or Medieval and } } Modern History	1 unit
1:00- 2:00	English History	$\frac{1}{2}$ or 1 unit
2:00- 3:00	American History and Civics	1 unit
3:00- 5:00	Spanish	First and second units

January 8, June 18, and September 14:

8:30-10:30	German	First and second units
10:30-12:00	German	Third and fourth units
1:00- 3:00	Zoology	$\frac{1}{2}$ or 1 unit
3:00- 5:00	Botany	$\frac{1}{2}$ or 1 unit

January 9, June 19, and September 15:

8:30-10:30	{ Greek	First and second units
	{ Bookkeeping	1 or 2 units
10:30-11:30	{ Greek	Third unit
	{ Stenography-Typewriting	1 unit
11:30-12:00	Economics	$\frac{1}{2}$ unit
1:00- 2:00	{ Trigonometry	$\frac{1}{2}$ or 1 unit
	{ Commercial Geography	$\frac{1}{2}$ unit
	{ Commercial Law	$\frac{1}{2}$ unit
4:00- 5:00	{ Manual Training	1 to 4 units
	{ Drawing	1 unit
4:00- 5:00	Domestic Science	1 to 4 units

DEFINITION OF UNITS

Detailed statements showing the exact amount of work required for each unit or group of units in the various subjects are here presented:

ENGLISH COMPOSITION AND LITERATURE

The examination in English will consist of two parts, one relating to composition and the other relating primarily to literature.

(a) The candidate should possess such knowledge of English grammar and of the principles of rhetoric, including the construction of the paragraph and of the sentence, as will enable him to write simply and correctly on some subject familiar to him.

(b) The candidate will be required to show his acquaintance with good literature and his knowledge of literary values. The books adopted by the National Conference on Uniform Entrance Requirements, as given below, are recommended in preparation for this part of the examination; but any course of equivalent amount and value will be received. The examination is intended to test rather the candidate's power to judge literary values so that he may read with intelligence and appreciation, than his knowledge of specific books.

I. THREE UNITS.—The preparation should include the following subjects:

Composition.—There should be practice in writing at regular and frequent intervals throughout all the years of the preparatory course. Special attention should be given to the proper structure of sentences and paragraphs, and the method of planning or outlining an essay.

Grammar.—It is expected that the applicant will be familiar with the essentials of English grammar, and will be able to explain the construction of sentences that occur in the classics he has read.

English Classics.—The following books are recommended for reading and study:

a. For Reading, 1915 to 1919

I (two to be selected): 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 omission, 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; Virgil's *Aeneid*. The *Odyssey*, *Iliad*, and *Aeneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

II (two to be selected): Shakespeare's *Merchant of Venice*; *Midsummer Night's Dream*; *As You Like It*; *Twelfth Night*; *The Tempest*; *Romeo and Juliet*; *King John*; *Richard III*; *Henry the Fifth*; *Coriolanus*; and *Julius Caesar*, *Macbeth*, and *Hamlet*, if these have not been chosen in the group for intensive study.

III. *Prose Fiction*.—Malory's *Morte d'Arthur* (about 100 pages); Bunyan's *Pilgrim's Progress*, Part I; Swift's *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); DeFoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; Frances Burney's *Evelina*; Scott's Novels (any one); Jane Austen's Novels (any one); Maria Edgeworth's *Castle Rackrent*, or *The Absentee*; Dickens' Novels (any one); Thackeray's Novels (any one); George Eliot's Novels (any one); Mrs. Gaskell's *Cranford*; Kingsley's *Westward Ho!* or *Hereward, the Wake*; Reade's *The Cloister and the Hearth*; Blackmore's *Lorna Doone*; Hughes' *Tom Brown's Schooldays*; Stevenson's *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*; Cooper's Novels (any one); Poe's Selected Tales; Hawthorne's *The House of the Seven Gables*, or *Twice-Told Tales*, or *Moses from an Old Manse*; a collection of Short Stories by various standard writers.

IV. *Essays, Biography, etc.*—Addison and Steele's *The Sir Roger de Coverley Papers*, or Selections from the *Tatler* and *Spectator* (about 200 pages); Boswell's *Selections from the Life of Johnson* (about 200 pages); Franklin's *Autobiography*; Irving's *Sketch Book* (about 200 pages), or *Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's *Essays of Elia* (about 100 pages); Lockhart's *Life of Scott* (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in the English Humourists; Macaulay's *Lord Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederic the Great*, *Madame d'Arblay* (any one); Trevelyan's *Life of Macaulay* (about 200 pages); Ruskin's *Sesame and Lilies*, or Selections (about 150 pages); Dana's *Two Years before the Mast*; Selections from Lincoln, including at least the two *Inaugurals*, the *Speeches in Independence Hall and at Gettysburg*, the *Last Public Address*, and the *Letter to Horace Greeley*, together with a brief memoir or estimate; Parkman's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Holmes's *The Autocrat of the Breakfast Table*; Stevenson's *An Inland Voyage*, and *Travels with a Donkey*; Huxley's *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.

V. *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 *b*); Goldsmith's *The Traveller*, and *The Deserted Village*; Pope's *The Rape of the Lock*; a collection of

English and Scottish 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's *The Ancient Mariner*, *Christabel*, and *Kubla Khan*; Byron's *Childe Harold*, Canto III or IV, and *The Prisoner of Chillon*; Scott's *The Lady of the Lake*, or *Marmion*; Macaulay's *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Ivry*; Tennyson's *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *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*, *Hervé Riel*, *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's *Sohrab and Rustum*, and *The Forsaken Merchant*; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

b. For Intensive Study, 1915 to 1919

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.

I. Drama.—Shakespeare's *Julius Caesar*, *Macbeth*, *Hamlet*.

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

III. Oratory.—Burke's *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*.

IV. Essays.—Carlyle's *Essay on Burns*, with a selection from Burns's Poems; Macaulay's *Life of Johnson*; Emerson's *Essay on Manners*.

II. FOURTH UNIT.—For the fourth unit in English composition and literature, the preparation should include, during the applicant's fourth year of the high school course, a study of the outlines of English literary history, based upon one of the recent manuals of English literature, and accompanied by a considerable amount of reading of representative authors.

LATIN

I. FIRST UNIT.—The student should have digested some Beginner's Book like that of Coy, or Collar and Daniel.

II. SECOND UNIT.—Caesar's *Gallic War*, Books I-IV, or an equivalent amount selected from the remaining portions of that work. It is expected that in the first year's preparation the student has mastered the declensions, comparisons, and verbal inflections, knows the leading rules of syntax, and possesses some vocabulary. Along with Caesar there should be some exercise in Latin Composition, a wider and deeper acquaintance with grammatical principles of the language, and a good vocabulary. Sallust's *Catiline* or an equivalent amount of the *Jugurtha* may be substituted for two books of Caesar. It is furthermore suggested that the teacher, if possible, vary the Caesar lessons by selections from Books V-VII. The Department of Latin is also willing to accept Miller and Beeson's second year Latin Book as a substitute for Caesar.

III. THIRD UNIT.—Cicero, *In Catilinam*, I-IV, and *Pro Archia*, with more practice in composition. It is also preferred that the student should study an additional oration or short treatise, e. g., *de Amicitia*, or selections from the *Letters*. He should also begin the practice of writing continuous prose.

IV. FOURTH UNIT.—Vergil's *Aeneid*, I-VI, with scanning and prosody. An equivalent amount of verse from *Aeneid*, VII-XII, or Ovid will be accepted in place of *Aeneid*, III and V. If circumstances permit, it is very advantageous to let Ovid precede Vergil. It is preferable that the composition done during this year be based on Cicero.

GREEK

I. FIRST UNIT.—White's *Beginner's Book* or an equivalent. Grammar and composition work.

II. SECOND UNIT.—Xenophon's *Anabasis*, Books I and II. Grammar and composition work.

III. THIRD UNIT.—In addition to the work outlined in paragraphs I and II, the following:

Xenophon, *Anabasis*, Books III and IV.

Homer, *Iliad*, Books I-III.

Composition.

Grammar: Babbitt, Goodell, Goodwin, or Hadley-Allen.

FRENCH

I. ONE UNIT.—

(a) The translation at sight of very simple French prose.

(b) The translation into French of easy sentences to test the candidate's familiarity with elementary grammar.

(c) One full year of five periods a week is necessary to meet the requirements in one unit. The first one hundred and fifty pages in Fraser and Squair's *French Grammar* may be taken as a standard of the amount of grammar which should be covered during that period.

II. TWO UNITS.—

(a) The translation at sight of ordinary prose. The passages set for translation must be rendered into clear and idiomatic English.

(b) A test of the candidate's knowledge of the regular verbs; the auxiliaries être, avoir; the more frequent irregular verbs.

(c) The translation into French of sentences to test the candidate's familiarity with elementary grammar.

Two full years of five periods a week are necessary to meet the requirements in two units. Fraser and Squair's *French Grammar*, complete, may be taken as a standard of the amount of grammar which should be covered during that period. Not less than three hundred duodecimo pages should be read from the works of at least three different authors. Suitable texts for these two units are: *Le Siège de Berlin* and *La Dernière Classe*, Daudet; *La Mère Sauvage*, Maupassant; *Le Tour de la France*, Bruno; *Le Petit Chose*, Daudet; *Sans Famille*, Malot; *La Tache du Petit Pierre*, Mairet; *La Poudre aux Yeux*, Labiche et Martin; *Le Voyage de M. Perrichon*, Labiche et Martin; *La Cigale chez les Fourmis*, Legouvé et Labiche.

III. THREE UNITS.—A continuation for one year of work just outlined. The candidate should be able to read at sight ordinary French prose or poetry, to translate into French easy English prose, to answer questions involving a more thorough knowledge of the essentials of French syntax, especially the ordinary uses of tenses and modes. It is expected that the candidate for three units will have worked through a grammar and will have read five or six hundred pages of French during three years of five periods a week. Suitable texts for these three units are: The plays of Labiche, Scribe, etc.; *Gil Blas*, Lesage; *Le Tour de la France*, Bruno; *La Belle Nivernaise*, Daudet; *Les Fourberies de Scapin*, *Le Médecin Malgré Lui*, Molière; Voltaire's historical writings; *Le Cid*, Corneille; Coppée's poems, etc.

IV. FOUR UNITS.—

(a) The translation at sight of standard French. The passages set for translation must be rendered into clear and idiomatic English.

(b) A test of the candidate's knowledge of the irregular verbs and the essentials of French syntax, especially the uses of tenses, modes, prepositions, and conjunctions.

(c) The translation into French of a connected passage of English prose.

(d) The writing of a theme in French on a given topic.

Four full years in a good preparatory school are necessary to meet the requirements for four units. Not less than six hundred pages should be read from the works of at least five different authors. Suitable texts besides those given above are *Colomba*, Mérimée; *La Mare au Diable*, Sand; *Pêcheur d'Islande*, Loti; *La Canne de Jonc*, Vigny; *Horace*, Corneille; *L'Avare* and *Le Bourgeois Gentilhomme*, Molière; *Athalie*, Racine; *Le Gendre de M. Poirier*, Sandeau; Selections from Victor Hugo; *Le Monde où l'on s'ennuie*, Pailleron.

The student should have constant practice in giving paraphrases and abstracts. He should be trained to write French from dictation in order to enable him to understand lectures delivered in that language.

GERMAN

I. ONE UNIT.—

(a) The translation at sight of very simple German prose.

(b) The translation into German of easy sentences, to test the candidate's familiarity with elementary grammar.

The candidate ought to have read not less than one hundred pages of easy German, such as is found in Hewitt's or Harris' *German Reader*.

II. TWO UNITS.—

(a) The translation at sight of simple German prose.

(b) The translation into German of easy connected prose, to test the candidate's familiarity with elementary grammar. The requirement in elementary grammar includes the conjugation of the weak and strong verbs; the declination of articles, adjectives, pronouns, and such nouns as are readily classified; the prepositions; the simpler uses of the modal auxiliaries; the elements of syntax, especially the rules governing the order of words.

The candidate ought to have read not less than two hundred pages of easy German, such as is found in Hewitt's or Harris's *German Reader*.

In general, to obtain two units in German, two years' work in a good preparatory school is required.

III. THREE UNITS.—

(a) The translation at sight of ordinary German.

(b) The translation into German of a connected passage of

English prose, to test the candidate's familiarity with grammar.

The candidate ought to have read not less than four hundred pages of classical and contemporary prose and verse. It is recommended that the reading be selected from such works as Schiller's *Wilhelm Tell*; Lessing's *Minna von Barnhelm*; Goethe's *Hermann und Dorothea*; Wildenbruch's *Das edle Blut*; Fontane's *Vor dem Sturm*; Moser's *Kopnickerstrasse*.

Generally speaking, three years' work in a good preparatory school will be necessary in order to meet the requirements for three units.

IV. FOUR UNITS.—

(a) The translation at sight of ordinary German.

(b) The translation into German of a connected passage of English prose, to test the candidate's familiarity with grammar. The candidate will be expected to show a thorough knowledge of accident, the principal uses of prepositions and conjunctions, and the essentials of syntax, especially the uses of the modal auxiliaries and of the subjunctive and infinitive modes.

The candidate ought to have read not less than six hundred pages of classical and contemporary prose and verse. It is recommended that the reading be selected from such works as Schiller's *Jungfrau von Orleans*; Goethe's *Iphigenie*; Freytag's *Die Journalisten, Soll und Haben, Bilder aus der deutschen Vergangenheit*; Riehl's *Culturgeschichtliche Novellen*.

In general, to obtain four units in German, four years' work in a good preparatory school is required.

SPANISH

I. ONE UNIT.—

(a) The translation at sight of simple Spanish prose.

(b) The essentials of grammar, including the conjugations of the regular and the most frequently used irregular verbs. The translation into Spanish of short sentences, intended to test the candidate's knowledge of the essential points in grammar. Conversation and dictation.

In general, one year's work in a preparatory school, or its equivalent, is necessary to meet the requirements for one unit. The candidate will be expected to have worked through a short Spanish grammar, or the principal parts of a more complete one, and to have read at least one hundred pages of simple Spanish. Suitable texts for one unit are: *Spanish Reader*, Bransby; *Victoria y Otros Cuentos*, Asensi; *Gil Blas*, Padre Isla; *El Pájaro Verde*, Valera; *O Locura o*

Santidad, Echegaray; *Zaragüeta*, Carrión y Vital Aza; *El Clavo*, Alarcón, etc.

II. TWO UNITS.—

In general, two years' work in a preparatory school, or its equivalent, will be needed to meet the requirements for two units. In addition to the work outlined in Paragraph I, the candidate will be expected to have worked through an elementary composition book and to have read from two to three hundred pages of modern Spanish. Suitable texts for the second unit are: *El Capitán Veneno*, Alarcón; *El Sí de las Niñas*, Moratín; *Doña Perfecta*, Galdós; *Guzmán el Bueno*, Gil y Zárate; *Cuentos Alegres*, Taboada; *Legends, Tales, and Poems*, Bécquer; *El Haz de Leña*, Núñez de Arce; *José*, Valdés, etc.

MATHEMATICS

I. ALGEBRA. ONE UNIT. DEFINITIONS.—Integral numbers. Rational numbers. Irrational numbers. The six fundamental operations of algebra. Algebraic expressions. Rational Algebraic expressions. Application of the four fundamental operations to Rational Algebraic expressions. The use of parentheses. Especial emphasis given to working within the parentheses. Factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, simple and complex. Simple equations, both numerical and literal, containing one or more unknown quantities. Systems of equations. Problems depending on linear equations. Involution and evolution of monomials and polynomials. Radicals, including rationalization. Exponents, including the fractional and negative. Imaginary quantities. Elementary treatment of quadratic equations. The solution of simple problems in quadratic equations.*

II. ALGEBRA. ONE AND ONE-HALF UNITS.—In addition to Paragraph I, the following: The completion of quadratic equations, both numerical and literal. A standard form for the solutions of these equations. The discriminant condition for equal roots, real and imaginary roots. Relations among the roots and the co-efficients of the equation. The nature of the roots when the different co-efficients

* It is assumed that the pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Familiarity with the metric system is pre-supposed. Some of these problems should be chosen from mensuration, from physics and from commercial life. The use of graphic methods and illustrations, particularly in connection with the solution of equations, is also expected. On the other hand, the student must be guarded against the tendency to become mechanical in his algebraic work. Algebra is not to be used as a T-square. Above all, the student should be thoroughly grounded in the fundamental principles, operations and definitions. It is recommended that Wells's Academic Algebra, Wentworth's Algebra, or an equivalent be used.

approach zero. Simultaneous quadratic equations. Systems of equations, simple and quadratic. Property of quadratic surds and solution of equations containing radicals. Problems leading to quadratic equations. Ratio and proportion. The binomial theorem for positive integral exponents.

III. ALGEBRA. TWO UNITS.—In addition to the work outlined in Paragraphs I and II, the following: Convergence of infinite series. Binomial theorem with fractional negative exponents. Exponential and logarithmic series. Formation of logarithms to base e , to base 10. Properties and application of logarithms. The progressions. Continued fractions.

IV. PLANE GEOMETRY. ONE UNIT.—The work required in Plane Geometry is practically the equivalent of the first five books in Sanders', Wells', or Wentworth's Geometry. Emphasis should be given to the demonstration of original problems and the solution of original exercises, including loci problems. Application to the mensuration of lines and plane surfaces.

V. SOLID GEOMETRY. ONE-HALF UNIT.—The usual theorems and constructions found in good text-books. Emphasis should be given to the demonstration of original problems and the solution of original exercises, including loci problems. Application to the mensuration of surfaces and solids.

VI. PLANE TRIGONOMETRY. ONE-HALF UNIT.—Definitions and relations of the six trigonometric functions as ratios, not as lines. Circular measurement of angles. Proofs of principal formulas, in particular those for the sine, cosine and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expression for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas.

VII. TRIGONOMETRY. ONE UNIT.—In addition to Paragraph VI. the following: Solutions of triangles, right-angled and oblique, requiring a knowledge of logarithms. Application to heights and distances. Demoiivre's Theorem. Properties of spherical triangles. Formulas connecting the sides and angles of spherical triangles. Napier's Analogies. Gauss' Theorem. Solution of spherical triangles.

PHYSICS

ONE UNIT.—The candidate must be well prepared in the elementary theory of the subject and must present a note-book showing the quantitative work done by him in the laboratory. One full year of four to five periods a week is necessary to meet the requirements for one unit.

The instruction in the class-room should include qualitative lecture-room experiments, the solution of numerous problems, and the study of some one standard text-book.

Every candidate for admission on examination is required to present a laboratory note-book, signed by the teacher, containing the results of quantitative experiments performed by him in the laboratory. At least thirty quantitative experiments must have been performed, of which ten must be in mechanics, and which must also include three of the subjects, light, heat, electricity, and sound. The thirty experiments are to be selected from some standard list such as the list adopted by the National Education Association, which may be found in *The Teaching of Chemistry and Physics*, Smith and Hall, Chapter X.

Laboratory note-books will be examined for neatness, language, accuracy, and proficiency in physics. They should be called for within one month after presentation.

CHEMISTRY

ONE UNIT.—The student's preparation should consist of an elementary course in chemistry (one year)* of the character taught in the better class of high schools. It should include:

- (a) Individual laboratory work, to the extent of at least one-third of the time;
- (b) Instruction by lecture table demonstration, to be used when expensive apparatus or superior skill in manipulation is indispensable;
- (c) The study of at least one standard text-book, to the end that the pupil may gain a connected view of the subject.

Either in the class-room or by experimental treatment in the laboratory, the course should take up for consideration the important modes of occurrence, the principal methods of preparation, the essential physical and chemical properties, and the recognition of the elementary substances and their chief compounds, commonly considered in the standard text-books. More detailed study should be given to those of frequent occurrence, or of especial scientific importance.

At the time of and as part of the examination in chemistry, every student must present a note-book, containing a description of at least forty experiments. The note-book should include drawings of essential pieces of apparatus used, and an index of the experiments. The laboratory note-book should be called for within one month after presentation.

Text-books recommended: McPherson and Henderson, Alex-

* The course should cover from thirty-five to forty weeks, with four to five periods per week. Two hours of laboratory work count as one period of recitation.

ander Smith, Hessler and Smith, and Remsen (Briefer Course). Other texts than the one prescribed should be available to the student for reference. Ostwald's *Conversations on Chemistry* will be found stimulating and suggestive for collateral reading.

ZOOLOGY

ONE UNIT.—The candidate will be required to present his original note-book of practical laboratory study, together with the dates and the endorsement of his teacher, certifying that the book is a true record of the pupil's own work. The note-book should contain carefully labeled outline drawings of the chief structures studied in at least fifteen different animals, together with notes on the same. The note-book will be graded as one-third of the examination. The student will be expected to know the classification of animals into phyla and classes, and he must be able to state the chief characteristics and to compare the general life activities of examples of each of the principal classes. He must know the general plan of internal structure of one vertebrate (frog or fish) in general comparison with the human body; an arthropod (crustacean or insect); an annelid (earth-worm or Nereis); a coelenterate (hydroid, hydra or sea-anemone); a protozoan (a ciliate and amoeba when possible). A mollusk (clam or mussel), an echinoderm or a second vertebrate may be substituted for any of the above types. A knowledge of the very general features of cell division, of the cellular nature of germ-cells, and the essentials of embryological development will be expected, as well as some understanding of the main facts involved in the struggle for existence, adaptation to environment and variation of individuals.

One full year of at least five periods a week is necessary to meet the requirements for one unit.

Such books as Colton's *Descriptive and Practical Zoology*, Harvey's *Introduction to the Study of Zoology*, or Kingsley's *Comparative Zoology* cover this ground adequately. At least half of the student's work must have been laboratory work, guided by definite directions.

BOTANY

ONE UNIT.—At least half of the student's work must have been laboratory or field work, and a note-book containing careful records of personal observations, illustrated by accurate drawings, must be presented.

Bergen, Atkinson, Bessey, Coulter, and Leavitt are representatives of the type of elementary texts accorded recognition. A full year's work is required for one unit of credit.

Important requirements for recognition are as follows: a knowledge of the common plants of the student's locality, includ-

ing their classification, structural adaptations for local conditions and any relation to human life which they possess, a general understanding of the importance of bacteria and fungi as the cause of disease and the practical measures for their control, and some understanding of heredity, reproduction, and evolution in plants and living organisms.

BOTANY AND ZOOLOGY

ONE UNIT.—A unit will be accepted only when Botany and Zoology have each been studied for half a year in one continuous course which extends throughout the year. Such a course will be reckoned as a one-unit course in Biology. A half year of one, independent of the other, will not be accepted. It is strongly recommended that the student devote an entire year to Botany or to Zoology for one unit, instead of combining Botany and Zoology for a single unit.

At least half of the work must have been laboratory work guided by definite directions. A laboratory note-book containing drawings and observations upon at least ten kinds of animals (both vertebrate and invertebrate) and ten kinds of plants (both flowering and non-flowering) must be presented with the certificate of the teacher that it is the student's own work. The student will be required to answer in writing general questions upon familiar animals, such as the frog, fish, earth-worm, paramoecium, crayfish, etc., and upon common plants, such as the fern, moss, mushroom, and simple flowering plants. In both Botany and Zoology a knowledge of the names and distinguishing characteristics of the different phyla and their classes will be required. The note-book will count for one-third of the work.

PHYSICAL GEOGRAPHY

ONE-HALF UNIT.—The scope of the work required for one-half unit in Physical Geography is represented by the standard modern text-books, some of which are named below. This includes the earth as a whole, atmosphere, ocean and land, with special emphasis on the work of water on the land in making topographic features. Entrance examinations may include simple interpretations of topographic maps, weather maps, and such charts as are given in text-books, the pointing out of features of scientific importance in such pictures as are used in text-books, and simple demonstrations with globes.

Among the high school text-books regarded as suitable are those by Dryer, Tarr, Gilbert and Brigham, Davis, and Arey Bryant Clendennin and Morey.

No student will be admitted to the entrance examination in Physical Geography after he has received credit for any science work in the University.

ASTRONOMY

ONE-HALF UNIT.—The student should be familiar with:

(a) Such fundamental notions and definitions as are necessary to locate celestial bodies.

(b) The names and positions of the most conspicuous stars and constellations, and be able to trace the positions of the ecliptic across the sky at certain times during the year.

(c) The most important facts concerning the form, dimensions, mass, density, rotation and orbital motion of the earth, including seasons, tides, eclipses, and other dependent phenomena; also methods for determining the mass of the earth.

(d) The essentials concerning the sun, moon, and planets, including methods for determining their respective distances, motions, etc.

(e) The different classes of objects found in the stellar universe—binaries, variable stars, nebulae; also the principles of spectroscopic observation.

Every student should visit a well-equipped observatory at least twice, once during the day to examine the apparatus, and once at night to view the heavens.

HISTORY

I. GENERAL HISTORY, OR MEDIEVAL AND MODERN HISTORY. ONE UNIT.—General History: Myers, Barnes, or G. B. Adams (complete); Medieval and Modern History: Munro and Whitcomb, Myers, Thatcher and Schwill, Harding's *Essentials*, or Robinson's *History of Western Europe* (complete).

II. ENGLISH HISTORY. ONE UNIT.—English History: Montgomery, Walker, Andrews, Cheyney, Larned or Wrong (complete). (Where half time is given to this subject a half unit may be offered.)

III. ANCIENT HISTORY. ONE UNIT.—Ancient History: Myers, Seignobos, West, or Wolfson (complete). (Where half time is given to the subject a half unit may be offered.)

IV. AMERICAN HISTORY. ONE UNIT.—American History: Adams and Trent, Channing, Larned, McLaughlin, Montgomery (student's), McMaster, or Hart's *Essentials* (complete).

V. AMERICAN HISTORY AND CIVICS. ONE UNIT.—See list in IV for American History. For Civics, Garner, J. W.: *Government in the United States*, or an equivalent text.

CIVICS

ONE-HALF UNIT.—Garner, J. W.: *Government in the United States*, or an equivalent text.

ECONOMICS

ECONOMICS. ONE-HALF UNIT.—This course should consist, primarily, of a study of economic organization, with special reference to the conditions existing in the United States; and, secondarily, to a concrete presentation of economic principles. The student should become familiar with market methods and the rules governing them; the transportation system and the agencies for the public control thereof; the kinds of money in use, their main characteristics, and the conditions of issue; the distinguishing features of the various kinds of banks and the functions performed by them; and labor unions, labor laws, and the machinery for their enforcement. The best results can be obtained by following the topical method, and requiring the student to investigate personally the economic structure of the community in which he lives and its relation to other communities.

COMMERCIAL GEOGRAPHY

ONE-HALF UNIT.—The work of this half-unit should be based on a standard text such as Adams, Robinson, or Gannett, Garrison, and Houston. The course should include a discussion of (1) the physical and human factors that affect commerce, (2) the chief commodities of commerce, and (3) the resources, development, and trade of the leading commercial nations with emphasis upon the United States. As far as possible, the work should be illustrated by trips to local industries and by specimens of commercial products.

BOOKKEEPING

BOOKKEEPING. ONE UNIT.—The unit of work in bookkeeping for college entrance should consist of a working knowledge of double entry bookkeeping for the usual lines of business. The student should be able to change his books from individual to partnership, and know the importance of the partnership agreement and its relation to bookkeeping. At least one set of transactions should be kept by single entry, and at least two sets by double entry, in which the uses of the ordinary bookkeeping books and commercial papers should be involved. The student should be drilled in the making of profit and loss statements and of balance sheets and should be able to explain the meanings of the items involved in both kinds of instruments. The work should be done under the immediate supervision of a teacher, and the student should devote an equivalent of at least ten periods (of not less than forty minutes full time) in class each week for one academic year.

ADVANCED BOOKKEEPING AND BUSINESS PRACTICE. ONE UNIT.—The student should be taught the principles of single entry and its relation to double entry. He should be required to change single entry to double entry and be given a thorough drill on standard business forms, such as bills, receipts, checks, notes, etc., also on the use and meaning of business symbols and abbreviations. The student should become acquainted with the bill book and invoice book, and the loose leaf and voucher systems and bookkeeping. Each student should carry on a business of his own, first as an individual, then as a partnership, and finally as a corporation. Credit on this course should mean that the student lacks only age and actual business experience to become a competent bookkeeper. The work should be done under the immediate supervision of a teacher, and the student should devote an equivalent of at least eight periods (of not less than forty minutes full time) in class each week for one academic year.

STENOGRAPHY AND TYPEWRITING

STENOGRAPHY AND TYPEWRITING. ONE UNIT, TWO YEARS.—This work is expected to occupy not less than two periods daily for two years. No credit should be given for either shorthand or typewriting if taken alone. Nothing but the touch method should be used in typewriting. The essentials are, first, accuracy and speed in taking dictation and transcribing notes; secondly, correct spelling, capitalization, punctuation, and paragraphing. The minimum speed at the end of the first year should be 75 words per minute in dictation and 25 words per minute on the machine, and at the end of the second year, 100 words per minute in dictation and 35 words per minute in transcribing notes.

COMMERCIAL LAW

ONE-HALF UNIT.—The purpose of the law course is to give the students as clear an understanding as possible of their legal rights and limitations in the ordinary business relations of life; some attention is given to the fundamental concepts which underlie all law, rights, duties, wrongs, and remedies. The principal subjects included in the course are Contracts, Negotiable Paper, Agency, Partnership, Corporations, Real Property, Personal Property, Deeds, and Mortgages. Gano's *Commercial Law* is a suitable text.

DRAWING

ONE UNIT.—One unit for entrance will be allowed for Freehand Drawing or Mechanical Drawing, or both. The student must have

done the equivalent of at least two years' work of not less than four periods a week of forty-five minutes each.

The work in Freehand Drawing should include outline drawing from models, principles of light and shade, application of conventional forms, ornaments, design, etc.

The course in Mechanical Drawing should cover lettering, simple geometric problems, projections, solution of problems of helix, cycloid, parabola, etc.

The candidate for admission on examination must present at the time of, and as a part of, his examination a full set of drawings, with the teacher's certificate that they are the candidate's work.

MANUAL TRAINING

Manual Training Including Shop Work and Mechanical Drawing.—Credit will be allowed in this subject to the extent of from one to four units according as one, two, three, or four years are devoted to the work; but it must be done in accordance with the regulations governing laboratory work; that is, twice the time must be given to the subject each week as is given to a regular academic subject.

The course must include carpentry, wood turning, pattern making, foundry work, forging, and machine work, and the proper courses in drawing must accompany such work.

The candidate for admission on examination must present at the time of, and as part of his examination, a certified list of courses completed by him, the drawings for the same, and such statements of his work as will give an adequate idea of the efficiency of the course.

DOMESTIC SCIENCE

One to four units of credit is allowed in this subject according as one, two, three, or four years are given to the work; but it must be done in accordance with the regulations governing laboratory work; that is, twice the time should be given to this work each week as is given to the academic studies which it displaces. The course should include the drawing and art work which usually accompany a first-class course in this subject. The first two years should include a study of textiles, drafting of patterns, and the making of dresses, and the designing and construction of hats. The last two years of work should consist of the study of cooking, chemistry of foods, home construction and sanitation, dietetics, food adulteration, bacteriology, laundering, decorating, and home economics.

ADMISSION ON CERTIFICATE FROM ACCREDITED SCHOOLS

Work of satisfactory grade (not lower than 70 per cent) will be accepted from graduates of the University's accredited schools in lieu of the entrance examinations upon the presentation of the proper certificate, signed by the principal of the school, certifying to the work of the candidate. All certificates presented for admission must specify the work actually done, the time devoted to each subject, and the grade received in each course. Blank forms will be furnished upon application to the Director of School Affiliation.

These certificates, properly made out, should be sent to the Director of School Affiliation, University of Cincinnati, Cincinnati, Ohio, as soon as possible after graduation, and at least five days before the first day of registration. Upon receipt of the certificate, the Director of School Affiliation will pass upon the application, and if it is satisfactory, will send a card of admission, which should be presented to the Registrar at the opening of the session. If the certificate is not satisfactory, the candidate will be informed, so that he may prepare himself for the entrance examinations.

A candidate from an accredited school who is not a graduate of such school will not be admitted upon certificate at all, but must enter by examination in accordance with the rule given above under the heading "Entrance Examinations."

*LIST OF ACCREDITED SCHOOLS

The following preparatory schools and high schools are on the accredited list of the University of Cincinnati. This list is subject to change from year to year, and each school is visited from time to time by a representative of the University:

* Superintendents or principals who may desire to have their schools accredited by the University, should address the Director of School Affiliation.

CITY	NAME OF SCHOOL	PRINCIPAL
Bellevue, Ky.....	High School.....	*W. P. King
Cincinnati, O.....	Oakhurst Collegiate School.....	Miss H. F. Kendrick
Cincinnati, O.....	The Bartholomew Clifton School..	} Miss E. A. Ely Mary F. Smith
Cincinnati, O.....	Franklin School.....		} J. E. White G. S. Sykes
Cincinnati, O.....	The College Preparatory School for Girls.....	Mary Doherty
Cincinnati, O.....	The H. Thane Miller School.....	} Mrs. H. Miller Emma L. Parry
Cincinnati, O.....	Hughes High School.....		E. D. Lyon
Cincinnati, O.....	Walnut Hills High School.....	‡‡A. T. Henshaw
Cincinnati, O.....	Woodward High School.....	Pliny A. Johnston
Cincinnati, O.....	University School.....	Wm. E. Stilwell
Cincinnati, O.....	Ohio Military Institute.....	} *A. M. Henshaw S. P. C. Roberts
Cincinnati, O.....	Hartwell High School.....	
Cincinnati, O.....	Madisonville High School.....	Arthur Powell
Cincinnati, O.....	Pleasant Ridge High School.....	C. M. Merry
Cincinnati, O.....	Pleasant Ridge High School.....	T. L. Simmermon
Covington, Ky.....	High School.....	} H. S. Cox *H. O. Sluss
Danville, Ky.....	Kentucky College for Women.....		‡John C. Acheson
Dayton, O.....	Steele High School.....	} C. L. Loos, Jr. *E. J. Brown
Delhi, O.....	Mt. St. Joseph on the Ohio Academy		Sister Eveline
Glendale, O.....	High School.....	*J. C. Chapin
Glendale, O.....	Glendale College.....	‡Jane R. DeVore
Hamilton, O.....	High School.....	} C. H. Lake *Darrel Joyce
Jeffersonville, Ind...	High School.....		} Emmett Taylor *C. M. Marble
Lawrenceburg, Ind..	High School.....	} Lydia A. Sembach *J. W. Riddle
Lebanon, O.....	High School.....		} C. H. Bruner *C. H. Young
Lockland, O.....	High School.....	*C. F. Sharp
Ludlow, Ky.....	High School.....	} *W. D. Reynolds C. O. Morgan
Maysville, Ky.....	High School.....		} Earl F. Chase *J. W. Bradner
Middletown, O.....	High School.....	} Elsor Heater *N. D. O. Wilson
Milford, O.....	High School.....		} J. F. Hardin *D. B. Clark
Newport, Ky.....	High School.....	} *J. A. Sharon Wm. A. Evans
Norwood, O.....	High School.....		} W. W. McIntire *W. S. Cadman
Oldenburg, Ind.....	Academy of the Immaculate Con- ception.....	Sister M. Clarissa
St. Bernard, O.....	High School.....	Mr. Trisler
Wyoming, O.....	High School.....	} *C. S. Fay Evelyn M. Prichard

* Superintendent ‡ Commandant † President ‡‡ Acting Principal.

LIST OF RECOGNIZED SCHOOLS

The work of the following schools is recognized by the University. Graduates of these schools will be given entrance credit without examination for such work as they have completed in a satisfactory manner:

CITY	NAME OF SCHOOL	PRINCIPAL
Cincinnati, O.....	East Night High School.....	Albert Schwartz
Cincinnati, O.....	West Night High School.....	E. W. Wilkinson
Cincinnati, O.....	St. Mary's, Hyde Park, High School	Rev. P. J. Hynes
Dayton, Ky.....	High School.....	{ J. M. McVey { L. N. Taylor, Supt.
Highlands, Ky.....	High School.....	F. A. Cosgrove
Loveland, O.....	High School.....	John Morris, Supt.
Terrace Park, O.....	High School.....	E. H. Foster
Williamsburg, O.....	High School.....	R. C. Franz

ACCREDITED SCHOOLS OF THE NORTH CENTRAL ASSOCIATION

Graduates of the secondary schools approved by the North Central Association of Colleges and Secondary Schools will be admitted to the University of Cincinnati in accordance with the provision for "Admission on certificate from accredited schools."

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS*

The degree of Bachelor of Arts is the only degree conferred upon graduates of the College of Liberal Arts.

One credit in the scale of University work is a subject taken for one period a week for one semester. In all laboratory courses, two and one-half hours in the laboratory are considered as equivalent to one recitation hour and the preparation therefor. Students who have satisfied the requirements for admission, but who take less than twelve hours per week, are called "irregular students," and they must pay a tuition fee in every instance. (See "Fees.") No student

* The curriculum, as here described, went into effect September 17, 1914. Freshmen will follow this curriculum in its entirety.

Sophomores will satisfy the requirements of the last two years, and as far as possible those of the first two years.

Juniors will satisfy the requirements as announced in the catalogue of 1913-14, and the requirements for the last two years as announced above.

Seniors will satisfy the requirements for the degree of Bachelor of Arts as published in 1913-14.

is permitted to elect courses in more than five departments in any one semester.

All students who are candidates for the degree of Bachelor of Arts must fulfill the following requirements:

Each student must obtain 124 credits. Of these credits, 56 to 60 must be taken in prescribed subjects, 4 in physical education, and 30 to 34 under the direction of the student's Adviser in the major groups of studies. The remainder may be freely elected. No student, however, may count toward his 124 credits for graduation more than 6 credit hours of work marked "D," or poor, in any one semester. But this restriction shall not operate to prevent his counting courses so marked toward the completion of his prescribed work.

PREScribed SUBJECTS FOR LOWER CLASSMEN

English	10 to 12 credits
Foreign Languages	12 credits
Laboratory Sciences	10 to 12 credits
History, Economics, Political and Social Science	12 credits
Mathematics, Philosophy, Psychology	12 credits

The above subjects must be completed before the beginning of the Junior year, except that a Sophomore, with the permission of the Advisory Committee and the approval of the Dean, may postpone the performance of not more than 12 credit hours of prescribed work (one-fifth of the total amount) to the Junior year, but only in so far as the prescribed work conflicts with the continuity of studies leading toward the fulfillment of a Major.

SUBJECTS IN MAJOR GROUPS FOR UPPER CLASSMEN

- I. Greek, Latin, English, German, French, Italian, Spanish
- II. Physics, Chemistry, Zoology, Botany, Geology, Physiology
- III. History, Economics, Political and Social Science
- IV. Mathematics, Philosophy, Psychology, Astronomy

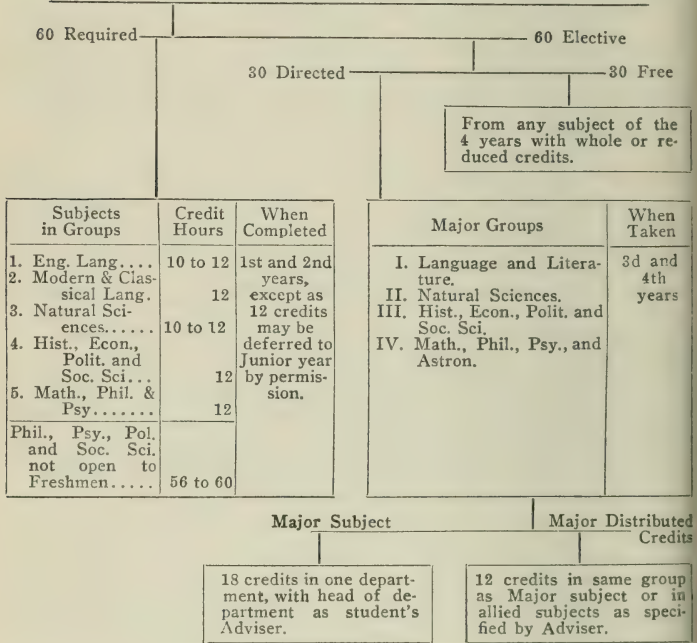
At the end of the Sophomore year, or at the beginning of the Junior year, each student shall designate one of the following groups from which he must select his major subject. Thereafter, the head of the department in which that subject lies shall act as his Adviser. For graduation, at least 18 credits must be secured in this major subject; and 12 additional credits must be secured in subjects in the same group or in allied subjects specified by the Adviser.

The requirements stated above are illustrated in detail in the following diagrams:

OUTLINE OF STUDIES IN THE COLLEGE OF LIBERAL ARTS

A. B. DEGREE

120 ACADEMIC CREDITS + 4 CREDITS IN PHYSICAL EDUCATION



FRESHMAN REQUIREMENTS

Prescribed Subjects	Credit Hours a Week per Sem.	Special Regulations
English.	3	Every Freshman must take English 1
Foreign Language.	3	
Science or Mathematics.	5 or 3	
History, Economics, or Mathematics.	3	If a student elects mathematics in place of science, he must elect also either history or economics
Physical Education.	1	
Total Prescribed Hours.	15 or 13	Maximum hours allowed per semester, 17

COURSES OPEN TO FRESHMEN

Subjects	Courses, Prescribed and Elective	Credit Hours a Week per Sem.
English.....	English 1, 5.....	3
	English 3.....	2
Foreign Language.....	Latin 1 (after 4 yrs. high school Latin)....	3
	Greek 9 (beginners).....	3
	Greek 15 (after 1 or 2 yrs. high school Greek)	3
	Greek 1 (after 3 yrs. high school Greek)	3
	Greek 2, 10 (after 3 yrs. high school Greek)..	2
	German 1 (beginners).....	3
	German 2, 3, 20 (after 2 yrs. high school Ger.)	3
	German 4 (after 4 yrs. high school Ger.)...	3
	German 21 (after 4 yrs. high school Ger.)..	2
	French 1 (beginners).....	3
	French 2 (after 2 yrs. high school French)...	3
	French 11 (after 4 yrs. high school French)	3
	Spanish 6 (beginners).....	3
	Spanish 9 (after 2 yrs. high school Spanish)	2
	Spanish 14 (after 4 yrs. high school Spanish)	3
Natural Science.....	Physics, 26a and 2a, 27b and 22b.....	5
	Chemistry, 1a and 2a, 3b and 4b.....	5
	Botany, 5a and 6a, 7b and 8b.....	5
	Zoology, 1a and 2a, 3b and 4b.....	5
	Geology 1.....	5
	Astronomy 1b.....	2
Mathematics.....	Mathematics 1.....	3
History	History 1, 13.....	3
	History 29.....	2
Economics	Economics 1, 2.....	3
Physical Education....	Physical Education 1.....	1

SOPHOMORE REQUIREMENTS

Completion of the Prescribed Work (including 2 credits in physical education), except in so far as such work may be deferred to the Junior year by special permission, as provided above.

Maximum hours allowed, exclusive of physical education, 18 a week.

JUNIOR REQUIREMENTS

Completion of such Prescribed Work as may have been deferred from the Sophomore year, and the election and pursuit of Major Work.

Maximum hours allowed, 18 a week.

SENIOR REQUIREMENTS

Completion of 124 credits, including the fulfillment of the requirement of 30 credits for a Major.

Maximum hours allowed, 18 a week.

FREE ELECTIVES

At any time during his four years of residence a student may elect any courses then open to him, provided that such electives do not conflict with the performance either of his Prescribed Work or of his Major Work.

A Senior electing courses designed primarily for Freshmen will receive for the same only half credit.

ADVISORY SYSTEM FOR THE ELECTION OF STUDIES

To the Advisory Committee for the Election of Studies is confided the duty of assisting Freshmen and Sophomores in registering for the subjects best adapted to their aims and abilities and of counselling them in all matters affecting scholarship.

Freshman and Sophomore students are required to conform to the following regulations:

FOR FRESHMEN

1. Each Freshman at the first semester registration days will be assigned by the Chairman to a member of the Committee, who will act as his temporary Adviser, and assist him in registering;

2. Within one month from this registration, each Freshman must appear before the Chairman of the Committee and be assigned, after consultation, to some member of the Committee who will act as his permanent Adviser;

3. At the second semester registration day, each Freshman will register with his own Adviser;

4. On or before May 1 of the Freshman year, each student will go to his Adviser and, in consultation with him, choose his studies for the Sophomore year. The schedule of studies must then be taken to the Chairman for approval.

FOR SOPHOMORES

1. In the Sophomore year, each student on the first semester registration days must go to his own Adviser and register in accordance with the schedule of studies chosen in the manner just outlined. If, in the meantime, any changes have been decided upon, he must consult his Adviser and obtain the approval of the Chairman before registering;

2. At the second semester registration day each Sophomore will register with his own Adviser;

3. On or before May 1, each Sophomore must go to his Adviser and, after consultation with him, and with the representative of any department concerned, he must choose his major course of studies for the Junior year;

4. No Sophomore will be allowed to register for Major Work unless he has fulfilled at least four-fifths of the required work of the Freshman and Sophomore years, and has obtained from the Chairman a certificate to that effect.

MAJOR ADVISERS

Every student of the Junior and Senior years will register with the head of the department in which he elects his Major, and this person will act through his Junior and Senior years as his Adviser.

SPECIAL ARRANGEMENTS

CREDIT FOR WORK DONE IN THE COLLEGE OF LAW.—A student who has received credit for the work of the first two years in the College of Liberal Arts may, in the third year, elect from four to six hours per semester of the lectures of the first year of the law course, as a substitute for studies in the College of Liberal Arts, and in the following year he may, in the same way, take the remainder of the thirteen hours of the first year's course in the College of Law. Or, if he so desires, he may elect, in his Senior year, the entire thirteen hours of the first year law course (equivalent to twenty-six credit hours in the College of Liberal Arts), provided he has fulfilled all the requirements for obtaining his B. A. degree. Thus a student may obtain both the academic and legal degrees in six years. In either of the above cases, the student will be classified as an irregular student in the College of Liberal Arts, and will be required to pay tuition at the regular rate of three dollars per credit hour per semester.

SIX-YEAR COMBINED COLLEGIATE AND MEDICAL COURSE.—In this combined course the student takes the first two years of work in the College of Liberal Arts, and the last four in the College of Medicine. At the end of the fourth year, he is granted the degree of B. S., and at the end of the sixth year, the degree of M. D.

CREDIT FOR HEBREW TAKEN IN THE HEBREW UNION COLLEGE AND IN LANE THEOLOGICAL SEMINARY.—Arrangements have been made with the Hebrew Union College and with Lane Theological Seminary, whereby students of these institutions who are pursuing a course in the University of Cincinnati may be allowed to count work in Hebrew taken in these institutions for the degree of Bachelor of Arts, to the amount of two hours a week throughout the Freshman and Sophomore years, and three hours a week throughout the Junior and Senior years, for the Hebrew Union College, and three hours per week for three years in Lane Theological Seminary, provided such work is regularly entered upon the election schedules of the University.

CREDIT FOR WORK DONE IN THE ART ACADEMY OF CINCINNATI.—By an arrangement with the Art Academy of Cincinnati, students from

the University may elect from the courses stated in the catalogue in drawing, modeling, and carving, not more than six hours' work in any one semester, and receive credit therefore on the books of the University, provided these courses have been duly entered on the election blank and the proper certificate from the Director of the School is presented on their satisfactory completion. Not more than twelve hours of work in the Art Academy will be credited for the degree of Bachelor of Arts.

CREDIT FOR WORK DONE IN THE COLLEGE FOR TEACHERS.—Certain courses in Education, to the number of twenty-four credits, may be elected by undergraduates during the Senior year and be counted toward fulfilling requirements for the A. B. degree.

COURSES OF INSTRUCTION

ASTRONOMY

JERMAIN GILDERSLEEVE PORTER, PH. D., Director of the Observatory
and Professor of Astronomy

For Undergraduates

1b. Descriptive Astronomy.—Lectures and class work. No mathematical training is required beyond a geometrical conception of the sphere and its circles. The object of the course is to give a comprehensive view of astronomy in its historic and practical relations, as well as a general résumé of our knowledge concerning the heavenly bodies. Reference books: *Popular Astronomy*, Newcomb; *Manual of Astronomy*, Young; *The Stars in Song and Legend*, Porter. M., F., 10:30—11:30, *second semester*.
Professor Porter.

For Undergraduates and Graduates

3. Spherical and Practical Astronomy.—Text-books: Campbell's *Elements of Practical Astronomy*; Chauvenet's *Spherical and Practical Astronomy*. Once a week throughout the year.
Professor Porter.

4. Celestial Mechanics.—Investigation of the fundamental equations of motion and of the formulæ for determining the positions of bodies revolving about the sun. Computation of orbits. Text-books: Watson's *Theoretical Astronomy*. Once a week throughout the year.
Professor Porter.

Courses 3 and 4 will ordinarily be given at the Observatory. Hours to be arranged.

BIBLICAL LITERATURE

EDWARD MACK, A. M., D. D., . . . Lecturer on Biblical Literature.

For Undergraduates and Graduates

8a. The Literature of the Old Testament; with studies in the life and institutions of the ancient Hebrews, particularly in their social aspects. *First semester*, T., Th., 11:30-12:30. Dr. Mack.

8b. The Literature of the New Testament; in its relation to the books of the Old Testament; the historical setting and antecedents; the Acts and the Epistles studied comparatively. *Second semester*, T., Th., 11:30-12:30.

Other hours will be arranged, if there is sufficient demand.

9b. The Social Teachings of Jesus and the Apostles.—Their teachings with regard to the nature of man, his individuality and responsibility; the family, rights of children, divorce; society, the method of its improvement; the state and our relations to it; wealth,

the rich and the poor, "the social question." *Second semester, T.,*
1:00-3:00. Dr. Mack.

BOTANY

HARRIS MILLER BENEDICT, PH. D., Professor of Botany.
LEVI ALEXANDER GIDDINGS, M. S., Instructor in Botany.
E. LUCY BRAUN, Ph. D., Graduate Assistant in Botany.

In the advanced courses training in physics and chemistry, as well as ability to read French and German, is expected. Special facilities are afforded students pursuing courses of research.

Students who desire to be recommended as teachers of botany in secondary schools must complete as a minimum, Courses 5a to 8b inclusive, and Course 35. It is very desirable that they also do at least one year of graduate work.

For Undergraduates

5a. Plant Biology.—A course of lectures on essential biological principles, the topics being as follows: the physical basis of life, its origin and evolution, sexual reproduction and heredity, plant breeding, storage and release of all living energy by plants, the conditions controlling the growth of wild and cultivated plants, and those involved in bacterial action and control. This course must be taken in conjunction with Course 6a. *First semester, M., W., F., 10:30-11:30.*
Professor Benedict.

Courses 5a and 6a together constitute a five-hour course in biological principles, which can be completed in one semester.

6a. Experimental Plant Biology.—Laboratory work on plant material for the purpose of investigating the evidence for the principles advanced in the accompanying Course 5a, which must be taken in conjunction with Course 6a. Accurate records of all work are required.

Sec. I, M., W., 1:00-4:00.

Sec. II, T., Th., 1:00-4:00.

Professor Benedict and Mr. Giddings.

7b. General Botany.—Lectures on the structure, reproduction, and adaptation to environment of the plants of the various phyla of the plant kingdom. It must be taken in connection with Course 8b. *Second semester, M., W., F., 10:30-11:30.* Professor Benedict.

8b. General Botany, Laboratory.—Thorough laboratory study of the structure of selected plants as examples of the different phyla of the plant kingdom, as well as carefully organized field trips for

the purpose of learning to identify the commoner plants in their own habitats. This course must be taken in connection with Course 7b.

Sec. I, M., W., 1:00-4:00.

Sec. II, T. Th., 1:00-4:00.

Professor Benedict and Mr. Giddings.

[9. Sanitary Biology.] Lectures on the biological principles involved in sanitary engineering, designed to enable the engineer to solve local problems in sanitation and to appreciate the significance of specialists' reports. M., 2:00-3:00, throughout the year.

Course 9 is open to all students.

Professor Benedict.

Omitted in 1914-15.

12b. Field Ornithology.—A field study of the identification, classification, songs, and habits of our native birds. One laboratory period per week during the second semester. Hours to be arranged.

Professor Benedict.

[35. Systematic Botany.] A course designed to give a working knowledge of the flora of this vicinity, comprising field trips followed by laboratory work in classification and in the preservation of plants, discussions on plant relationships and the preparation of "keys." T., Th., 9:30-12:30.

Professor Benedict.

Omitted in 1914-15.

Course 35 is open to students who have taken Courses 5 and 7, and under certain conditions to all Seniors. It is required of all who desire to be recommended as teachers of Biology or Nature-Study in secondary schools.

For Undergraduates and Graduates

23. Field Work.—Practical directions for collecting, identifying, and preserving specimens will form a minor part of the work. Each student is assigned a special problem. The work may be taken as a two or a three-hour course. Hours to be arranged.

Professor Benedict.

Prerequisite: Courses 5a, 6a, 7b, and 8b.

24a. Plant Histology.—Lectures on the general histology of the Spermatophytes, special attention being given to the physiological adaptations of the tissues to their functions. This course must be taken in connection with Course 25a. *First semester*, M., 1:00-2:00.

Professor Benedict.

Prerequisite: Courses 5a, 6a, 7b, and 8b.

25a. Plant Histology Laboratory.—In this course the student will be given sufficient practice in microscopical botanical technique to enable him to prepare the slides which he will use in his laboratory study of the tissues of selected plants. Accurate drawings and descrip-

tions will be required. A few exercises on the identification of food adulterations will be given. This course must be taken in connection with Course 24a. *First semester*, M., 2:00-4:00; W., 1:00-4:00.

Professor Benedict.

26b. The Reproduction and Embryology of the Spermatophytes.—Lectures on the origin and nature of sexual reproduction in the flowering plants and the general principles of Spermatophyte embryology. This course must be taken in connection with Course 27b. *Second semester*, M., 1:00-2:00.

Professor Benedict.

Prerequisite: Courses 24a and 25a.

27b. Reproduction of the Angiosperms.—A laboratory investigation of the origin of the sex cells and the formation of the seed in selected Angiosperms. While a few special slides will be supplied the student will be required to make his own preparations. This course must be taken in connection with Course 26b. *Second semester*, M., 2:00-4:00; W., 1:00-4:00.

Professor Benedict.

Primarily for Graduates

[40. Current Problems in Botany.] Lectures, assigned readings, and discussions upon present problems in plant physiology and cytology. A reading knowledge of French or German is required. Two credit hours.

Professor Benedict.

Prerequisite: Courses 5a, 6a, 7b, 8b, 24a, 25a, 26b, 27b, and 35. Omitted in 1914-15.

31. Research.—Credit according to number of hours elected.

Professor Benedict.

CHEMISTRY

LAUDER WILLIAM JONES, PH. D., Professor of Chemistry.

HARRY SHIPLEY FRY, PH. D., . Associate Professor of Chemistry.

HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
Chemistry.

EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Physio-
logical Chemistry.

JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.

_____, Instructor in Physical Chemistry.

EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.

RAY GOULD KNICKERBOCKER, B. S., . . . Instructor in Metallurgy.

LEONORA NEUFFER, A. M., Assistant in Chemistry.

STUDENT ASSISTANTS: Dorothy Anderson, Lester Brand, Stanley Cook.

For Undergraduates

1a. General Inorganic Chemistry.—The Non-metals. This course gives a definite idea of the fundamental laws of general chemistry, and furnishes a survey of the important facts concerning the chemistry of the non-metals and their compounds. Lectures, recitations, and quizzes illustrated by experiments, charts, and specimens. Course 2a forms an integral part of, and must accompany Course 1a. M., W., F., 8:30-9:30.

Associate Professor Fry and Assistants.

2a. General Inorganic Chemistry, Laboratory.—Two laboratory exercises per week. *First semester.* Experiments complementary to the subject-matter of Course 1a.

Sec I, T., Th., 1:00-4:00.

Sec. II, M., W., 1:00-4:00.

Associate Professor Fry and Assistants.

3b. General Inorganic Chemistry.—The Metals. A continuation of Course 1a. The properties of the metals and their compounds. Three hours per week. *Second semester.* Students who have completed Courses 1a and 2a are eligible for this course. It must be accompanied by Course 4b. M., W., F., 8:30-9:30.

Associate Professor Fry and Assistants.

4b. General Inorganic Chemistry Laboratory.—Two laboratory exercises per week. *Second semester.* Experiments complementary to the subject-matter of Course 3b.

Sec. I, T., Th., 1:00-4:00.

Sec. II, M., W., 1:00-4:00.

Associate Professor Fry and Assistants.

5a. Qualitative Analysis.—Lectures and recitations on the principles and practice of qualitative analysis. Considerable emphasis will be laid upon the application of the laws of chemical equilibrium, and the theories of solutions and of electrolytic dissociation to the practical problems of the analyst. Three exercises a week. *First semester.* M., W., F., 8:30-9:30.

Professor Jones.

Prerequisite: Courses 3b and 4b.

6. Qualitative Analysis Laboratory.—To accompany Course 5a. During the first few weeks of the semester the student will perform important tests commonly used in the processes of analytical chemistry. The later work of the course will furnish abundant training in the qualitative examination of salts, minerals, alloys, etc. Two exercises a week, *first semester*; two laboratory periods and one quiz period, *second semester.* T., Th., 1:00-4:00.

Professor Jones and Mr. Esslinger.

7. Quantitative Analysis.—An introductory laboratory course in gravimetric and volumetric analysis. Occasional conferences are

held, at which analytical methods and calculations are discussed, and at which reports are submitted covering assigned reading. Three exercises a week. *First or second semester.* M., W., F., 1:00-4:00.

Prerequisite: Courses 5a and 6 (first semester). Mr. Esslinger.

8b. Elementary Organic Chemistry.—Three exercises a week. *Second semester.* Quizzes and lectures which are experimental, covering the chief classes of organic compounds of both the aliphatic and aromatic series. This course is arranged to meet the needs of those who intend to specialize in chemistry, in medicine, or in biology. It serves as a general introduction for those who intend to go deeper into the study of organic chemistry. M., W., F., 8:30-9:30.

Prerequisite: Courses 3b and 4b. Professor Jones.

9b. Organic Reactions and Preparations.—Laboratory practice to accompany the lectures of Course 8b. *Second semester.* M., W., 1:00-4:00. Professor Jones, assisted by Dr. Reemelin.

Prerequisite: Courses 3b and 4b.

14b. Metallurgy.—Five credit hours per week. *Second semester.* A study of fuels, refractories, ferrous and non-ferrous metallurgy, and practice in metallurgical calculations. Emphasis is laid upon foundry and steel works processes. Excursions will be made to metallurgical establishments in Cincinnati and vicinity. M., T., W., Th., 9:30-10:30; M., 1:00-4:00.

Assistant Professor Aston and Mr. Knickerbocker.

Prerequisite: Courses 5a, 6, and Physics 1.

15b. Assaying.—One afternoon a week. *Second semester.* Laboratory practice in the fire assay of ores and base metals for gold, silver, and lead. Hours to be arranged. Mr. Knickerbocker.

Prerequisite: Course 7b.

[16a. Technical Inorganic Chemistry.] Three periods a week. *First semester.* M., W., F., 9:30-10:30.

Assistant Professor Goettsch.

Prerequisite: Courses 5a and 6.

Omitted in 1914-15.

17. Technical Analysis.—The course consists of analyses of typical industrial products, involving the use of gravimetric, volumetric, gasometric, electrolytic, and colorimetric processes. T., Th., F., 1:00-4:00. May be taken either semester, or both semesters. Two or three credit hours.

Assistant Professor Goettsch, assisted by Mr. Esslinger.

Prerequisite: Course 7b.

18b. Technical Organic Chemistry.—M., W., F., 8:30-9:30.

Assistant Professor Goettsch.

Prerequisite: Courses 8a, 9a, and 16a.

[29a. Practical Photography.] One lecture and one laboratory period a week. *First semester.* The course embraces a study of the exposure and development of photographic plates; the treatment of defective negatives; the preparation and use of various printing papers; copying, enlarging, and lantern-slide making. W., 8:30-9:30; F., 1:00-4:00. Assistant Professor Goettsch.

Prerequisites: 1a, 2a, 3b, and 4b.

Omitted in 1914-15.

For Undergraduates and Graduates

10a. Advanced Inorganic Chemistry.—Two exercises a week during the first semester. Special topics and recent theories of inorganic chemistry, including colloids, reactions in non-aqueous solvents; inactive gases; radioactive elements and emanations; the electron; valence, structure, and co-ordination theories. T., Th., 8:30-9:30. Associate Professor Fry.

Prerequisite: Courses 5a, 6, and 7b.

11a. Inorganic Preparations.—Two or three laboratory exercises a week. *First semester.* Experiments supplementary to the subject-matter of Course 10a. Hours to be arranged.

Prerequisite: Course 7b. Associate Professor Fry.

12a. Physical Chemistry.—Lectures and recitations. Three exercises a week. *First semester.* An introductory course which considers the general properties of gases, liquids, solids and solutions, as well as the principles determining reaction velocity and the equilibria in homogeneous and heterogeneous systems. M., W., F., 11:30-12:30.

Prerequisite: Chemistry 5a, 6a, and 7b, Physics 26a and 27b, Mathematics 5.

13b. Physical Chemistry Laboratory.—Two exercises a week. *First semester.* Designed to illustrate the principles developed in Course 12a, and to provide a knowledge of the common methods used in physical-chemical measurements. This course must accompany Course 12a. Th., F., 1:00-4:00.

32b. Electrochemistry.—Lectures and recitations. Three exercises a week. *Second semester.* A general consideration of the electrical properties of matter with special reference to the theory of aqueous solutions. T., Th., S., 11:30-12:30.

Prerequisite: Course 12a.

33b. Electrochemistry Laboratory.—Two exercises a week. *Second semester.* Determination of conductivity with its application, transference numbers, electromotive force, dielectric constant, etc. Th., F., 1:00-4:00. This course accompanies Course 32b.

[34a. Thermodynamics Applied to Chemistry.] Two exercises a week. *First semester.* Devoted to an elementary consideration of the principles of thermodynamics and their application to physical-chemical problems. The work will be illustrated by the solution of many numerical examples. Hours to be arranged. _____.

Prerequisite: Courses 12a and 32b.

Omitted in 1914-15.

41a. Phase Rule.—Lectures and recitations. A study of the phase rule and its applications. Two exercises a week. *First semester.* Hours to be arranged. _____.

Prerequisite: Course 12a.

20. Advanced Organic Chemistry.—Three lectures and conferences a week, embracing a systematic study of the principles and practices of organic chemistry, and treating of the modes of formation, properties, reactions, and constitutional formulae of typical members of the most important classes of organic compounds. Hours to be arranged. Professor Jones.

Prerequisite: Courses 5a, 6, 7, 8b, 9b, and a reading knowledge of German and French.

21. Advanced Organic Chemistry Laboratory.—Practice in the preparation of a number of typical organic compounds. This course will require considerable reading in the journals of chemistry and in various hand-books and works of reference. Credit according to number of hours elected. May be taken either first or second semester, or both semesters. Professor Jones.

Prerequisite: As in Course 20.

22a. Bio-Chemistry.—Among other subjects, the course will take up for discussion the nature of carbohydrates, fats, and protein substances; the processes of digestion and metabolism; the chemical composition of the body tissues, secretions, and excretions, including the methods employed in their analysis. *First semester, M., W., F., 11:30-12:30.* Assistant Professor Reemelin.

Prerequisite: Courses 8b and 9b.

22a. Bio-Chemistry Laboratory.—Laboratory exercises arranged to accompany the lectures. Reactions of carbohydrates, fats, and protein substances applied to the qualitative detection of, and the quantitative estimation of, these substances in body tissues, secretions, and excretions. Digestion, the analysis of gastric and fecal matter and of urine will be considered from the chemical point of view. *First semester, M., W., 8:30-11:30; F., 1:00-4:00.*

Assistant Professor Reemelin.

Prerequisite: Courses 8a and 9a.

24b. History of Chemistry.—Special attention is directed to the classical memoirs of the Greek philosophers, the tenets of the

alchemists, and those researches of the past century that have developed the atomic and structure theories of modern chemistry. Lectures, collateral readings, and papers. Three exercises per week. *Second semester.* Hours to be arranged.

Associate Professor Fry.

Prerequisite: Courses 5a, 6, 8b and 9b, or 20b and 21.

[28b. Elementary Spectrum Analysis (Qualitative).] The course consists largely of laboratory work. The emission (flame and electric sparks) and absorption spectra of inorganic and some organic substances are studied from the chemist's point of view. Two laboratory periods a week. *Second semester;* hours to be arranged.

Professor Jones.

Prerequisite: Courses 5a, 6, 8b, and 9b; Physics, 1 year.

Omitted in 1914-15.

Primarily for Graduates

30. Research.—This course requires intensive laboratory work under the direction of some member of the department. Problems for investigation may be chosen from the following: organic chemistry (30a), inorganic chemistry (30b), physical chemistry (30c), or industrial chemistry (30d).

Professor Jones, Associate Professor Fry,

Assistant Professor Goetsch, Assistant Professor Aston.

During the summer of 1915, students engaged in research may enroll in the Graduate School.

35a. Some Special Problems and Theories of Organic Chemistry.—A critical discussion of the working hypotheses and the theories of organic chemistry. With this end in view, their application to the difficulties of certain complex cases are presented in detail. Topics for consideration will be chosen each year from the following: Optical and geometrical isomerism of compounds of carbon, nitrogen, and other elements; tautomerism; the electronic conception of valence; bivalent carbon derivatives; oxonium compounds; purine derivatives; the carbohydrates; the alkaloids; the terpenes; the polypeptides, proteins; the organic dyes, etc. *Second semester.* Two hours a week, to be arranged. Professor Jones.

40. Journal Club Meetings.—Instructors and advanced students of the department present papers dealing with subjects under investigation in the department, or critical reviews of papers of general interest to those engaged in advanced work or research. All students interested in chemistry are invited to attend. Meetings are held fortnightly, and last one hour. Subjects to be discussed are announced one week in advance.

ECONOMICS

(The Sinton Professorship)

FREDERICK CHARLES HICKS, PH. D., Sinton Professor of Economics and Commerce.

JAMES DYSART MAGEE, Ph. D., Instructor in Economics.

GRADUATE ASSISTANTS: Ella Davis Isaacs, A. M.; Lowell Hobart Ludwig, A. B.; Amy F. Mihalovitch, A. B.

Students desiring a general knowledge of economics are recommended to take Course 1 or Courses 1 and 2.

For Undergraduates

1. Economics.—This course is intended to give the student a general view of the subject. It includes a study of (1) the elements of economics: wealth, value, price, competition, monopolization, production, and distribution; (2) the evolution of industry from local organization and control during the middle ages, through nationalism and the industrial revolution, to modern conditions; and (3) the leading economic problems of today. M., W., F., 11:30-12:30. Professor Hicks.

2. Economic History.—A study of industrial development since the tenth century, including the economic history of the United States. Subjects considered: the local industry of feudalism, the manorial and guild systems; the rise of nationalism; the colonial policy and national regulation of industry under the mercantile system; the industrial revolution, 1750-1850; and the distinguishing features of the complex and highly developed economic organization of modern times. T., Th., S., 11:30-12:30.

Dr. Magee.

For Undergraduates and Graduates

11. Elements of Economics.—An advanced course in the fundamental principles of economics. The work will consist mainly of a comparison of the views of representative economists. Th., 1:00-3:00. Professor Hicks.

Course 11 is open to students who have completed Course 1.

15a. Railroads.—This course includes a study of the place of transportation in economic development; a brief description of the early technical development of the railroad; a history of the railroad development in the United States; and a discussion of the problem of governmental regulation of railroads. T., Th., 9:30-10:30. Dr. Magee.

Prerequisite: Course 1.

15b. Tariffs.—The course begins with a study of the theory of international trade. It considers in some detail the tariff history of

the United States, including the actual course of the duties and the arguments urged at the various times in favor of the different policies. Also the present tariff situation in England, France, and Germany is treated. T., Th., 9:30-10:30. Dr. Magee.

Prerequisite: Course 1.

[16a. Money and Banking.] The elementary principles of money and banking are considered, together with the monetary history of the United States. In the discussion of banking, the history of the United States is treated in some detail. In the case of Germany, France, and England, the history is outlined briefly and the present situation discussed more fully. T., Th., 9:30-10:30.

Prerequisite: Course 1.

Dr. Magee.

Omitted in 1914-15.

[16b. Labor.] The subjects treated in this course include: the development of the Trade Union; the forms of organization and federation; the aim and policies of Trade Unions; the legal aspects of Unionism; governmental regulation of working conditions; employers' association; and methods of industrial peace. T., Th., 9:30-10:30.

Dr. Magee.

Prerequisite: Course 1.

Omitted in 1914-15.

Evening Courses

32. Economics (Similar to Course 1).—W., 7:30-9:30.

Professor Hicks.

33. Economic History (Similar to Course 2).—Th., 7:30-9:30.

Dr. Magee.

30. Commercial Geography.—A study of the leading articles of commerce, including both raw materials and manufactured products, their character and relative importance, the principal sources of supply, and their distribution in the world's markets. W., 4:45-6:45.

Dr. Magee.

31. Statistics.—The principles of the statistical method and their application to social and economic problems. M., 4:45-6:45.

Dr. Magee.

* EDUCATION

WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History and Principles of Education.

JOHN WILLIAM HALL, A. M., Professor of Elementary Education.

HENRY SKINNER WEST, Ph. D., Professor of Secondary Education.

* After 1914-15, those students who wish both an A. B. degree and a Teacher's Diploma, must earn the latter by not less than a year's resident work in the College for Teachers after completing the requirements for the A. B. degree. Those who wish to qualify in four years for teaching in elementary schools, will

CYRUS DEWITT MEAD, Ph. D., Assistant Professor of Elementary
Education.

ABBIE LOUISE DAY, B. S., B. Di., Instructor in Elementary Education.

The following courses may be elected by undergraduates during the Senior year, and be counted toward fulfilling requirements for the A. B. degree in the McMicken College of Liberal Arts.

1. History and Principles of Education.—6 credits. M., W., F., 10:30-11:30. Professor Burriss.

2. Theory and Practice of Teaching.—8 credits. Three hours class-room work and fifteen hours of practice per semester. Hours for practice to be arranged before registration. M., W., F., 9:30-10:30. Professor Hall.

4. School Economy.—2 credits. F., 11:30-12:30. Miss Day.

14. The Teaching of English.—4 credits. M., W., 8:30-9:30. Miss Day.

16. The Teaching of History.—2 credits. F., 8:30-9:30. Assistant Professor Mead.

20. The Teaching of Mathematics.—2 credits. *Second semester*, M., W., 11:30-12:30. Assistant Professor Mead.

22. The Teaching of Geography.—2 credits. *First semester*, M., W., 11:30-12:30. Assistant Professor Mead.

Prerequisite Courses:

Psychology 1a and 1b.

Philosophy 5a.

Geology and Geography 1.

History 15. (For those who did not offer a year's work in American history for admission.)

Education Courses 1, 2 and 4, and eight credits for work elected in Courses 14, 16, 20, and 22, making a total of twenty-four credits, entitle the graduate to a Teacher's Diploma, conferred by the College for Teachers, and a place on the preferred list of those eligible to appointment in the Cincinnati schools.

Students may count Education as one of the two departments in each of which they are required to obtain at least sixteen credits for graduation.

spend the first two years in the College of Liberal Arts, and the last two years in the College for Teachers, receiving, at the end of the four year period, the degree of Bachelor of Science, conferred upon the recommendation of the Faculty of the College for Teachers.

For further information, including statements in detail concerning the requirements of professional programs for those who wish to prepare for various positions in educational work, see announcement of the College for Teachers.

ENGLISH

COMPARATIVE LITERATURE

(The Nathaniel Ropes Foundation for the Comparative Study of Literature*)

FRANK WADLEIGH CHANDLER, PH. D., Professor of English and Ropes Professor of Comparative Literature.

EMILIE WATTS McVEA, A. M., Assistant Professor of English.

BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Public Speaking and of English.

CLYDE WILLIAM PARK, A. M., . . . Assistant Professor of English.

BERTHA K. YOUNG, A. M., . . . Assistant Professor of English.

CLARENCE DIMICK STEVENS, A. M., Assistant Professor of English.

WALTER WESLEY PLOCK, A. M., Instructor in English.

MADELAINE MAURY WRIGHT, A. B., Assistant in English.

GRADUATE ASSISTANTS: John D. Ellis, A. B., LL. B.; Martha Jane Gibson, A. M.; Ralph Kreimer, A. B.; Helen A. Stanley, A. M.; Mary Dunn Whitfield, A. B.

STUDENT ASSISTANT: Virginia Biddle.

All students in English, before making their election of courses, are advised to consult with some member of the department, and to read carefully the departmental bulletin of information as to the proper sequence in which such courses should be taken.

No student should enter or withdraw from a two-semester course at the beginning of the second semester without first consulting both the instructor concerned and the head of the department.

Students majoring in English are required to take as part of their course either 7 or 10.

For Undergraduates

1. English Composition.—This course presents a general survey of the principles of English composition and endeavors to enforce them by practice in writing. A certain amount of reading in English literature is also required.

Sec. I, M., W., F., 9:30-10:30.

Sec. II, T., Th., S., 8:30-9:30.

Sec. III, M., W., F., 10:30-11:30.

Sec. IV, M., W., F., 10:30-11:30.

Sec. V, M., W., F., 1:00-2:00.

Sec. VI, M., W., F., 1:00-2:00.

* During the months of February, March and April, 1915, Professor Anatole LeBraz, of the University of Rennes, will lecture in French at the University under the auspices of the Ropes Foundation, his subject being "The Celtic Influence in Literature."

Sec. VII, T., Th., S., 8:30-9:30.

Assistant Professors McVea, Van Wye, Park,
Young, Stevens, and Mr. Plock.

Course 1 is required for all students in the College of Liberal Arts in the Freshman year.

A passing grade received in this course may at any time lapse into a "condition," upon recommendation of the Department of English, or upon the joint recommendation of the English Department and any other department of the College of Liberal Arts. A condition thus incurred may be removed only at the examination period next ensuing, and if not removed within one semester, it will lapse into a failure. The method of removing the condition will be determined by the English Department according to the individual case; but, in any event, it must include a written test.

2a. Argumentation.—*First semester*, T., Th., 8:30-9:30.

Assistant Professor Van Wye.

2b. The Forms of Public Address.—*Second semester*, T., Th., 8:30-9:30.

Assistant Professor Van Wye.

Courses 2a and 2b are intended to serve as preparation for debating and effective public speaking. They are recommended for Sophomores and for those who may become candidates for the Jones prizes.

25. Public Speaking.—Control of the voice and body, correct enunciation, and practice in effective expression.

Sec. I, T., Th., 10:30-11:30.

Sec. II, T., Th., 11:30-12:30. Assistant Professor Van Wye.

Course 25 counts as only one University credit for each semester. It is recommended for students who expect to take Course 13a.

13a. Debating.—*First semester*. T., 1:00-3:00.

Assistant Professor Van Wye.

Course 13a is open to students who have passed creditably in Courses 1 and 2a. Students interested in public speaking are advised to take Courses 2a and 2b one year, and Course 13 the next.

15b. Descriptive and Narrative Writing.—T., Th., 11:30-12:30.

Assistant Professor McVea.

Course 15b is open to Sophomores and Juniors. Seniors will receive but half credit for it.

3. Types of Literature.—An appreciative rather than an historical study of the principal literary kinds—lyric, narrative verse, drama, prose fiction, and essay—illustrated by readings in representative masterpieces, chiefly English. Lectures, class papers, discussions. T., Th., 9:30-10:30. Professor Chandler.

Course 3 is recommended for Freshmen and Sophomores only. Juniors and Seniors will receive but half credit for it.

5. Shakespeare.—A study of the life and times of Shakespeare, his dramatic methods, and the literary history of his plays. Some of the plays are examined in detail, and most of the others are assigned for reading. M., W., F., 9:30-10:30.

Assistant Professor Young.

Course 5 is open to Freshmen and Sophomores.

11. The English Novel.—A course which considers the origin and history of the English novel, and discusses its characteristics as a form of prose literature. M., W., F., 9:30-10:30.

Assistant Professor Stevens.

Course 11 is recommended for Sophomores and Juniors.

16. Wordsworth and His Contemporaries.—A study of the English romantic poets of the early nineteenth century—Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats—involving a discussion of their technic, art, growth of mind, general interpretation of life, and relation to their time. M., W., F., 8:30-9:30.

Assistant Professor McVea.

Course 16 is recommended for Juniors and Seniors.

4. Nineteenth Century Prose.—Studies in the thought and style of the great prose writers, other than novelists, from Coleridge to Carlyle (during the first semester), and from Emerson to Pater (during the second semester). M., W., F., 10:30-11:30.

Assistant Professor Young.

Course 4 is recommended for Juniors and Seniors.

For Upper-Classmen and Graduates

24. Recent European Drama.—A study of the new dramatic literature, its varieties, technic, aims, and problems, beginning with the later plays of Ibsen, and considering the art and thought of such other representative writers for the stage as Björnson, Hauptmann, Sudermann, Schnitzler, Maeterlinck, Hervieu, Rostand, D'Annunzio, Echegaray, Strindberg, Tchekhov, Pinero, Jones, Phillips, Synge, and Shaw. T., Th., 1:00-2:00.

Professor Chandler.

26. The Essay.—A consideration of the origin and history of the English essay, involving a study of the rise of periodical literature and some reading of foreign examples of the type. M., W., 2:00-3:00.

Assistant Professor Park.

14. The English Drama from its Origins to 1642.—A survey of the English drama from its beginnings in the Middle Ages to the closing of the theaters. In 1914-15, the major part of the course will be devoted to an intensive study of the rise and development of English comedy. T., Th., S., 10:30-11:30.

Assistant Professor Stevens.

10. Chaucer.—The work and influence of Chaucer: his times, sources, contemporaries, and immediate successors, studied chiefly from the literary point of view. T., Th., S., 9:30-10:30.

Assistant Professor Stevens.

19. Main-Currents in Literary Criticism.—A survey of the principal theories of literature,—Greek, Roman, Italian, French, German, and English. The later portion of the course will be devoted to a study of special problems in literary criticism. W., 4:00-6:00.

Professor Chandler.

For Graduates Only

20. Seminary.—Elizabethan Literature in its Continental Relations.—Studies in English literature of the Renaissance, with especial reference to its foreign sources. Such forms as the lyric and the romantic epic; tragedy, comedy, and the history play; pastoral, picaresque, and Utopian fiction; the essay, voyages, and the books of court etiquette will be examined in the light of their European development. T., 4:00-6:00.

Professor Chandler.

For Teachers

For courses available for teachers' see Courses 19 and 20, the evening courses, and Course 29 described below:

29. Materials and Methods in Secondary English.—The organization and adaptation of the work in composition and literature to meet the needs of pupils in the secondary schools. A course designed for (1) seniors and graduates intending to teach English in secondary schools, (2) teachers in elementary schools preparing to teach secondary English, and (3) teachers in secondary schools already engaged in the teaching of English. S., 9:30-11:30.

Assistant Professor Young.

Courses Regularly Given, But Omitted During 1914-15

12. Literary Composition.—T., Th., 11:30-12:30.

Assistant Professor McVea.

6. Victorian Poetry.—M., W., F., 8:30-9:30.

Professor Chandler.

18. American Literature.—T., Th., 1:00-2:00.

Assistant Professor McVea.

21. English Poetry from Spenser to Burns.—T., Th., 9:30-10:30.

Assistant Professor Stevens.

27. English Drama Since the Restoration.—M., W., F., 1:00-2:00.

Assistant Professor Park.

7. Old English.—T., Th., S., 8:30-9:30.

Assistant Professor Young.

22. Foreign Backgrounds of English Literature.—T., Th., 2:00-3:00.

Professor Chandler.

23. The Literary Movement of the Eighteenth Century.—W.,
4:00-6:00. Professor Chandler.

Evening Courses

30. English Composition.
Sec. I, Th., 7:30-9:30. Assistant Professor Park.
Sec. II, T., 4:45-6:45. Assistant Professor Stevens.
[31. Nineteenth Century Prose.]
Omitted in 1914-15. Assistant Professor Young.
32. Nineteenth Century Poetry. M., 7:30-9:30.
Assistant Professor Young.
33. Public Speaking. T., 7:30-9:30.
Assistant Professor Van Wye.

GEOLOGY AND GEOGRAPHY

NEVIN M. FENNEMAN, PH. D., Professor of Geology and Geography.
J. ERNEST CARMAN, B. S., M. Di., Assistant Professor of Geology.
WALTER H. BUCHER, Ph. D., Instructor in Geology.

For Undergraduates

1. Introduction to the Earth Sciences.—Minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean; followed by a brief study of the physiography of the United States. Lectures, M., W., F., 8:30-9:30; Laboratory, M., W., 2:00-5:00; T., Th., 9:30-12:30; T., Th., 2:00-5:00; T., Th., 1:00-4:00. Professor Fenneman, Dr. Bucher, and Assistant.

2. General Geology.—This course is primarily for co-operative engineering students, but Liberal Arts students will also be admitted. An introductory study of minerals and rocks, dynamic geology and topography, followed in the second semester by stratigraphic, structural, and economic geology. T., Th., F., 9:30-10:30; M., W., 9:30-11:30. Assistant Professor Carman.

9. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure; special attention given to the economic deposits of each period. Frequent local (half-day) excursions noting fossils, stratigraphy, physiography, and economic relations. Lectures, T., Th., 8:30-9:30; Laboratory, M., 2:00-5:00. Course 1 is prerequisite.

Assistant Professor Carman.

Geology 9 is accepted as graduate work by agreement with the professor in charge.

For Undergraduates and Graduates

5b. Field Geology and Survey Methods.—The study and mapping of assigned areas in the vicinity of Cincinnati. Students

work singly or in parties of two, and submit typewritten reports with topographic and geologic maps. *Second semester.* Hours to be arranged by agreement with each party. Credit according to number of hours elected. Course 1 is prerequisite.

Assistant Professor Carman.

[*7. Mineralogy.] This course embraces (1) geometrical study of crystal forms illustrated by wooden models; (2) description and classification of minerals, about 400 species being used in laboratory study; (3) determinative mineralogy and blowpipe analysis. Two lectures and one laboratory. Hours to be arranged.

Omitted in 1914-15.

Dr. Bucher.

8. Introductory Paleontology.—The work of this course is mainly with fossil invertebrates, their specific features, the age of the rocks which contain them, their migrations and association in societies. Recognition at sight is emphasized. T., Th., 8:30-9:30; F., 1:00-4:00.

Dr. Bucher.

[12. Petrology.] This course embraces (1) the optical principles of mineralogy; (2) the microscopic study of minerals in rock sections; (3) a systematic study of rocks, their constitution, structure, origin, and classification. Two or three hours, to be announced.

Course 7 is prerequisite.

Omitted in 1914-15.

13. Special Work in Geology.—Any student in this department may, by agreement with the instructors in charge, register for individual study or investigation not described in the list of courses. Such work must be regularly supervised and approved upon examination or by the preparation of a thesis. Credit according to number of hours elected.

14. Course 14 is outlined under the heading "For Teachers." Open to college students only by special agreement with the professor in charge.

16. Course 16 is outlined under the heading "For Teachers."

For Teachers

14. General Geology for Teachers.—Elements of dynamic, structural, and physiographic geology, being identical with the corresponding parts of Course 1. Lecture, S., 8:30-10:30. Field or Laboratory, 10:30-12:30.

Professor Fenneman.

19. Historical Geology.—For teachers who have had Course 14. Lectures, S., 8:30-10:30; Field or Laboratory, 10:30-12:30.

Assistant Professor Carman.

* Course 1 is not prerequisite to Course 7, but the latter is not accepted as a graduate course for students making Geology a major, unless Course 1 or its equivalent has been taken.

16. Advanced Physiography of the United States.—Course 1 (or Course 14) and Course 9 or 19 are prerequisite. Lecture, W., 4:00-6:00; S., 10:30-11:30. Professor Fenneman.

Course 16 runs through more than one year, but may be entered at the beginning of any semester.

GERMAN

MAX POLL, PH. D., . . . Professor of the Germanic Languages.

CLAUDE M. LOTSPEICH, PH. D., . Associate Professor of German.

ELEANOR NIPPERT, A. B., Instructor in German.

MARTIN LUDWICH, A. M., Instructor in German.

WALTER BUCHER, PH. D., Instructor in German.

ASSISTANT: Emma Andriessen, A. M.

For Undergraduates

1. Elementary German.—Grammar, translation from German into English, and elementary exercises in translating into German.

Sec. I, T., Th., S., 8:30-9:30.

Sec. II, M., W., F., 11:30-12:30.

Sec. III, M., W., F., 1:00-2:00.

Associate Professor Lotspeich and Miss Nippert.

Course 1 is open to students who have had no German in the high school.

2. German Prose and Poetry.—Reading at sight, grammar, composition, and dictation.

Sec. I, M., W., F., 9:30-10:30.

Sec. II, M., W., F., 10:30-11:30.

Sec. III, M., W., F., 11:30-12:30.

Associate Professor Lotspeich and Miss Nippert.

Course 2 is open to students who have passed in Course 1 or who have had two years of German in the high school.

Course 2 does not count towards a major in German.

20. German Scientific Prose.—Subjects in natural science. T., Th., 11:30-12:30. Dr. Bucher.

Course 20 is open to students who have passed in Course 1 or its equivalent. Course 20 does not count towards a major in German. If taken after Course 2, Course 20 will count only as a half course.

3. German Composition (Beginners' Course).—German grammar, conversation, and practice in writing German. T., Th., 10:30-11:30. Miss Nippert.

Course 3 is open to students who have passed in Course 1. Courses 2 and 3 may be advantageously taken together.

****4.** Introduction to German Literature of the Eighteenth Century.—Lessing's *Emilia Galotti*, Schiller's *Jungfrau von Orleans* and *Maria Stuart*, Goethe's *Iphigenie*, *Egmont*, *Tasso* and *Goetz von Berlichingen*. Translation and reading at sight. Practice in writing German, based on the reading. This course is conducted mainly in German.

Sec. I, M., W., F., 10:30-11:30.

Sec. II, M., W., F., 9:30-10:30.

Professor Poll, Miss Nippert, and Assistant.

Course 4 is open to students who have passed in Course 2. Students in this course are urged to take a composition course in addition.

21. German Composition (Intermediate Course).—Practice in composition, conversation and in writing German. T., Th., 9:30-10:30. Course 21 is open to students who have passed in Course 2.

Miss Nippert.

Courses 4 and 21 may be advantageously taken together.

14b. Advanced German Prose.—The material for study will be selected from such works as Goethe's *Dichtung und Wahrheit*, Schiller's *Geschichte des dreissigjährigen Krieges*, Lessing's *Laokoon* and *Hamburgische Dramaturgie*, Biedermann's *Deutsche Bildungszustände in der zweiten Hälfte des Achtzehnten Jahrhunderts*. Second semester, T., Th., 11:30-12:30.

Associate Professor Lotspeich.

Course 14b is open to students who have either completed or are taking Course 4 or Course 5.

For Undergraduates and Graduates

5. History of German Literature to the Nineteenth Century, with special study of the Classic Periods of the Twelfth and Eighteenth Centuries. Among other works the following are read in 1914-15: *An Anthology of German Literature*, by Calvin Thomas; the *Nibelungenlied* (translated into modern German by R. Woerner); Lessing's *Nathan*; Schiller's *Wallenstein* and *Braut von Messina*, and Goethe's *Faust*. Lectures in German, collateral reading. M., W., F., 9:30-10:30.

Professor Poll and Assistant.

Course 5 is open to students who have passed in Course 4.

6. German Literature of the Nineteenth Century.—The Romantic School. The Novel. The Drama and Lyrics. Lectures, collateral reading and written reports by the class. Th., 4:00-6:00.

Professor Poll.

Course 6 is open to students who have passed in Course 5.

** Students entering the University who have done advanced work in German may anticipate this course by passing an examination on the work as outlined above, within three weeks after matriculation.

[10. German Composition (Advanced Course).] Advanced composition and practice in writing German. S., 9:30-11:30.

Omitted in 1914-15.

Professor Poll.

30. Glimpses of German Life and Culture.—Papers and discussions in German. Advanced composition. S., 10:30-12:30.

Professor Poll.

Primarily for Graduates

12. Interpretation of both parts of Faust and Study of the Legend.—Collateral reading and written reports. T., 4:00-6:00.

Professor Poll.

Course 12 is open to students who have passed in Course 5.

[11b. German Literature from the Reformation to the Classic Period of the Eighteenth Century.] Lectures in German and collateral reading. *Second semester*, T., 4:00-6:00. Professor Poll.

Course 11b is open to students who have passed in Course 5 or 6.

Omitted in 1914-15.

[7. Middle High German.] Wright's *Middle High-German Primer*. Bachmann's *Mittelhochdeutsches Lesebuch*. Translation into modern German. W., 4:00-6:00.

Omitted in 1914-15.

Associate Professor Lotspeich.

8. Old High German.—Braune's *Althochdeutsche Grammatik*, and the same author's *Althochdeutsches Lesebuch* are used as textbooks. Translation into modern German. During a part of the second semester the Old Saxon phonology and morphology will be studied and selections from the Heliand will be read. M., 4:00-6:00.

Associate Professor Lotspeich.

[13. Gothic.] Braune's *Gotische Grammatik*; reading of selections from Ulfilas, lectures on Germanic philology. W., 4:00-6:00.

Omitted in 1914-15.

Associate Professor Lotspeich.

[26. Old Norse.] Heusler's *Altislaendisches Elementarbuch*. Reading of selections from the Sagas. In the second semester selected poems of the Edda will be read. M., 4:00-6:00.

Omitted in 1914-15.

Associate Professor Lotspeich.

[9b. German Seminary.] Willem's *Van den vos Reinaerde. Second semester*. T., 4:00-6:00.

Omitted in 1914-15.

Professor Poll.

For Teachers

Courses 10 and 30, outlined above, are intended primarily for teachers.

Evening Courses

33. Elementary German.—Grammar, translation from German into English, and elementary exercises in translating into German. W., 7:30-9:30.

Mr. Ludwich.

34. Intermediate German, Prose and Poetry.—Translation, sight reading, grammar, composition, dictation. T., 7:30-9:30.

Associate Professor Lotspeich.

35. Introduction to German Literature of the Eighteenth Century.—Translation and reading at sight. Practice in writing German, based on the reading. This course is conducted in German. W., 7:30-9:30.

Professor Poll.

GREEK

JOSEPH EDWARD HARRY, PH. D., Professor of Greek.

ARTHUR JAMES KINSELLA, A. M., Instructor in Greek.

For Undergraduates

1. Oratory—Epic Poetry—Philosophy.—Lysias, six orations; Herodotus, one book; *Iliad*, Books XIX-XXII.

The Lyric Poets.—Selections. Plato: *Protagoras*; *Lysis*; *Laches*; *Charmides*. Collateral reading: two orations of Lysias; two books of the *Iliad*; Plato's *Apology* and *Crito*. M., W., F., 9:30-10:30, throughout the year. Professor Harry.

A collateral course is offered by Mr. Kinsella for those students who are unable to attend at this hour.

Course 1 is open to students who have had three years of Greek in the high school.

2. Greek Prose Composition.—Hours to be arranged.

Mr. Kinsella.

Course 2 should be taken in connection with Course 1.

Course 2 is open to students who have had three years of Greek in the high school.

3. The Drama.—Euripides, *Hippolytus*; Sophocles, *Oedipus Tyrannus*; Aeschylus, *Prometheus*; Aristophanes, *Nubes*. Collateral reading—Euripides: *Alcestis*, *Ion*. M., W., F., 10:30-11:30, throughout the year. Professor Harry.

Course 3 is open to students who have completed Course 1.

4. The Odyssey.—Two hours weekly; to be arranged.

Mr. Kinsella.

8. The Life and the Literature of the Ancient Greeks.—Greek Life, *first semester*. Drama, History, Oratory, Plato (1915); Homer (1916); *second semester*. Th., 10:30-11:30.

Professor Harry.

Students who are not acquainted with the Greek language may be admitted to Course 8.

9. Elementary Greek.—First Greek book and grammar. Xenophon. M., W., F., 8:30-9:30. (See also Course 17.)

Mr. Kinsella.

Course 9 is open to students who have had no Greek in the high school.

[10. The New Testament.] A course in grammar and translation. Two hours; to be arranged with the instructor.

Throughout the year.

Mr. Kinsella.

Course 10 alternates with Course 16.

Course 10 is open to students who have had three years of Greek in the high school.

Omitted in 1914-15.

[11. Advanced Course in the Greek Drama.] *Iphigenia, Antigone, Agamemnon, Aves, Ranae*. M., W., F., 10:30-11:30.

Omitted in 1914-15.

Professor Harry.

12. Xenophon's *Hellenica, first semester. Symposium, Memorabilia, second semester*. T., Th., 10:30-11:30. Mr. Kinsella.

15. Intermediate Greek.—Completion of Xenophon. Prose Composition. Homer, I-III. M., W., F., 11:30-12:30.

Mr. Kinsella.

Prerequisite: Course 9 or two years of Greek in the high school.

16. Hellenistic Greek.—Philo and other writers of this period. Two hours throughout the year; to be arranged with the instructor.

Course 16 alternates with Course 10.

Mr. Kinsella.

17. First Year Greek.—T., Th., S., 11:30-12:30. This course is offered to give those who cannot take Course 9 an opportunity to begin the study of Greek in the University. Professor Harry.

20b. Greek Mythology.—A lecture course with collateral reading. *Second semester*. T., Th., 9:30-10:30. Mr. Kinsella.

Students who are not acquainted with the Greek language may be admitted to Course 20b.

For Undergraduates and Graduates

13. Greek Art.—A course in the grammar and history of Greek art, including architecture. Special attention is given to the spirit and principles of plastic art, to the influence of religion and athletics, to the temples and their decorations, and to the masterpieces of the great Greek sculptors. Pre-Hellenic archaeology, Greek architecture, and sculpture (1914-15); vase paintings, coins, gem engraving, wall paintings (1915-16). T., 10:30-11:30.

This class is limited to forty students.

Professor Harry.

Primarily for Graduates

5. Rapid Reading.—Th., 3:00-4:00. Professor Harry.

6. Practical Exercises in Greek.—M., 3:00-5:00.
Professor Harry.

[7. Greek Seminary.] The Attic Orators (1915-16). M.,
3:00-5:00. Professor Harry.

Course 7 is open to graduates and to those who have completed the undergraduate courses in Greek.

Omitted in 1914-15.

HISTORY

MERRICK WHITCOMB, Ph. D., Professor of History.

ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.

DEXTER PERKINS, Ph. D., Instructor in English History.

ESTHER GODSHAW, Ph. B., Assistant in History.

MIRIAM URBANSKY, . . . D. A. R. Fellow in American History.

For Undergraduates

1. Middle Ages—Renaissance.—Reformation.—This course includes the main facts of European history from the fall of the Roman Empire to the end of the Reformation. Lectures and recitations. M., W., F., 9:30-10:30. Professor Whitcomb.

3. The Revolution and Napoleon.—Beginning with the Bourbon period this course includes a study of the Ancien Régime and the French Revolution, and follows the fortunes of Napoleon to 1815. Lectures and recitations. M., W., F., 10:30-11:30.

Professor Whitcomb.

13. General Course in English History.—This course is introductory to the study of both European and American history. It traces the development of the English people from the earliest times to the present. Lectures and recitations. M., W., F., 1:00-2:00.

Dr. Perkins.

29. Ancient History to 476, A. D.—This course comprises a brief survey of the development of the principal Oriental nations; and a more complete discussion of the civilizations of Greece and Rome. T., Th., 8:30-9:30.

Dr. Perkins.

15. General Course in American History.—This course is especially recommended for those who have not had American history in the high school and for those who contemplate work in the College for Teachers. It should, if possible, be preceded by History 1 or History 13. The work is based largely upon a text-book, supplemented by regular reports and lectures. M., W., F., 8:30-9:30.

Associate Professor Cox.

For Undergraduates and Graduates

25. European History Since 1814.—An advanced course dealing with the problems of European history in the nineteenth century. France since 1814; Germany since 1814; the Kingdom of Italy; the Eastern Question; Colonization. T., Th., 10:30-11:30.

Professor Whitcomb.

Open to Seniors; to Juniors by permission.

Prerequisite: History 3.

[46. History of Germany.] Beginning with the early Germans this course will follow the history of the German peoples down to the present time. T., Th., 10:30-11:30. Professor Whitcomb.

Omitted in 1914-15.

[20. Spain and Spanish America.] A brief view of the development of the Spanish nation and of the Spanish colonies; the subsequent development of Latin America, and its relations with Europe and the United States. Lectures and special reports. Open to advanced students. Associate Professor Cox.

Omitted in 1914-15.

[21. American Constitutional History.] The course treats of the development of governmental institutions during the Colonial era, and of the important constitutional questions occurring between the Revolution and the Civil War. M., W., F., 11:30-12:30.

Associate Professor Cox.

Open to those who have had Course 15 or an equivalent.

Omitted in 1914-15.

22. American Constitutional History (Continued).—A review of the Civil War and Reconstruction Periods, and the subsequent industrial and territorial expansion of the United States. Lectures and special reports. M., W., F., 11:30-12:30.

Associate Professor Cox.

28. American Territorial History.—A general view of the territorial development of North America with the United States as its chief factor. Emphasis will be given to Spanish-American relations between 1803 and 1823. Lectures and special reports. T., Th., 11:30-12:30.

Associate Professor Cox.

39. Seminary in American History.—Politics and Political Leaders of the Ohio Valley. The course is devoted to an intensive study, from the original sources, of selected national political issues

affecting this section, and the social and economic causes underlying them. Seniors may be admitted. S., 10:30-12:30.

Associate Professor Cox.

Open to properly qualified teachers.

34. Seminary in European History.—*First semester.* The Eastern Question. *Second semester.* Colonization by European Powers. Students are expected to confer with instructors before electing course. M., W., 11:30-12:30.

Professor Whitcomb and Dr. Perkins.

[40. English Constitutional History.] The course traces the development of English political institutions from the Saxon period to the present times. Recommended for students who intend to enter upon the study of law, and for those who wish to specialize in American history. T., Th., 11:30-12:30. Dr. Perkins.

Omitted in 1914-15.

Evening Courses

56. The French Revolution and Napoleon (Similar in scope to History 3).—W., 7:30-9:30. Professor Whitcomb.

47. General Course in American History.—The work of this course covers the Colonial and Revolutionary Periods and is based largely upon a text-book, supplemented by regular reports and lectures. Th., 7:30-9:30. Associate Professor Cox.

[49. General Course in American History (Continued).] The work of this course covers the period from 1789 to the present time, and is conducted in the same manner as Course 47. Th., 7:30-9:30. Associate Professor Cox.

Omitted in 1914-15.

LATIN

JOHN MILLER BURNAM, PH. D., Professor of Latin.

WILLIAM TUNSTALL SEMPLE, PH. D., Assistant Professor of Latin.

HELEN ABIGAIL STANLEY, A. M., . . Graduate Assistant in Latin.

For Undergraduates

1. Livy.—Horace.—Selections from Livy. Selected Odes and Epodes of Horace. Informal discussion of the life and thought of the times.

Sec. I, T., Th., S., 8:30-9:30.

Sec. II, M., W., F., 10:30-11:30.

Sec. III, M., W., F., 10:30-11:30.

Professor Burnam,

Assistant Professor Semple, and Miss Stanley.

Course 1 is open to students who have had four years of Latin in the high school.

2. Cicero, Tacitus, Horace.—Cicero's *Laelius*, Tacitus' *Agricola* and *Germania*, selections from Horace's Satires and Epistles.

Sec. I, M., W., F., 9:30-10:30. Assistant Professor Semple.

Course 2 is open to students who have completed Course 1.

6. Prose Composition.—One hour per week throughout the year. T., 10:30-11:30. Assistant Professor Semple.

Course 6 is required of all students who choose Latin as a major. It may be taken any year after the completion of Course 1.

3. Comedy.—Plautus and Terence, *first semester*; Lucretius' *De Rerum Natura*, *second semester*. M., W., F., 11:30-12:30.

Assistant Professor Semple.

Course 3 is open to students who have passed in Courses 1 and 2.

4. Virgil's *Bucolics* and *Georgics*, *first semester*; Tacitus' *annals* or *Quintilian*, *second semester*. Three hours, to be arranged.

Professor Burnam.

Course 4 is open to students who have passed in Courses 1 and 2.

5. Latin Literature.—A general survey of the life and letters of the Roman people from the earliest times until the later Empire. W., 2:00-3:00. Assistant Professor Semple.

Primarily for Graduates

Hours in all cases to be arranged

9. Latin and Romance Palaeography.—The history of the Latin alphabet in Western Europe, from A. D. 1 to the close of the fifteenth century. Students are given abundant practice in reading facsimiles. Three hours. Professor Burnam.

Course 9 must be preceded by at least four years of undergraduate work, and requires the ability to read French and German.

10. Latin Seminary.—

10a. Virgil. Three hours.

10b. Caesar. Omitted in 1914-15.

10c. Cicero. Omitted in 1914-15.

The seminary considers Caesar, Cicero, and Virgil, in successive years in the order mentioned. The author to be studied in 1914-15 (Course 10a) is Virgil. Professor Burnam.

12. Graduate Study.—Credit according to work elected and completed under the direction of the teaching staff of the department.

***MATHEMATICS**

HARRIS HANCOCK, PH. D., D. Sc., . . . Professor of Mathematics.
 STEPHEN ELMER SLOCUM, PH. D., Professor of Applied Mathematics.
 CHARLES NAPOLEON MOORE, Ph. D., Assistant Professor of Mathematics.
 LOUIS BRAND, A. M., . . . Assistant Professor of Mathematics.
 FLORENCE CAMERON LAWLER, B. S., . . . Instructor in Mathematics.
 JOSEPH HENRY KINDLE, A. M., . . . Instructor in Mathematics.
 EDWARD SMITH, M. S., Instructor in Mathematics.

For Undergraduates

1. Algebra, Trigonometry.—Selected portions of Algebra and the elementary Theory of Equations. Rietz and Crathorne, *College Algebra*; Trigonometry, Crockett, *Trigonometry*.

Sec. I, M., W., F., 8:30-9:30.	Miss Lawler.
Sec. II, T., Th., S., 8:30-9:30.	Miss Lawler.
Sec. III, M., W., F., 9:30-10:30.	Miss Lawler.
Sec. IV, T., Th., S., 9:30-10:30.	Miss Lawler.

Beginning September 15, 1914, students who matriculate with *less than three units* in Mathematics, and who elect Mathematics, *must* take Course 1.

2. Algebra, Trigonometry (as above).—Analytical Geometry of Two Dimensions. M., W., F., 10:30-11:30. Miss Lawler.

Beginning September 15, 1914, students who matriculate with *three or more units* in Mathematics, and who elect Mathematics, *must* take Course 2.

3. Analytical Geometry of Two and Three Dimensions. M., W., F., 9:30-10:30. Assistant Professor Moore.

Sophomores who have taken Course 1, and Freshmen, who enter *with four units* in Mathematics, may (by special permission) take Course 3.

5. Calculus. Differential and Integral.—Osborne, *Calculus*; Davis, *Calculus*.

Sec. I, M., T., Th., F., 10:30-11:30. Professor Hancock.

For Undergraduates and Graduates

15. Theory of Equations, Including Determinants.—Burnside and Panton, *Theory of Equations*. Lectures. M., W., F., 9:30-10:30. Professor Hancock.

* See other courses in Mathematics and Applied Mathematics, College of Engineering.

[8a. Advanced Integral Calculus.] Byerly, *Integral Calculus*. Lectures. M., W., F., 9:30-10:30, *first semester*.

Omitted in 1914-15.

Professor Hancock.

[9b. Differential Equations.] Forsyth, *Differential Equations*. Lectures. M., W., F., 9:30-10:30, *second semester*.

Omitted in 1914-15.

Professor Hancock.

Primarily for Graduates

20. Theory of Maxima and Minima Involving Several Variables. The Calculus of Variations. M., Th., 4:00-6:00.

Professor Hancock.

11b. Fourier's Series and Spherical Harmonics.—Byerly, *Fourier's Series and Spherical Harmonics*. This course is intended as an introduction to mathematical physics. After a preliminary study of certain trigonometric series, Fourier's theorem for the development of a function into a trigonometric series is derived, and the limitations of its validity investigated. This is followed by the study of Lagrange's, Laplace's, and Lamé's functions, with applications to problems in heat, electricity, potential, elasticity, etc. *Second semester*, Th., 4:00-6:00; S., 9:30-10:30.

Professor Slocum.

10a. Theory of Errors and Method of Least Squares.—Wright and Hayford, *Adjustment of Observations*. The general theory of the adjustments of observations, with applications to triangulation and the derivation of empirical formulas from experimental data. *First semester*, M., 4:00-5:00; W., 4:00-6:00. Professor Slocum.

40. Seminary.—Theoretical and experimental research in some special topic of the mechanics of rigid, elastic, fluid, or gaseous bodies. Results to be summarized in a form suitable for publication. Credit according to number of hours elected. Hours by special arrangement. Professor Slocum.

The following courses which are given from time to time will be omitted in 1914-15:

16a. Theoretical Mechanics.

16b. The Mathematical Theory of Elasticity.

26. The History and Teaching of Mathematics.

30. Theory of Numbers, Part I.—Natural Numbers.

31. Theory of Numbers, Part II.—Algebraic Numbers.—Dedekind's Theory.

32. Theory of Numbers, Part III.—Kronecker's Theory.

24. Elliptic Functions, Part I.—Analysis.

25. Application of Elliptic Functions, Part II.

36. Vector Analysis.

28. Theory of Functions.—Lectures on the Theory of Functions of a Complex Variable.
 29. Theory of Functions of a Real Variable.
 33. Advanced Algebra.—Part I. Lectures.
 34. Advanced Algebra.—Part II.
 35. Advanced Algebra.—Part III.
 18a. Theory of Minimal Surfaces.

Evening Courses

40. Algebra—Trigonometry.—Selected portions of algebra and the elementary Theory of Equations. Ashton and Marsh, *College Algebra*. Trigonometry: Rothrock, *Trigonometry*. F., 7:30-9:30.
 Mr. Kindle.
 42. Analytical Geometry and Elementary Calculus. W., 7:30-9:30.
 Mr. Smith.

PHILOSOPHY

- *GUY ALLAN TAWNEY, Ph. D., Professor of Philosophy.
 HENRY G. HARTMANN, Ph. D., . Assistant Professor of Philosophy.
 ERNEST LYNN TALBERT, Ph. D., . . . Instructor in Philosophy.
 HYMAN BERNARD CANTOR, A. B., Graduate Assistant in Philosophy.

For Undergraduates

- 1a. Introduction to Philosophy.—Open to students who have completed one year of University work. *First semester*, M., W., F., 11:30-12:30.
 Dr. Talbert.
 1b. Philosophical Idealism Historically and Critically Treated.—*Second semester*, M., W., F., 11:30-12:30.
 Dr. Talbert.
 2a. Introduction to Logic.—Open to students who have completed at least one year of University work. *First semester*, M., W., F., 9:30-10:30.
 Assistant Professor Hartmann.

For Undergraduates and Graduates

- 2b. Theory of Scientific Method.—*Second semester*, M., W., F., 9:30-10:30.
 Dr. Talbert.
 Prerequisite: Course 2a.
 3a. History of Philosophy from the Italian Renaissance to the Time of Kant.—Open to students who have completed one year of University work. *First semester*, M., W., F., 8:30-9:30.
 Assistant Professor Hartmann.

* Absent on leave, 1914-15.

3b. History of Modern Philosophy from the Time of Kant.—
Courses 3a and 3b alternate biennially with Courses 4a and 4b.
Second semester, M., W., F., 8:30-9:30.

Assistant Professor Hartmann.

Prerequisite: Course 3a.

[4a. History of Philosophy to the Beginning of the Christian
Era.] *First semester*, M., W., F., 8:30-9:30.

Omitted in 1914-15. Assistant Professor Hartmann.

[4b. History of the Philosophy of the Middle Ages.] *Second
semester*, 8:30-9:30.

Assistant Professor Hartmann.

Omitted in 1914-15.

5a. Ethics.—Open to students who have completed two years
of University work. *First semester*.

Sec. I, M., W., F., 10:30-11:30.

Assistant Professor Hartmann.

Sec. II, M., W., F., 1:00-2:00.

Dr. Talbert.

5b. Ethical Interpretations.—*Second semester*, M., W., F.,
10:30-11:30.

Dr. Talbert.

Prerequisite: Course 5a.

6a. History of Ethics.—*First semester*, T., Th., 11:30-12:30.

Prerequisite: Course 5a. Assistant Professor Hartmann

6b. History of Moral Ideas.—*Second semester*, T., Th., 11:30-
12:30.

Assistant Professor Hartmann.

Prerequisite: Course 5a.

8a. Social Psychology.—See Psychology 8a. This course counts
toward a major in philosophy. Psychology 1a prerequisite.

Dr. Talbert.

8b. Aesthetics, the Science of the Beautiful.—*Second semester*,
M., W., F., 9:30-10:30.

Assistant Professor Hartmann.

Prerequisite: Psychology 1a.

11. Contemporary Philosophy.—S., 9:30-10:30.

Prerequisite: Philosophy 3b.

Dr. Talbert.

Primarily for Graduates

9. The Methods of Certain Ethical Systems.—Th., 1:00-3:00.

Assistant Professor Hartmann.

10. Plato and Aristotle.—T., 1:00-3:00.

Dr. Talbert.

For Teachers

11. Contemporary Philosophy.—S., 9:30-10:30.

Dr. Talbert.

Evening Courses

22. Logic.—Th., 4:45-6:45. Assistant Professor Hartmann.
 23. Ethics.—M., 7:30-9:30. Dr. Talbert.

It should be remembered that work in the Department of Philosophy is facilitated by courses in psychology, sociology, political science, general history, economics, the history of education, aesthetics, and other allied subjects dealing with human life and the products of civilization.

PHYSICAL EDUCATION

ALFRED BRODBECK, Director of Physical Education.
 ————, Instructor in Physical Education.
 HAROLD H. WAGNER, Assistant in Physical Education.

Physical Training for Men.—All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: Three hours per week for all members of the Freshman class (lectures on hygiene, one hour, work in the gymnasium, two hours), and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed only under exceptional conditions, for which special permission must be secured from the Dean in advance.

A physical examination is required of each student of the two lower classes upon entrance and upon completion of the required work. Appointments for the examination must be made with the Physical Director at the beginning of the first semester.

Credit: One credit will be given for each semester's work.

Hours.—Phys. Ed. 1 (Freshmen). Gymnasium, T., Th., 10:30-11:30; M., W., 10:30-11:30; T., Th., 4:00-5:00 (voluntary); Lecture, F., 2:00-3:00.

Phys. Ed. 2 (Sophomores). T., Th., 11:30-12:30; M., W., 11:30-12:30; T., Th., 4:00-5:00 (voluntary). Mr. Brodbeck.

Physical Training for Women.—The work is arranged with a view to obtaining the best hygienic, corrective and recreative results. A physical examination will be made at the beginning of the Freshman and at the end of the Sophomore year.

The course for Freshmen consists of three hours attendance per week throughout the year. Two hours each week are spent in exercising in the gymnasium; the other hour is devoted to lec-

tures on hygiene. The lectures must be attended by every member of the Freshman class, irrespective of the fact that she may be excused from the gymnasium work.

The course for Sophomores consists of two hours of exercise in the gymnasium, prescribed for all members unless excused by the Director of Physical Education or on a physician's certificate.

Credit: One credit will be given for each semester's work.

Hours—Phys. Ed. 1 (Freshmen), M., W., 1:00-2:00; T., Th., 1:00-2:00; Lecture, F., 2:00-3:00.

Phys. Ed. 2 (Sophomores). T., Th., 2:00-3:00; M., W., 2:00-3:00.

Voluntary Class.—F., 1:00-2:00. _____

PHYSICS

LOUIS TRENCHARD MORE, PH. D., Professor of Physics.

SAMUEL JAMES MCINTOSH ALLEN, PH. D., Associate Professor of
Physics.

ROBERT E. CLYDE GOWDY, Ph. D., Instructor in Physics.

THOMAS LANSING PORTER, Ph. D., Instructor in Physics.

ASSISTANTS: Mr. Evens, Mr. Lorenz, A. M.

For Undergraduates

26a. General Physics.—Lectures and recitations on mechanics, sound, and heat, illustrated with lecture experiments. *First semester*, M., W., F., 11:30-12:30. Professor More.

27b. General Physics.—Lectures and recitations on light, electricity and magnetism, illustrated with lecture experiments. *Second semester*, M., W., F., 11:30-12:30. Professor More.

N. B.—The above courses are designed for students in the College of Liberal Arts only; they may be elected in the Freshman year. They will present the fundamental laws and phenomena of physics, and will be non-mathematical in treatment. Taken with Courses 2a and 22b, Experimental Physics, they satisfy the science requirement.

2a. Experimental Physics.—Laboratory work arranged to accompany General Physics. *First semester.*

Associate Professor Allen, Dr. Gowdy, Dr. Porter,
and Assistants.

Sec. I, T., Th., 8:30-11:30.

Sec. II, T., Th., 1:00-4:00.

Sec. III, M., F., 1:00-4:00 (for Engineers only).

Sec. IV, W., 1:00-4:00.

22b. Experimental Physics.—Laboratory work arranged to accompany General Physics. *Second semester.*

Associate Professor Allen, Dr. Gowdy, Dr. Porter,
and Assistants.

Sec. I, T., Th., 8:30-11:30.

Sec. II, T., Th., 1:00-4:00.

Sec. III, M., W., F., 1:00-4:00 (for Engineers only).

28a. Advanced General Physics.—Lectures and recitations on Mechanics and Heat. *First semester.* T., Th., 9:30-10:30.

Associate Professor Allen.

29b. Advanced General Physics.—Lectures and recitations on Light, Electricity, and Magnetism. *Second semester.* T., Th., 9:30-10:30.

Associate Professor Allen.

Prerequisites for Courses 28 and 29 are Courses 26 and 27, and Mathematics 1.

4. Advanced Experimental Physics.—Experiments in photometry, spectrum analysis, calibration of weights and thermometers, etc., requiring exact measurement. Credit according to periods elected. T., Th., 1:00-4:00.

Associate Professor Allen.

For Undergraduates and Graduates

[3a. Theoretical Mechanics.] A course of lectures on the mathematical laws of mechanics. *First semester,* T., Th., S., 11:30-12:30.
Omitted in 1914-15. Professor More.

[18b. Theory of Electricity and Magnetism.] A course of lectures on the mathematical laws of electricity and magnetism. *Second semester,* T., Th., S., 11:30-12:30. Professor More.
Omitted in 1914-15.

19a. Theory of Heat.—A course of lectures on the mathematical laws of heat. *First semester,* T., Th., S., 11:30-12:30.
Professor More.

15b. Theory of Light.—A course of lectures on the mathematical laws of light. *Second semester,* T., Th., S., 11:30-12:30.
Professor More.

The above courses may be elected for a minor in Physics, the following courses for a major, in graduate work.

8. Experimental Physics.—The exact determination of some of the standard and classical experiments. Credit according to number of hours elected. Associate Professor Allen.

10. Seminary.—The reading and discussion of papers in physical journals. T., 4:00-5:00. Associate Professor Allen.

16. Physical Manipulations.—A series of exercises in scientific shop-work. Shop-work; soldering and metal-working, screw-cutting and elementary lathe-work. Glass-work and physical processes; glass-blowing, cutting, grinding, polishing, silvering; fiber suspensions and preparations useful in the laboratory. Hours to be arranged. Without credit. Mr. Evens.

For Graduates Only

7. Lectures on Theoretical Physics.—This course is designed to include three years' work. In 1913-14 the lectures discuss the theory of heat and generalized co-ordinates; 1914-15, electricity and magnetism; 1915-16, light. Twice weekly. Professor More.

25a. Theoretical Mechanics.—See under Mathematics 16a. Professor Slocum.

9. Research.—Those electing this course are supplied with all the apparatus needed, and with the assistance of the Mechanician. Daily. Professor More and Associate Professor Allen.

For Teachers Only

11. Laboratory Methods for Teachers.—This course comprises a set of experiments designed especially for teachers. The exercises will include those which are usually given in schools, and also those of a more difficult nature which illustrate the theoretical principles. S., 8:30-11:30. Dr. Porter.

Evening Courses

30a. General Physics.—Lectures with demonstrations on mechanics, heat, and sound. *First semester*, M., 7:30-9:30. Associate Professor Allen.

30b. General Physics.—Lectures with demonstrations on light, electricity, and magnetism. *Second semester*, M., 7:30-9:30. Associate Professor Allen.

31a. Experimental Physics.—Laboratory work to accompany General Physics. *First semester*. Sec. V, W., 7:30-9:30. Dr. Porter.

31b. Experimental Physics.—Laboratory work to accompany General Physics. *Second semester*. Sec. V, W., 7:30-9:30. Dr. Porter.

POLITICAL AND SOCIAL SCIENCE

SELDEN GALE LOWRIE, Ph. D., . . . Professor of Political Science.
CLARENCE ORAN GARDNER, Ph. D., Assistant Professor of Political
Science.

WILLIAM HAMMOND PARKER, Ph. D., Assistant Professor of Eco-
nomics and Social Science.

DEXTER PERKINS, Ph. D., Instructor in History.

SAMUEL SPEIR MAYERBERG, A. M., Graduate Assistant in Social
Science.

POLITICAL SCIENCE

1. American Government.—The primary aim of this course is to prepare for the duties of citizenship and lay a foundation for the further study of political science. The nature and organization of our federal government will be studied the first semester, and state and local government will be studied the second semester. M., W., F., 10:30-11:30. Assistant Professor Gardner.

For Undergraduates and Graduates

2a. European Governments.—A study of the nature and organization of the principal governments of Europe. *First semester*, M., W., F., 11:30-12:30. Assistant Professor Gardner.

Open to Juniors and Seniors and to those students taking Course 1.

2b. International Law.—A study of the principles, rules, and customs controlling the states of the civilized world in their relation to each other. *Second semester*, M., W., F., 11:30-12:30.

Professor Lowrie.

Open to Juniors and Seniors and to those students taking Course 1.

6a. Public Finance and Taxation.—An introductory course in the principles of taxation and the methods of levying and collecting taxes. Also a study of the budget systems of the countries of the world as well as of states and cities. *First semester*, T., Th., 8:30-9:30. Professor Lowrie.

Open to Juniors and Seniors and to those students who have taken Economics 1.

9b. American Diplomacy.—This course will deal with certain selected questions from the history of American diplomacy with a view to the determination and elucidation of the principles of international law. Among the topics touched on, will be the recognition of the South American states; the questions connected with the Panama Canal; various phases of the Monroe Doctrine; and the most notable boundary arbitrations. *Second semester*, T., Th., 11:30-12:30. Dr. Perkins.

11a. Municipal Government.—A comparative study of municipal organization and administration in the United States and in European countries. *First semester*, M., W., F., 8:30-9:30.

Assistant Professor Gardner.

11b. Municipal Functions.—A study of the activities of the modern city. Special attention will be given the problems involved in the contemporary development of Cincinnati. This course will be given in co-operation with the Municipal Reference Bureau. *Second semester*, M., W., F., 8:30-9:30.

Assistant Professor Gardner.

[4b. Political Parties and Party Methods.] A study of the theory and organization of political parties in the United States with particular reference to party methods and machinery. *Second semester*, T., Th., 8:30-9:30. Assistant Professor Gardner.

Omitted in 1914-15.

17b. Constitutional Law.—A study of the American Constitution, and its development through judicial interpretation. *Second semester*, T., Th., 8:30-9:30. Assistant Professor Gardner.

Open to those who have had Course 1.

25. Seminar in Municipal Government.—A study will be made of the function of a modern city with special reference to Cincinnati. Given in co-operation with the Municipal Reference Bureau. M., 4:00-6:00. Professor Lowrie.

Open to those who have had Courses 11a and 11b, and to others by permission.

3. Political Theory.—The first semester of this course will be devoted to a study of the development of ancient, medieval, and modern political thought, including a brief survey of American theory. The work of the second semester will consist principally of an analysis and criticism of various political concepts, such as the origin, nature, and functions of the state; sovereignty; government; liberty, etc. Either semester may be taken separately. Open to Seniors and graduate students. W., 4:00-6:00.

Assistant Professor Gardner.

Evening Course

30. Municipal Government.—A study of the organization, power, and functions of American municipalities, together with a brief survey of the governments of modern English, French, and Prussian cities. Throughout the course special emphasis will be

placed upon the operation of city government, with particular reference to contemporary government in Cincinnati. M., 7:30-9:30.

Assistant Professor Gardner.

[31. American Government.] The scope of this course is practically the same as that of Course 1 as described above. M., 7:30-9:30.

Assistant Professor Gardner.

Omitted in 1914-15.

SOCIAL SCIENCE

For Undergraduates

5. Elementary Sociology.—An introductory course designed to present a working theory of the nature of society, the prevailing types of social organizations, and the larger problems connected therewith. The nature of sociology, facts of social evolution, social control, social organization, social ideals, social pathology, methods of social investigation, and the history of sociology. T., Th., 9:30-10:30.

Assistant Professor Parker.

For Undergraduates and Graduates

7. Modern Social Theories.—Lectures and assigned readings on the social theories of Comte, Mill, Spencer, Gumplowicz, Tarde, Mackenzie, Ward, Giddings, Small, and others. Particular attention is given to the development of social theory and to the consequences of the theories of these writers in the field of practical social reform. M., W., 10:30-11:30.

Assistant Professor Parker.

15. Modern Philanthropy.—A study of the problems of charity. Treatment of the pauper, feeble-minded, insane, and of dependent children. Reform suggestions regarding the best methods of dealing with these classes. As an integral part of this course there will be a series of lectures on the scope and method of the work of the Associated Charities, the Department of Charities and Corrections of the City of Cincinnati, the House of Refuge, the Juvenile Court, the Juvenile Protective Association, the National Child Labor Organization, and the Social Settlement. M., W., 9:30-10:30.

Assistant Professor Parker.

20. Criminals and Delinquents.—Problems of Crime. Criminal anthropology, physical and psychical. Criminal diagnostics, definition of crime, detection and identification of criminals, state control of criminals. Criminal therapeutics, penalties, punishment and reformation of criminals, jails, prisons, and reformatories. Criminal hygienics, police prevention of crime, presumptive criminals. Principles of scientific penology, lynch-law, and the trend of crime in modern times. T., Th., 10:30-11:30.

Assistant Professor Parker.

[21. Social Problems.] A study of current social problems and the influence of certain factors in social evolution. The function, origin, forms, development, and problems of the family. Problems of population, immigration, the negro, the city, poverty and pauperism, education, and social progress. T., Th., 11:30-12:30.

Omitted in 1914-15.

Assistant Professor Parker.

22. Seminary.—Opportunity is here given for the detailed study of special problems in social science. Credit according to number of hours elected; minimum, two hours; maximum, four hours.

Assistant Professor Parker.

Evening Course

5. Elementary Sociology.—A fundamental course dealing with the origin, composition, evolution, and functions of society. Special attention will be given to the study of the existing social organization and certain of the larger problems connected therewith. This course is designed to be introductory to all advanced work in the field of Social Science. Th., 7:30-9:30.

Assistant Professor Parker.

PSYCHOLOGY

BURTIS BURR BREESE, PH. D., Professor of Psychology.

SCHACHNE ISAACS, A. M., Assistant in Psychology.

STUDENT ASSISTANT: Edward S. Robinson.

For Undergraduates

1a. Introductory Psychology.—An analytical study of mental phenomena, with special attention to accurate observation and description. A general account of the subject matter of psychology. *First semester.* Sec. I, M., W., F., 11:30-12:30; Sec. II, M., W., F., 10:30-11:30.

Professor Breese.

1b. A continuation of 1a.—*Second semester.* Sec. I, M., W., F., 11:30-12:30; Sec. II, M., W., F., 10:30-11:30.

Professor Breese.

For Undergraduates and Graduates

2a. Experimental Psychology.—Laboratory course. *First semester,* M., W., F., 2:00-4:30. Professor Breese and Mr. Isaacs.

2b. Experimental Psychology.—A continuation of 2a. *Second semester,* M., W., F., 2:00-4:30.

Professor Breese and Mr. Isaacs.

8a. Social Psychology.—The aim of this course is to exhibit the human mind in its development within a social environment; to show how, under the influence of the social environment, the native tendencies of the mind become gradually organized into systems of increasing complexity, and the ways in which they co-operate in shaping and sustaining such institutions as come to exist among men in civilized societies. Open to students who have had Introductory Psychology. *First semester*, M., W., F., 9:30-10:30.

Dr. Talbert.

9. Mental and Physical Tests.—Laboratory methods. Two credits per semester. Hours to be arranged.

Professor Breese and Mr. Isaacs.

Primarily for Graduates

3. Research.—Special investigation in the psychological laboratory. Hours to be arranged.

Professor Breese.

[4. Seminar.] A critical study of the most important problems in psychology. Reports and discussions. Th., 3:00-5:00.

Omitted in 1914-15.

Professor Breese.

[6a. Educational Psychology.] The experimental and statistical methods in mental measurements. Intended for advanced students and teachers of experience. *First semester*. Two credit hours. Hours to be arranged.

Professor Breese.

Omitted in 1914-15.

For Teachers

[5. Elements of Psychology.] A general account of the facts of mental life and their application to education. One credit per semester for A. B. S., 11:30-12:30.

Professor Breese.

Omitted in 1914-15.

Evening Course

10. Introductory Psychology.—An analytical study of mental phenomena, with special attention to accurate observation and description. A general account of the subject matter of psychology. T., 7:30-9:30.

Professor Breese.

ROMANCE LANGUAGES

PHILLIP OGDEN, PH. D., . . . Professor of Romance Languages.

RALPH EMERSON BASSETT, A. M., Assistant Professor of Romance Languages.

MERTON JEROME HUBERT, A. M., Instructor in French and Italian.

WILLARD A. KINNE, A. B., . . . Instructor in French and Spanish.

FRENCH

For Undergraduates

1. Elementary French.—Chardenal's Complete French Course; Aldrich and Foster, *A French Reader*; Enault, *Le Chien du Capitaine*; Coppée, *On rend l'argent*. Composition.

Sec. I, M., W., F., 11:30-12:30.

Mr. Hubert.

Sec. II, T., Th., S., 8:30-9:30.

Mr. Kinne.

Course 1 is open to students who have had no French in the high school.

2. Intermediate French.—*First semester*, Fraser and Squair's *French Grammar*, Part II; François, *French Prose Composition*; dictation and modern texts. *Second semester*, nineteenth century prose writers, etc. Dictation and composition.

Sec. I, M., W., F., 9:30-10:30.

Mr. Hubert.

Sec. II, T., Th., S., 9:30-10:30.

Mr. Kinne.

Sec. III, M., W., F., 9:30-10:30.

Mr. Kinne.

Course 2 is open to students who have taken Course 1 or who have had two years of French in the high school.

11. French Literature in the Nineteenth Century.—A study of the principal authors, supplemented by lectures and collateral reading on the life and literature of the time. Daudet; Hugo; Zola; Loti. M., W., F., 10:30-11:30.

Professor Ogden.

Course 11 is open to students who have passed in Course 2.

3. French Composition.—Review of the more difficult points in French Grammar and Syntax. Dictation. Reproduction of narrative and descriptive passages read by the instructor from French authors. Conversation. Original composition in French. T., Th., 11:30-12:30.

Professor Ogden.

With the permission of the instructor.

Course 3 is open to students who have taken Course 2.

For Undergraduates and Graduates

4. French Drama in the Seventeenth Century.—A study of the principal authors, supplemented by lectures and collateral reading

on the life and literature of the time. Corneille, Racine, Molière. T., Th., 9:30-10:30. Professor Ogden.

Course 4 is open to students who have passed in Course 11.

5. French Drama in the Nineteenth Century. Rapid reading of modern plays. W., F., 1:00-2:00. Mr. Hubert.

10. Old French Readings.—Constans, *Chrestomathie de l'Ancien Français*. Lectures on historical French grammar. M., 4:00-6:00. Mr. Hubert.

Course 10 is open to students who have passed in Course 4 or its equivalent.

24. The Letter and Memoir Writers of the Seventeenth Century.—T., 4:00-6:00. Professor Ogden.

Course 24 is open to students who have passed in Course 4 or Course 11.

26, French Drama in the Nineteenth Century.—Lectures; outside reading; conversation in French. T., Th., 8:30-9:30. Professor Ogden.

15. French Conversation.—M., W., F., 1:00-2:00. Two credits. Professor Ogden and Mr. Hubert.

For Teachers

30. Intermediate French.—Grammar, composition, conversation. One credit per semester for A. B. S., 10:30-11:30. Mr. Hubert.

24. Course 24, outlined above, is open to teachers, by permission, as well as to regular students.

Teachers who are pursuing graduate studies and are qualified to do advanced work in the Romance languages may elect courses from the above upon advice from the head of the department.

Evening Course

33. Elementary French.—Pronunciation, grammar, reading. T., 7:30-9:30. Mr. Hubert.

SPANISH

For Undergraduates

6. Elementary Spanish.—Pronunciation, grammar, composition, conversational drill. Text-books: Bassett, *Handbook of Spanish Pronunciation and Spanish Grammar*; Hills, *Spanish Tales*; Ramos-Aza, *Zaragüeta*. M., W., F., 10:30-11:30.

Assistant Professor Bassett and Mr. Kinne.

Course 6 is open to students who have had no Spanish in the high school.

9. Intermediate Spanish.—Selected texts since 1850. Valera, *Pepita Jiménez*; Pereda, *Pedro Sánchez*; Pérez Galdós, *Doña Perfecta*; Hartzenbusch, *La coja y el encogido*. M., W., F., 1:00-2:00.
Assistant Professor Bassett.

18. Spanish Composition.—Systematic practice in speaking and writing. Review of syntax. Business forms. Bassett, *Spanish Composition*; Román y Salamero, *El castellano actual*; Harrison, *Spanish Correspondence*. T., Th., 1:00-2:00.

Assistant Professor Bassett.

Courses 9 and 18 must be preceded by Course 6 or by two years of Spanish in the high school.

14. The Nineteenth Century.—Representative works from leading Spanish authors of the past hundred years. Alarcón, Becquer, Fernán Caballero, Larra, Zorrilla, etc. M., W., F., 2:00-3:00.
Assistant Professor Bassett.

Course 14 must be preceded by Course 9.

For Undergraduates and Graduates

8. Spanish Literature in the XVI and XVII Centuries.—Cervantes, *Don Quijote*; selected plays by Lope de Vega and Calderón. History of Spanish literature from the age of Juan II to the Bourbons. Th., 3:00-5:00.
Assistant Professor Bassett.

Course 8 alternates with Course 22.

[22. The Picaresque Novel.] *Lazarillo de Tormes*; Alemán, *Guzmán de Alfarache* (Part I); Cervantes, *Novelas ejemplares* (selections); Espinel, *Marcos de Obregon*. Two hours, to be arranged.
Assistant Professor Bassett.

Course 22 alternates with Course 8.

Omitted in 1914-15.

Evening Courses

31. Elementary Spanish.—Pronunciation, grammar, oral practice, and introductory reading. F., 7:30-9:30. Mr. Kinne.

32. Intermediate Spanish.—Grammar review and written exercises, selected prose texts, business and letter forms, practice in speaking. T., 7:30-9:30.
Assistant Professor Bassett.

34. Advanced Spanish.—Special exercises in grammar and composition. Reading of modern prose. W., 7:30-9:30.
Assistant Professor Bassett.

ITALIAN

For Undergraduates

[7. Elementary Italian.] Grandgent, *Italian Grammar*; De

Amicis, *Cuore*; Serao, *All' Ertà, Sentinella*; Testa, *L'oro e l'orpello*; Giacosa, *Come le foglie*. M., W., F., 11:30-12:30.

Omitted in 1914-15.

Assistant Professor Bassett.

For Undergraduates and Graduates

16. Italian Prose in the XIX Century.—Fogazzaro, Amicis, D'Annunzio, Verga. Two hours, to be arranged. Mr. Hubert.

SPECIAL ANNOUNCEMENT

Professor Anatole Le Braz, of the University of Rennes, during the months of February, March, and April, 1915, will deliver a series of lectures in French under the joint auspices of the Ropes Foundation and the Alliance Française. The general subject of the course will be "The Celtic Influence in Literature." Certain of these lectures will be open to the public.

ZOOLOGY

HARRY LEWIS WIEMAN, PH. D., . Assistant Professor of Zoology.

ROBERT CHAMBERS, JR., PH. D., Assistant Professor of Histology and Comparative Anatomy.

CORA MAY BOX, A. M., Instructor in Zoology.

RAPHAEL ISAACS, A. M., . Assistant in Embryology and Zoology.

ANNETTE F. BRAUN, Ph. D., Assistant in Zoology.

In the advanced courses training in physics and chemistry, as well as ability to read French and German, is expected. Special facilities are afforded students pursuing courses of research.

Students who desire to be recommended as teachers of zoology in secondary schools must complete as a minimum, Courses 1a to 8b inclusive, and Courses 19a and 20a. It is very desirable that they also do at least one year of graduate work.

For Undergraduates

1a. Animal Biology.—Lectures dealing with topics of a general biological nature, such as animal activities and adaptations, protoplasm, the cell, sex, development, etc. The course is intended to provide a thorough foundation for further work in zoology. This course must be accompanied by Course 2a. *First semester*, M., W., F., 9:30-10:30.

Assistant Professor Wieman.

2a. Animal Biology, Laboratory.—This course consists of the practical laboratory and field work which must accompany Course 1a. Certain animals, selected as types to illustrate general principles, are

dissected and compared. Careful notes and drawings of all dissections are required. *First semester.*

Sec. I, M., W., 1:00-4:00.

Sec. II, T., Th., 1:00-4:00.

Sec. III, T., Th., 9:30-12:30.

Assistant Professor Wieman and Miss Box.

3b. General Zoology.—Lectures dealing in a comparative way with the various groups of animals, including life-histories, evolution, heredity, and classification. This course must be accompanied by Course 4b. *Second semester, M., W., F., 9:30-10:30.*

Assistant Professor Wieman.

Course 3b is open to students who have passed in Course 1a.

4b. General Zoology, Laboratory.—This course consists of the practical work which must accompany Course 3b. Careful dissections, drawings, and comparisons are required. *Second semester.*

Sec. I, M., W., 1:00-4:00.

Sec. II, T., Th., 1:00-4:00.

Sec. III, T., Th., 9:30-12:30.

Assistant Professor Wieman and Miss Box.

[15. Invertebrate Zoology.] An advanced laboratory course dealing with selected forms of Invertebrates. Credit according to number of hours elected. Miss Box.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

Omitted in 1914-15.

For Undergraduates and Graduates

19a. Embryology of Vertebrates.—The work consists of lectures and demonstrations dealing with the history of the germ cells, cleavage of the ovum, embryo formation, and the development of the principal organs of the body. This course must be accompanied by Course 20. T., Th., 1:00-2:00. Assistant Professor Chambers.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

20a. Embryology of Vertebrates, Laboratory.—Laboratory work to accompany Course 19a. The work is based largely on the chick and pig. T., Th., 2:00-5:00.

Assistant Professor Chambers and Mr. Isaacs.

17b. Comparative Anatomy of Vertebrates.—Lectures on the anatomy, classification, habits, and distribution of vertebrates. The anatomy is studied in a comparative way, with special reference to the evolution of the various organs. This course must be accompanied by Course 18b. *Second semester, T., Th., 1:00-2:00.*

Assistant Professor Chambers.

Prerequisite: Courses 19a and 20a.

18b. Comparative Anatomy of Vertebrates, Laboratory.—The work consists in the careful dissection and study of selected forms to accompany Course 17b. *Second semester*, T., Th., 2:00-5:00.

Assistant Professor Chambers.

[13b. Animal Physiology.] Lectures dealing with fundamental physiological phenomena of animal life. This course must be accompanied by Course 14b. *Second semester*, T., Th., 1:00-2:00.

Assistant Professor Chambers.

Prerequisite: Courses 1a, 2a, 3b, and 4b.

Omitted in 1914-15.

[14b. Animal Physiology Laboratory.] Experiments on different organisms selected for the study of physiological activities, such as irritability, conductivity, reproduction, tropisms, etc., to accompany Course 13b. *Second semester*, T., Th., 2:00-5:00.

Assistant Professor Chambers.

Courses 13b and 14b alternate with Courses 17b and 18b. Courses 13b and 14b are omitted in 1914-15.

10a. Microscopical Technique.—The course includes the preparation and use of standard fixing and staining agents, and drill in the manipulative processes incident to general microscopy and cytology. Two or three credits. *First semester*, M., W., F., 1:00-4:00.

Assistant Professor Wieman.

Prerequisite: Courses 19a and 20a.

10b. Cytology.—A laboratory course intended to serve as an introduction to cytology and the general field of cellular biology. Two or three credits. *Second semester*, M., W., F., 1:00-4:00.

Prerequisite: Course 10a. Assistant Professor Wieman.

Primarily for Graduates

[30. Current Problems in Zoology.] Assigned readings and discussions to accompany courses of research. A reading knowledge of French and German is required. Two credit hours.

Omitted in 1914-15.

Assistant Professor Wieman.

31. Research.—Credit according to number of hours elected.

Assistant Professor Wieman and Assistant Professor Chambers.

Evening Course

50. Principles of Animal Biology.—A lecture and laboratory course. The lectures deal with general biological topics, such as

animal morphology, physiology, adaptation, heredity, and evolution. In the laboratory certain animals selected as types are dissected and compared. Lecture, F., 7:30-9:30; Laboratory, Th., 7:30-9:30.

Assistant Professor Wieman and Mr. Isaacs.

*DRAWING, MODELING, AND CARVING

By an arrangement with the Art Academy of Cincinnati (originally established as the McMicken School of Design in 1869, and a department of the University of Cincinnati from 1871 to 1884, when it was transferred to the Cincinnati Museum Association) students of the University may elect courses in Drawing, Modeling, and Carving at the Art Academy in 1914-15, and, upon presentation of the proper certificate from the Director of the School, may receive credit in the Registrar's office for such courses as part of the total number of "credits" required for the degree of Bachelor of Arts. On the payment of a fee of twenty-five dollars at the office of the Art Academy, the student is admitted to the several day classes (drawing, modeling, carving, and design). For the night classes the fee is five dollars. In the Summer Term of ten weeks no instruction is given at night. The Winter Term extends from September 28, 1914, to May 28, 1915, the Summer Term from the middle of June to the end of August.

The following courses of instruction are offered:

1. Free-hand Drawing.—From objects and casts. Day classes, M., W., F., 8:45-12:45, or M., T., W., Th., F., 1:00-4:00, and S., 8:45-12:45. Night classes, T., Th., F., 7:15-9:15.

Miss Young, Miss Miller, Miss Lord,
Miss Wilson, and Mr. Reisz.

Color work in oils, water colors, or pastels is also taught in the day classes, but not at night.

2. Drawing and Painting from Life.—Figure or head. Day classes, M., T., W., Th., F., S., 8:45-12:45, and M., T., W., Th., F., 2:00-4:00, 1:30-4:30. Night classes, M., T., W., Th., F., 7:15-9:15. Mr. Duveneck, Mr. Meakin, Mr. Wessel, and Mr. Hopkins.

Artistic Anatomy is a part of this course. The night classes draw the head or figure from life.

3. Illustration.—M., T., W., Th., F., 1:30-4:30.

Mr. Eschenbach.

4. Modeling.—From casts. Day classes, T., Th., S., 8:45-12:45. Night classes, M., W., 7:15-9:15.

Mr. Barnhorn.

* For the teachers' training course in art, see announcement of the College for Teachers.

5. Modeling. Advanced Course.—From life. Day classes, M., T., W., Th., F., S., 8:45-12:45. Night classes, M., T., W., Th., F., 7:15-9:15.
Mr. Barnhorn.

6. Wood Carving.—M., W., F., 12:30-4:30, and S., 8:45-12:45.
Mr. Fry.

7. Decorative Design.—The principles of design, preparation of decorative motives, and their application to metals, enamels, leather, porcelain, etc. T., W., Th., F., 1:30-4:30. Miss Riis.

From the courses above offered a student may elect not more than six hours in any one semester. Not more than twelve hours of work in the Art Academy will be credited for the degree of Bachelor of Arts.

EXTERNAL COURSES

ASTRONOMY

152. A critical study of the historical development of astronomy from the earliest period to modern times.—M., 7:30-8:30, at the Hyde Park Branch Library. Professor Porter.

ENGLISH

161. Shakespeare.—M., 4:00-5:00, at the Avondale Public School. Professor Chandler.

34. Nineteenth Century Poetry.—T., 7:30-8:30, at the Madisonville School. Assistant Professor Young.

162. The Development of the English Novel.—W., 3:30-4:30, at the College Hill School; Th., 4:00-5:00, at the Norwood South School. Assistant Professor Stevens.

GEOGRAPHY

155. General Principles of Physical Geography.—T., 4:00-5:00, at the Ninth Street School, Newport, Ky. Professor Fenneman.

HISTORY

150. Territorial History of North America.—T., 4:00-5:00, at the Washington School. Associate Professor Cox.

153. Civil War, Reconstruction, and the Modern Period.—M., 4:00-5:00, at the Covington Public Library. Associate Professor Cox.

163. Europe in the Nineteenth Century.—M., 4:00-5:00, at the Washburn School. Professor Whitcomb.

SOCIOLOGY

160. Elementary Sociology.—M., 4:00-5:00, at the Avondale Public School. Assistant Professor Parker.

COLLEGE FOR TEACHERS

The College for Teachers is organized under the joint management of the Board of Directors of the University and the Board of Education of the city of Cincinnati.

COMMITTEE IN CHARGE

CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
ARTHUR M. SPIEGEL, Member of the Board of Directors of the University.
RANDALL JUDSON CONDON, A. M., Superintendent of Cincinnati Schools.
ALBERT D. SHOCKLEY, . . . Member of the Board of Education.

FACULTY AND INSTRUCTORS

CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
RANDALL JUDSON CONDON, A. M., Superintendent of Cincinnati Schools.
WILLIAM PAXTON BURRIS, A. M., L. H. D., Professor of the History and Principles of Education, and Dean of the College for Teachers.
JOHN WILLIAM HALL, A. M., Professor of Elementary Education.
HENRY SKINNER WEST, Ph. D., Professor of Secondary Education.
BURTIS BURR BREESE, PH. D., Professor of Psychology.
NEVIN MELANCTHON FENNEMAN, PH. D., Professor of Geology and Geography.
*GUY ALLEN TAWNEY, PH. D., Professor of Philosophy.
HARRIS MILLER BENEDICT, PH. D., Professor of Botany.
ISAAC JOSLIN COX, PH. D., . . . Associate Professor of History.
CYRUS DE WITT MEAD, PH. D., Assistant Professor of Elementary Education.
J. ERNEST CARMAN, B. S., M. Di., . Assistant Professor of Geology.
HENRY GOTTLIEB HARTMANN, Ph. D., Assistant Professor of Philosophy.
ABBIE LOUISE DAY, B. S., B. Di., Instructor in Elementary Education.
LEVI A. GIDDINGS, M. S., Instructor in Botany.
WALTER BUCHER, Ph. D., . . Instructor in Geology and Geography.
SCHACHNE ISAACS, A. M., Assistant in Psychology.

OTHER OFFICERS OF INSTRUCTION

Courses in the teaching of household arts are given by the following persons in the School of Household Arts:

* Absent on leave, 1914-15.

ANN GILCHRIST STRONG, B. S., . . . Professor of Household Arts.
 ELEANOR TOAZ, B. S., . . . Assistant Professor of Household Arts.

Courses in special subjects are given by the following persons connected with the Cincinnati public schools:

WALTER H. AIKEN	Music.
WILLIAM H. VOGEL	Art and Hand Work.
CARL ZIEGLER, M. D.	Physical Training and Hygiene.
A. H. STEADMAN	Penmanship.
H. H. FICK, PH. D.	German.
JULIA S. BOTHWELL	Kindergarten.
GRACE ANNA FRY	Kindergarten.
MARY ELIZABETH HYDE	Art.
WILLIAM P. TEAL	Art.
—————,	Art.
EMMA KOHNKY, A. M.	Teaching of Defectives.

The technical instruction and training in kindergarten courses is given by the following persons on the teaching staff of the Cincinnati Kindergarten Training School:

LILLIAN H. STONE	Principal.
ELSIE HOBART	Instructor.
JOHN JEROME THOMPSON	Art.
MRS. W. E. LEWIS	Physical Training.
MARIE CURTIS RAINS	Instructor.
FRANCES A. LE VOY	Instructor.

At the Art Academy of Cincinnati:

ELIZABETH KELLOGG	History of Art.
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GENERAL STATEMENT

The College for Teachers is the department of education of the University. It is organized under the joint management of the Board of Directors of the University and the Board of Education of the city of Cincinnati. It is primarily a professional school for the training of teachers under University auspices, in close touch with a cosmopolitan public school system which serves as a working laboratory for teachers and students of education. Affiliated with the college are the Cincinnati Kindergarten Training School, the Art Academy of Cincinnati, and the Cincinnati Public Schools.

GENERAL REGULATIONS

(Old plan, in effect with classes graduating in 1915 and 1916 only.)

The conditions governing admission, graduation, prerequisites.

privileges, etc., vary with the different professional programs offered, and are best indicated in connection therewith, as follows:

PROGRAM I. For those fitting, primarily, for positions in elementary schools.

ADMISSION.—This program is open to Seniors and graduates, and may be pursued during a single year.

Seniors must be prepared to fulfill all the requirements for graduation in the College of Liberal Arts without being compelled to carry more than three hours work per semester in addition to the courses in education indicated below.

PREREQUISITE COURSES.—Before entering upon this program students must have had, as a part of their college courses, and as suitable prerequisites to the courses in education, the equivalent of the following:

- Psychology, three hours per week for one year.
- Ethics, three hours per week for one-half year.
- Physiography, five hours per week for one year.
- American history, three hours per week for one year.

Those who have had a year's study in American history in high school shall be exempt from the requirement in this subject.

COURSES REQUIRED.—

Education 1	6 credits.
Education 2	6 “
Laboratory work (30 hours practice teaching in connection with Education 2)....	2 “
Education 4	2 “
Elected from the following	8 “
Education 14.....	4 credits.
Education 16.....	2 “
Education 20.....	2 “
Education 22.....	2 “

Total 24 credits.

GRADUATION AND PRIVILEGES.—Seniors who complete the above courses in education may count the same toward the A. B. degree in the McMicken College of Liberal Arts and receive a Teacher's Diploma from the College for Teachers.

All students pursuing this program have the further privilege of taking the brief courses in special subjects given by supervisors of the city schools on Saturday mornings (Education 32, 34, 36 and 38), in lieu of passing examinations in the teaching of these subjects.

PROGRAM II. For those fitting, primarily, for positions in secondary schools.

ADMISSION.—This program is open only to graduates, with the approval of the Dean of the College for Teachers, the Dean of the Graduate School, and the head or heads of the University departments in which the student wishes to pursue advanced study. Students must give satisfactory evidence that they are well qualified, personally and otherwise, to undertake the work of this program and to become teachers in secondary schools. Such students must be willing to give from 6 to 12 periods per week as assistants in high school departments in which they are preparing to teach. Before registration a student must also be accepted by the principal of the high school and the head of the high school department in which apprenticeship is to be served.

PREREQUISITE COURSES.—Psychology and Ethics, as indicated in Program I.

COURSES REQUIRED.—

Education 1, as indicated in Program I.....	6 credits.
Education 3	4 “
Education 3p, Practical Work (high school assisting)	2 “
Graduate work in not more than two subjects which the student is best qualified to teach	12 “
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Total	24 credits.

PROGRAM III. For those fitting, primarily, for positions in kindergartens.

ADMISSION.—This program is open to Seniors and graduates and may be pursued during a single year.

Seniors must have not less than ninety credits in the College of Liberal Arts, including all required courses in that college, and the prerequisite courses indicated below.

PREREQUISITE COURSES.—

Psychology, as in Program I.

Ethics, as in Program I.

Education 1.

COURSES REQUIRED.—See list under Kindergarten Training, page 166.

GRADUATION AND PRIVILEGES.—Graduates who have completed the above program in a satisfactory manner may count the same

toward the degree of Bachelor of Arts in Education conferred by the College of Liberal Arts and the College for Teachers jointly, and receive diplomas from the Cincinnati Kindergarten Training School certifying that they are qualified to be directors in kindergartens. They will also be eligible to appointment in the local public kindergartens without examination except in the Theory and Practice of Kindergartening.

PROGRAM IV. For those fitting, primarily, for positions as teachers of German in elementary schools.

ADMISSION.—This program is open to Seniors and graduates, and may be pursued during a single year.

Seniors must be prepared to fulfill all the requirements for graduation in the College of Liberal Arts, toward which this program will count to the extent of eighteen credits.

PREREQUISITE COURSES.—Before entering upon this program students must have had, as a part of their previous college courses, and as suitable prerequisites to courses in education, the equivalent of the following:

Psychology, as in Program I.

Ethics, as in Program I.

For those who have had no German in high school, the equivalent of German 1, 2, 3, 4, 21, 5 and 10 or 30.

For those who have had two years of German in high school, the equivalent of German 2, 3, 4, 21, 5 and 10 or 30.

For those who have had four years of German in high school, the equivalent of German 4, 21, 5 and 10 or 30.

In no case will students be permitted to enter upon this program without the ability to speak the German language readily and fluently.

Education 1	6 credits.
Education 2	6 “
Education 4	2 “
Education 30, with fifteen hours practice per semester	4 “

Total18 credits.

GRADUATION AND PRIVILEGES.—The same as in Program I, with the following modifications:

The restrictions as to the amount of other work to be carried by students does not apply to those pursuing this program. They shall, however, submit their cards to the Dean of the College for

Teachers for his approval before registration. They should also arrange, if possible, to take the courses given on Saturday mornings by the Supervisors of Drawing and Music in lieu of examinations in these subjects.

PROGRAM V. For those fitting for positions as instructors in education, supervisors, critic teachers, or administrators in educational positions requiring experience and advanced study.

For meeting the needs of this class of students appropriate opportunity is given in advanced courses in education, including seminar work, and such courses may be counted toward fulfilling requirements for the higher degrees conferred by the Graduate School. For further information see statements in connection with the description of various courses.

PROGRAM VI. For those fitting for positions as teachers or supervisors of art.

See pages 168-170.

PROGRAM VII. For those fitting for the teaching of defective children.

ADMISSION.—This program is open to Seniors and graduates and may be pursued during a single year.

PREREQUISITE COURSES.—Psychology, three hours per week, for one year, and ethics, three hours per week, for one-half year.

COURSES REQUIRED.—

Education 1.....	6 credits
Education 2.....	6 “
Psychology 9.....	4 “
Education 11.....	4 “
Education 14.....	4 “
—	
Total.....	24 credits

PROGRAM VIII. For those fitting for positions as teachers of household arts. (In preparation.)

GENERAL REGULATIONS

(New Plan)

An announcement in detail, in accordance with a new plan of organization which does not affect the present Junior and Senior classes in the University, is in preparation, and will appear in the spring bulletin containing the Announcement of Courses for the year 1915-16.

Provision will be made for the following classes of programs for students who wish to qualify for teaching or for other positions in educational work:

1. One year programs of studies for students who have completed a course in a standard college and who have included in such course certain prerequisite studies as a foundation. A student who completes one of these programs will be entitled to an appropriate Graduate Diploma in Education conferred upon recommendation of the Faculty of the College for Teachers. Such student will also be eligible to an Ohio State certificate, without examination, and be placed upon an appropriate preferred list from which appointments to positions in the schools of Cincinnati are made. Programs of this character will be offered to those who wish to teach in elementary or high schools.

2. Two year programs of studies for students who have completed two years of standard college work. A student who completes one of these programs will be entitled to the degree of Bachelor of Science conferred upon recommendation of the Faculty of the College for Teachers. Such a student will also be eligible to an Ohio State certificate, without examination, and be placed upon an appropriate preferred list from which appointments to positions in the schools of Cincinnati are made. Programs of this character will be offered to those who wish to teach in the regular positions of the elementary schools, as well as to those who wish to qualify for special positions, such as kindergarten director, teacher of German, teacher of art, and teacher of household arts.

3. Two year programs of studies for students who have satisfied the regular college entrance requirements and who wish to qualify for special positions without proceeding, for the time being, in fulfillment of the requirements for a degree. A student who completes one of these programs will receive an appropriate Teacher's Diploma, granted upon recommendation of the Faculty of the College for Teachers. Such a student will also be eligible to an appropriate Ohio State certificate, without examination, but will *not* be eligible to a preferred list from which appointments to positions in the schools of Cincinnati are made. Programs of this character will be offered to those who wish to qualify for teaching art, household arts, and in kindergartens.

4. Courses in education will also be offered to those fitting for positions as instructors in education, supervisors, critic teachers, or administrators in educational positions requiring experience and advanced study. Such courses will be accepted in partial fulfillment of the requirements for the higher degrees conferred upon recommendation of the Faculty of the Graduate School.

5. Special courses will also be offered to teachers already in

the service, with a view to promoting professional growth and improvement.

SPECIAL COURSES

Special Courses are offered to teachers in Cincinnati and vicinity, and are given on Saturdays and at hours during the week which do not conflict with the duties of the class-room. Credit is given on the books of the Registrar for satisfactory work done in these courses.

REQUIREMENTS OF THE CINCINNATI BOARD OF EDUCATION

For the benefit of students who wish to become teachers in the schools of Cincinnati a Circular of Information has been prepared showing the method of appointment, salaries, and character of the examination for teachers who are candidates for positions in the Cincinnati Public Schools. A copy of this circular may be had upon application to the Superintendent of Schools or the Dean of the College for Teachers.

APPOINTMENT COMMITTEE

The Appointment Committee offers its services, without charge, to students seeking appointment to educational positions for which they are properly qualified. The Dean of the College as Chairman is assisted by other members of the faculty who are familiar with the student's work, and students who are candidates for appointment and who desire to avail themselves of the services of this committee are invited to register at the office of the Dean, on blanks provided for this purpose.

COURSES OF INSTRUCTION

The following is the list of courses offered for the year 1914-15. Certain of these courses are required of candidates for the first or preferred list of persons eligible to appointment in the Cincinnati schools. Others are intended to meet the needs of advanced students of education, as well as of teachers of experience. Courses which are prerequisite to the pursuit of the various professional programs for teachers are also included in this announcement, but with this exception only those which are primarily professional in character will be found here. All courses given in the University, many of which are semi-professional in character, are open to properly qualified students in the College for Teachers. (See the announcement of the McMicken College of Liberal Arts.)

EDUCATION

Education 1. History and Principles of Education.—Lectures, required reading, and discussions. Beginning with primitive society, this course considers the various conceptions of education as they have arisen in the course of history. Special attention will be given to those conceptions which have been most instrumental in shaping current tendencies.

Open to Seniors and graduates. If counted for graduate credit, additional work must be done and a thesis submitted. This course is also a prerequisite for students taking Program III, and as such may be taken during the Junior year. (See page 154.) M., W., F., 10:30-11:30.
Professor Burriss.

Education 2. Theory and Practice of Teaching.—Lectures, discussions, practical work, and required readings. Development of the principles of method of the recitation and their application in the proper conduct of class exercises in the several subjects of the elementary schools. Three hours of class work and fifteen hours of practice per semester. Hours for practice work must be arranged with the instructor before registration. Open to Seniors and graduates. M., W., F., 9:30-10:30.
Professor Hall.

Education 3. Secondary Education.—Development of American secondary education; function of the secondary school; program of studies; educational values; theory of formal discipline; construction of curricula; method of secondary instruction; introduction to the pedagogy of typical high school subjects. Open to graduates and teachers; counting, under certain conditions, four credits. S., 9:30-11:30.
Professor West.

Education 3p. High School Assisting.—Hours to be arranged. Work done in connection with Education 3. Professor West.

Education 4. School Economy.—Lectures, discussions, and required readings. This course will consider principles and practice of class-room management, including such problems as preventing the waste of time and energy, preserving hygienic conditions, discipline, grading, promotions, tests. Open to Seniors and graduates. This course may not be counted for the higher degrees. F., 11:30-12:30.
Miss Day.

Education 5. Seminar in Secondary Education.—Reading and discussion of recent and current professional literature upon aspects of secondary education and problems of high school instruction. W., 4:00-6:00.
Professor West.

Education 6. General Method.—This is a brief course similar to Education 2, and is intended for students who expect to become teachers of domestic science, and those who expect to become

teachers of art. Students who are candidates for a degree will take Education 2 instead of this. S., 8:30-10:30. Professor Hall.

Education 7. Seminar.—A study of the principles of scientific management and their application to the problems of school administration. Open to graduates and persons of experience who are interested in the study of school administration. *Second semester.* M., 4:00-6:00. Professor Burris.

Education 9. Ancient and Medieval Education.—S., 10:30-12:00. For undergraduates and graduates.

Education 11. Modern Education.—S., 10:30-12:00. For undergraduates and graduates.

These two courses given in alternate years will cover the same ground as Education 1. Three credits will be allowed for each course, but no credit will be given for either course if pursued less than a year.

Education 11 will be given in 1914-15, and Education 9 in 1915-16. Professor Burris.

Education 12. Seminar.—Investigations and reports on problems in the theory and practice of teaching. This course is open to graduates of the College for Teachers, and is intended primarily for principals and prospective principals who wish to acquaint themselves with modern methods of measuring results in education. T., 4:00-6:00. Professor Hall and Assistant Professor Mead.

Education 14. The Teaching of English.—Lectures, discussions, and required readings. This course will consider the selection and organization of the subject matter and method of treatment in the grades of the following subjects: reading, spelling, literature, composition, and grammar. Open to Seniors and graduates; it may be counted toward the A. B. degree. M., W., 8:30-9:30. Miss Day.

Education 15. Theory and Practice of Teaching Defective Children.—One hour class-room instruction and one period of practical work in teaching defective children per week. Hours to be arranged. Miss Kohnky.

Education 16. The Teaching of History.—Lectures, discussions, readings, and reports. This course aims to cover the field of history as usually presented in elementary schools. Gathering material for lesson plans, its arrangement for presentation, the consideration of difficulties involved, and the method of overcoming the same will form the basis of the course. Open to Seniors and graduates; it may be counted toward the A. B. degree. F., 8:30-9:30. Assistant Professor Mead.

Education 17. School Administration.—M., W., 11:30-12:30.
First semester. For undergraduates and graduates.

Professor Burris.

Education 19. Statistical Problems in Education.—Open by special permission to graduates and teachers. W., 4:00-5:00.

Professor Burris.

Education 20. The Teaching of Mathematics.—Lectures, discussions, and required reading. This course will aim to work up portions of material for presentation in the various grades according to the course of study, with devices and methods for their use. The principles underlying the above will be developed. Open to Seniors and graduates; it may be counted toward the A. B. degree. *Second semester*, M., W., 11:30-12:30.

Assistant Professor Mead.

Education 21. Seat Work and School Room Devices.—Seat work based upon and related to the actual class work of the grades. The use of illustrative materials, devices, and games, and the principles underlying the same. For teachers of the first four grades. S., 9:30-10:30.

Miss Day.

Education 22. The Teaching of Geography.—Lectures, discussions, and required readings. This course will deal with the collection of suitable material for teaching geography in the grades and with the organization and method of presentation of this material. Open to Seniors and graduates; it may be counted toward the A. B. degree. *First semester*, M., W., 11:30-12:30.

Assistant Professor Mead.

Education 28. Primary Teaching.—This course is for the purpose of acquainting prospective directors of kindergartens with the subject matter and method of the work done in primary grades, with special attention to the first year. Open to Seniors in the Cincinnati Kindergarten Training School. S., 9:30-10:30.

Miss Day.

[Education 30. The Teaching of German.] This course consists of instruction, observation and practice teaching, and is intended especially for the teachers of German in the elementary schools. For the conditions under which students may enter this course see Program IV, p. 155. Fifteen hours of practice per semester. M., 9:30-10:30.

Supervisor Fick.

Omitted in 1914-15.

Education 32. The Teaching of Art and Hand Work.—The aim of this course is to familiarize those intending to teach in the public schools with the art and hand work pursued in the elementary grades at the present time, and to place before them

the best methods for obtaining satisfactory results. This course prepares for the city examination in this subject. *First semester*, S., 8:30-11:30, for twelve weeks. Given at Hughes High School. Supervisor Vogel.

Education 34. The Teaching of Music.—The purpose of the course is to give those who contemplate teaching in the public schools, or are at present teaching, a systematic and comprehensive training in the matter and method of school music. This course prepares for the city examination in this subject. *Second semester*, S., 8:30-9:30. Given at Hughes High School. Supervisor Aiken.

Education 36. The Teaching of Physical Training and Hygiene.—This course is for those fitting for positions in elementary schools. It will not be considered sufficient preparation to qualify as a special teacher. The course will include theory and practice of physical exercise, gymnastic games for the school-room and play-ground, school sanitation, and methods of teaching physiology and hygiene in the grades. *Second semester*, S., 10:30-11:30. Given at Hughes High School. Supervisor Ziegler.

Education 38. The Teaching of Penmanship.—This course will present the principles underlying the system of penmanship taught in the Cincinnati public schools, and will show the best methods of teaching it, accompanied by drills for the purpose of securing technique. The course prepares for the city examination in this subject. Given at Hughes High School. *Second semester*, S., 9:30-10:30. Supervisor Steadman.

BOTANY

For a complete list of all the courses offered by the Department of Botany, see the announcement of the McMicken College of Liberal Arts.

[Botany 100. Elementary School Gardening.] One lecture and one laboratory period per week. Two credits. Lecture, F., 1:00-2:00; laboratory, 2:00-5:00. Mr. Giddings.

Omitted in 1914-15.

Botany 101. Advanced School Gardening.—Lectures and conferences. One hour per week; 4:00-5:00 on day to be arranged. Mr. Giddings.

Botany 102. Applied Biology.—Open to all students, except Freshmen, who expect to become teachers. Lectures and class-room

discussions. M., W., 8:30-9:30. Laboratory to be arranged. Three credits per semester. Laboratory fee \$5.00 per semester.

Professor Benedict.

ENGLISH

For a complete list of all the courses offered by the Department of English, see the announcement of the McMicken College of Liberal Arts.

English 29. Materials and Methods in Secondary English.—The organization and adaptation of the work in composition and literature to meet the needs of pupils in the secondary schools. (1) For Seniors and graduates intending to teach English in secondary schools; (2) For teachers in elementary schools preparing to teach secondary English; (3) For teachers in secondary schools already engaged in the teaching of English. S., 9:30-11:30.

Assistant Professor Young.

GEOLOGY AND GEOGRAPHY

For a complete list of all the courses offered by the Department of Geology, see the announcement of the McMicken College of Liberal Arts.

1. Introduction to the Earth Sciences.—Minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean, followed by a brief study of the physiography of the United States. Lectures, M., W., F., 8:30-9:30; Laboratory, T., Th., 2:00-5:00; M., W., 2:00-5:00; T., Th., 9:30-12:30; and T., Th., 1:00-4:00. Professor Fenneman, Dr. Bucher, and Assistant.

This course is a prerequisite to the study of education as outlined in the professional program for elementary teachers on p. 144. It must be taken not later than the Junior year by those students who expect to enter upon this program during the Senior year. It may be taken as late as the Senior year by those students who wish to prepare for teaching in elementary schools after graduation from the College of Liberal Arts.

14. General Geology for Teachers.—Elements of dynamic, structural, and physiographic geology. Lecture, S., 8:30-10:30; field or laboratory, 10:30-12:30. Professor Fenneman.

19. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure. Lecture, S., 8:30-10:30; field or laboratory, 10:30-12:30.

Assistant Professor Carman.

16. Advanced Physiography of the United States.—Course 1 or 14 and Course 9 are prerequisite. Lecture, W., 4:00-6:00; S., 10:30-11:30. Professor Fenneman.

HISTORY

The following course in history is prerequisite to the study of education as outlined in the professional program for elementary teachers on p. 153 for all students who have not had a year's course in American history in high school. Those students who wish to complete this program during the Senior year should take this course in history not later than the Junior year. If the student wishes to defer preparation for teaching in the elementary schools till after receiving the A. B. degree, this course may be taken as late as the Senior year.

For a complete list of all the courses offered in the Department of History, see the announcement of the McMicken College of Liberal Arts.

History 15. General Course in American History.—This course, while open to all, is especially recommended for those who have not had American history in the high school and for those who contemplate taking work in the College for Teachers. The work covers the period from the earliest discoveries to the present time, and is based largely upon a text-book, supplemented by regular reports and occasional lectures. Special quiz sections and conference groups at other hours if necessary. M., W., F., 8:30-9:30.
Associate Professor Cox.

HOUSEHOLD ARTS EDUCATION

1. Organization and Administration.—This course deals with the application of educational standards to industrial and household arts subjects as taught in elementary and secondary schools. Throughout the year. M., 8:30-9:30; S., 9:30-10:30.

Professor Strong, Assistant Professor Toaz.

2. Theory and Practice of Teaching Household Arts.—This course considers the special methods of teaching foods, clothing, and shelter. Lectures, observations, and practice teaching, with required readings. Two hours of class work and two credit hours of practice teaching and observation per semester. Open to Seniors and graduates. Throughout the year. W., F., 8:30-9:30.

Professor Strong, Assistant Professor Toaz.

PHILOSOPHY

For a complete list of all the courses offered by the Department of Philosophy, see announcement of the McMicken College of Liberal Arts.

5a. Ethics.—An introduction to the theory of morals. The course includes, beside the theory of morality, discussion of selected problems of present moral experience. Open to students who have completed two years of work in the University. *First semester*, M., W., F., in two sections, 10:30 and 1:00.

Assistant Professor Hartmann and Dr. Talbert.

This course is prerequisite to entrance upon professional programs, I, II, III, and IV, outlined on pp. 153-155. It should be taken in the Junior year by those who pursue a professional program during the Senior year. It may be taken in the Senior year by those who expect to pursue a professional program after graduation from the College of Liberal Arts.

12. The History of Philosophy.—In the fall of 1914 this course began with the philosophy of Immanuel Kant, it being part of a cycle of courses dealing with the history of philosophy. One hour throughout the year. S., 9:30-10:30. Dr. Talbert.

PSYCHOLOGY

For a complete list of all courses offered by the Department of Psychology, see the announcement of the McMicken College of Liberal Arts.

Psychology 1a. Introductory Psychology.—An analytical study of mental phenomena, with special reference to accurate observation and description. A general account of the subject matter of psychology. Sec. I, M., W., F., 11:30-12:30; Sec. II, M., W., F., 10:30-11:30.

Professor Breese.

Psychology 1b. A continuation of Psychology 1a. Sec. I, M., W., F., 11:30-12:30; Sec. II, M., W., F., 10:30-11:30.

Professor Breese.

Courses 1a and 1b are prerequisite to entrance upon the study of education, as indicated in professional programs for teachers outlined on pp. 153-155. Those who wish to pursue one of these programs should take these courses in psychology not later than the Junior year. Those who wish to qualify for a teacher's diploma after graduation from the College of Liberal Arts may take these prerequisite courses in psychology during the Senior year.

Psychology 9. Mental and Physical Tests.—Laboratory methods. Two credits per semester. Hours to be arranged.

Professor Breese and Mr. Isaacs.

KINDERGARTEN TRAINING

The following courses in Kindergarten Training, not given at the University, may be taken at the Cincinnati Kindergarten Train-

ing School. The school is located at No. 6 Linton street, Vernonville. Registration day, Thursday, September 17, 1914. Work began on Friday, September 18.

For conditions governing college students who are fitting primarily for positions in kindergartens, see Program III, page 154.

The Cincinnati Kindergarten Training School issues a special announcement giving full information, a copy of which may be had upon application to the Registrar at the above address.

COURSES

Kgtn. 1. Gifts.—This course has for its aim a thorough knowledge of the kindergarten material, a comparative study of typical and original plays or lessons with the gifts, and a study of Froebel's underlying principles. Juniors. *First semester*, M., 9:30-11:30. *Second semester*, two hours, to be arranged. Three credits. Miss Stone.

Kgtn. 2. Handwork.—This course includes both the old and new occupations with practice in each. Also the preparation of simple courses adapted for use in the kindergarten. *First semester*, T., 9:00-11:00. *Second semester*, Th., 2:30-4:30. Four credits.

Miss Stone and Special Teachers.

Kgtn. 3. Rhythms, Songs, and Games.—Juniors and Seniors. T., 3:30-4:30, throughout the year. Three credits. Miss Fry.

Each of these courses includes theory and practice, and is intended to develop resourcefulness and originality in the student, as well as to give technical mastery of kindergarten instrumentalities.

Kgtn. 4. Theory.—This course includes an introductory study of Froebel's Mother Play as the basis for story, song, and game in kindergarten teaching. Also the study of Froebel's writings, for the purpose of discovering the educational laws which form the foundation for child development and personal culture. *First semester*, M., Th., 8:30-9:30. *Second semester*, W., 2:00-3:00. Six credits. Miss Stone, Miss Fry.

Kgtn. 5. Stories.—This course includes lectures, discussions, and reference work concerning the literature of childhood, together with regular practice in the telling of stories. Juniors and Seniors. Th., 1:00-2:00; F., 2:00-3:00. One credit.

Kgtn. 6. Program Construction.—A critical résumé of every division of kindergarten work and the educational principles involved. The careful planning of programs for definite periods of time and for meeting different conditions. Seniors, *First semester* T., 1:50-3:30. *Second semester*, W., 1:30-3:30. Four credits.

Miss Bothwell.

Kgtn. 7. Observation.—Carefully supervised observation of the entire morning's work in kindergarten, followed by a discussion of the various activities and the educational principles involved. Juniors. *First semester*, hours to be arranged. Two credits.

Miss Stone, Miss Fry.

Kgtn. 8. Practice Teaching.—A minimum of one-half year (days to conform to the public school calendar) in private, mission, or public school kindergartens, under at least two directors. Opportunity for increasing responsibility under careful supervision. Additional practice may be required to demonstrate the student's ability to conduct satisfactorily every phase of kindergarten work. Juniors and Seniors. Ten credits.

Miss Stone, Miss Fry.

Kgtn. 9. Organization of Mothers' Meetings.—A series of lectures covering the essentials of parliamentary law and the general purpose and subject matter of mothers' meetings. Short talks suitable for different occasions are prepared and given by the students. Seniors. *Second semester*. Two hours, to be arranged. Two credits.

Miss Laws and Miss Stone.

Kgtn. 10. Art.—Rapid sketching on blackboard; brush work in ink and water color; decorative design. Art in kindergarten—decoration, pictures, and children's work. Th., 9:30-11:30. One credit.

Mr. John J. Thompson.

Kgtn. 11. Music.—Study and criticism of kindergarten music, the child's voice, rhythm, and development of ear and tone. Attention to instrumental music with each student. Juniors and Seniors. *Second semester*, T., 1:30-2:30. One credit.

Supervisor Aiken.

Kgtn. 12. Hygiene and Physical Training.—This course includes lectures by specialists in each of these lines as well as class work in Physical Training. Its aim is to afford knowledge of sanitation, food, dress, exercise, rest, children's diseases, and emergencies. To give ease and grace of movement, a wise conservation and use of energy, and to correlate with games played in the kindergarten such movements as are essential to the child's general development. Juniors and Seniors. Voice Training and Physical Training, Th., 2:00-3:00. One credit each year.

Kgtn. 13. Directors' Conference.—Lectures, discussions, suggestions in program work.

Occasional talks by prominent kindergartners and specialists in education from other cities. M., 2:00-4:00, throughout the year.

Miss Bothwell.

COURSES FOR TEACHERS OF ART

The purpose of this course is to prepare students for positions as teachers of art or supervisors of art instruction in public or private schools.

Admission presupposes (a) the satisfactory completion of an approved curriculum in a secondary school, and (b) an amount of work in art of approved quality equivalent to that represented by two years of study in the Art Academy of Cincinnati. It is understood, however, that all students are admitted upon a month's probation during which they must give satisfactory evidence of a high degree of capability in art and show that they are otherwise qualified to pursue the course.

The course is two years in length, during which the student's time is divided about equally between the professional program of the College for Teachers and studies in art at the Art Academy of Cincinnati. The satisfactory completion of the course leads to graduation and a diploma certifying that the holder is qualified to teach art or supervise art instruction in public or private elementary, secondary, and normal schools.

To students seeking a teacher's training course in art, Cincinnati offers exceptional opportunities. The Art Academy is a thoroughly equipped school for the training of artists. Adjacent to it is the Cincinnati Museum, containing large collections of paintings and sculpture, as well as of the applied arts. Each month, also, special exhibits of contemporary interest are arranged. The reference library of the Museum, relating especially to art, the Public Library, and the University Library are also available. In the University various lectures are open to students. For studies in natural history students have access to the Museum of the Society of Natural History, and the Cincinnati Zoological Garden. Among the local art industries the Rookwood Pottery is of especial interest.

The work of observation and practice teaching is done in the regular public elementary and high schools of Cincinnati. This phase of the course, therefore, is conducted under the ideal conditions necessary to give the student a truly professional preparation. In connection with this practice are wrought out lesson-plans and outlines of work for the various grades of the elementary and high schools, in harmony with the requirements of a well graded course of study based upon modern educational principles. In this way the ability of students to organize a progressive course in art instruction is thoroughly tested.

For fees in the course for teachers of art see p. 57.

COURSES

The following courses of instruction, when not otherwise specified, are given at Hughes High School.

First year students will take Courses 2, 3, 4, and 5 or 9. They will spend the forenoon of each week-day, excepting Saturday, in work at the Art Academy. They will also take, at the University, Education 9 and 11, and a course in Psychology, to be announced later.

Second year students will take Courses 1, 6, 7, 8, and 5 or 9. On forenoons and afternoons, when not occupied with these courses they will continue work at the Art Academy. At the University they will take Education 6. (See p. 159.)

Art 1. Theory and Practice of Teaching Art.—Principles upon which art teaching is based. The function of art in general education. Consideration of courses of study. Making of lesson plans and outlines of work for elementary and secondary schools. Principles of criticism. Discussion of methods and devices. F., 1:00-3:00. Miss Hyde.

Art 2. Water Colors and Crayons.—Landscape, nature products, pose and still life. Practice in arrangement of still life studies for the sake of good composition and harmony of color. Tu., 1:00-4:00. Mr. Teal.

Art 3. Art Design and Applications.—Study of the principles of balance, rhythm and harmony, in line, dark and light, and color. Fitness of design in form, tone and color, in relation to various applications. Design applied to embroidery, stenciling, weaving, basketry, metal and leather work. W., 1:00-3:00. Miss Hyde.

Art 4. Art Construction and Clay Work.—Paper and cardboard construction. Weaving, stenciling, book binding, block printing, metal and leather work, basketry, pottery, and knife work. Th., 1:00-3:00. Miss Hyde.

Art 5. Pictorial Composition.—Critical study of landscape composition in black and white, in tones of middle gray, and in color. Figure compositions in color. Illustrated talks on the old masters and comparisons of their work with modern art. Instruction in blackboard illustration suited to the needs of teachers of regular subjects in elementary and secondary schools. Given in alternate years. M., 1:30-4:00. Mr. Teal.

Art 6. Design and Classic Ornament.—An advanced study of questions taken up in Art 3. Study of historic ornament. Adaptation of nature forms in design. Influence of materials on design.

Theory of color. Designing of interiors with the study of original color schemes. W., 1:30-4:00. Mr. Teal.

Art 7. Observation and Practice Teaching.—Two half-days per week in the public elementary and secondary schools under critical supervision. Webster Public School on Th., 8:30-12:00, Miss Swing, critic. Hughes High School, Tuesday forenoon, Miss Hyde, critic.

Art 8. History of Art.—A study and amplification of Reinach's Apollo with the aid of photographs and plates in the Cincinnati Art Museum Library. Students required to make notes, outlines, and chronological tables. Instruction and practice as guides of visitors to the Art Museum. At the Art Museum. Tu., 2:00-4:00. Miss Kellogg.

Art 9. Mechanical Drawing.—Use and care of materials and instruments. Simple geometric problems. Lettering. Scale drawing. Isometric and orthographic projections. Intersections. Machine drawings. House plans and elevations. Tracing and blue printing. Given in alternate years in place of Art 5. M., 1:30-4:00. Supervisor Vogel.

COLLEGE OF ENGINEERING

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, PH. D., LL. D., President of the University.
JERMAIN GILDERSLEEVE PORTER, PH. D., Director of the Observatory
and Professor of Astronomy.
FREDERICK CHARLES HICKS, PH. D., Sinton Professor of Economics
and Commerce and Dean of the College of Commerce.
HARRIS HANCOCK, PH. D., D. SC., . . . Professor of Mathematics.
MAX POLL, PH. D., . . . Professor of the Germanic Languages.
MERRICK WHITCOMB, PH. D., Professor of History.
LOUIS TRENCHARD MORE, PH. D., Professor of Physics.
HERMAN SCHNEIDER, Sc. D., William Thoms Professor of Civil
Engineering and Dean of the College of Engineering.
STEPHEN ELMER SLOCUM, PH. D., Professor of Applied Mathematics.
JOHN THEODORE FAIG, M. E., Professor of Mechanical Engineering.
NEVIN M. FENNEMAN, PH. D., Professor of Geology and Geography.
LAUDER WILLIAM JONES, PH. D., . . . Professor of Chemistry.
FRANK WADLEIGH CHANDLER, PH. D., Professor of English, Ropes
Professor of Comparative Literature, and Dean of the
McMicken College of Liberal Arts.
PHILLIP OGDEN, PH. D., . . . Professor of Romance Languages.
CURTIS C. MYERS, M. M. E., Professor in Charge of Co-ordination.
ALEXANDER MASSEY WILSON, M. E., Professor of Electrical En-
gineering.
HARRIS MILLER BENEDICT, PH. D., Professor of Botany.
SELDEN GALE LOWRIE, PH. D., . . . Professor of Political Science.
_____, Professor of Zoology.
HARRY SHIPLEY FRY, PH. D., Associate Professor of Chemistry.
ALEXANDER LEWIS JENKINS, M. E., Associate Professor of Mechan-
ical Engineering.
SAMUEL JAMES MCINTOSH ALLEN, Ph. D., Associate Professor of
Physics.
ISAAC JOSLIN COX, Ph. D., . . . Associate Professor of History.
G. M. BRAUNE, C. E., . . . Associate Professor of Civil Engineering.
CHARLES NAPOLEON MOORE, PH. D., Assistant Professor of Mathe-
matics.
HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
Chemistry.
BENJAMIN CARLTON VAN WYE, A. M., Assistant Professor of Pub-
lic Speaking and English.
CLARENCE RAYMOND WYLIE, M. E., Assistant Professor of Electrical
Engineering.

J. ERNEST CARMAN, B. S., M. Di.,	Assistant Professor of Geology.
LOUIS BRAND, A. M.,	Assistant Professor of Mathematics.
CLYDE WILLIAM PARK, A. M., . . .	Assistant Professor of English.
JAMES ASTON, Ch. E.,	Assistant Professor of Metallurgy.
CLARENCE D. STEVENS, A. M., . . .	Assistant Professor of English.
ALFRED BRODBECK,	Director of Physical Education.
JOSEPH HENRY KINDLE, A. M., . . .	Instructor in Mathematics.
HAROLD W. T. COLLINS, M. E.,	Instructor in Mechanical Engineering.
MARTIN LUDWICH, M. E., A. M.,	Instructor in French and German.
ROBERT E. CLYDE GOWDY, Ph. D.,	Instructor in Physics.
MAX B. ROBINSON, M. E.,	Instructor in Co-ordination.
CHARLES WATKINS BROWN,	Mechanician and Instructor in Laboratory Arts.
GEORGE R. MOORE, C. E.,	Instructor in Civil Engineering.
EDWIN W. ESSLINGER, A. M., . . .	Instructor in Analytical Chemistry.
EDWARD SMITH, M. S.,	Instructor in Mathematics.
JAMES DYSART MAGEE, Ph. D.,	Instructor in Economics.
CHARLES ALBERT JOERGER, M. E.,	Instructor in Mechanical Engineering.
RUSSELL B. WITTE, B. C. E., . . .	Instructor in Civil Engineering.
CHARLES B. HOFFMANN, M. E., E. E.,	Instructor in Electrical Engineering.
DEXTER PERKINS, Ph. D.,	Instructor in History.
WALTER W. PLOCK, M. A.,	Instructor in English.
JOHN J. LONG, M. S.,	Instructor in Civil Engineering.
R. G. KNICKERBOCKER, B. S.,	Instructor in Metallurgy.
—————,	Instructor in Physical Chemistry.

OTHER APPOINTMENTS FOR THE ACADEMIC YEAR

1914-15

EDWARD J. LORENZ, A. M.,	Hanna Fellow in Physics.
CHARLES L. BLOOM, B. Ch. E., . . .	Graduate Assistant in Chemistry.
OTTO C. F. LIPPERT, A. B.,	Student Assistant in Chemistry.
CLIFFORD J. ROLLE,	Student Assistant in Chemistry.
ODIN WILHELMY,	Student Assistant in Chemistry.

REQUIREMENTS FOR ADMISSION TO THE COLLEGE OF ENGINEERING

Candidates for admission as undergraduates must be at least sixteen years of age. They must give evidence of having completed satisfactorily an amount of preparatory study represented by sixteen units, a unit being understood to mean one of the subjects in the following table pursued for one full year of five recitation periods each week. Of these sixteen units every candidate for admission to the College of Engineering must present the following:

ENGLISH.—Three units, in which there can be no "condition."

MATHEMATICS.—One unit in Algebra and one unit in Plane Geometry, and one-half unit in Solid Geometry.

HISTORY.—One unit.

In addition to these fixed requirements, the candidates must offer a number of units selected from the list of subjects below, sufficient, with the units specified above, to amount to a total of sixteen. The number of units that may be offered in any subject is shown in the following table:

		NUMBER OF UNITS ACCEPTED FOR ADMISSION	
		Minimum	Maximum
English	.....	3 required	4
Latin	.....	1	or 2 or 3 or 4
Greek	.....	1	or 2 or 3
French	.....	1	or 2 or 3 or 4
German	.....	1	or 2 or 3 or 4
Spanish	.....	1	2
General or Medieval and Modern History	.....	1	1
Ancient	.....	1/2	1
English	.....	1/2	1
American	.....	1/2	1
American and Civics	.....	1	1
Economics	.....	1/2	1/2
Algebra	.....	1 required	or 1 1/2 or 2
Geometry, Plane	.....	1 required	1
Geometry, Solid	.....	1/2	1/2
Trigonometry	.....	1/2	1
Civics	.....	1/2	1/2
Physics	.....	1	1
Chemistry	.....	1	1
*Zoology	.....	1	1
*Botany	.....	1	1
Physical Geography	.....	1/2	1
Astronomy	.....	1/2	1/2
Bookkeeping	.....	1	2
Stenography-Typewriting	.....	1	1
Commercial Geography	.....	1/2	1/2
Commercial Law	.....	1/2	1/2
Drawing	.....	1	1
Manual Training	.....	1	or 2 or 3 or 4

One unit required

For further information regarding the procedure in connection with the entrance examinations, the schedule of these examinations, definitions of each unit or group of units, and admission on certificate from accredited schools, consult the paragraphs under those

* One-half unit will be allowed in Zoology and one-half unit in Botany when these two subjects are presented together as one unit in the same year.

heads to be found in the section of this catalogue relating to the College of Liberal Arts.

ENTRANCE CONDITIONS AND ADMISSION TO ADVANCED STANDING

All students must satisfy the entrance requirements in mathematics. Students who are deficient in not more than two units of the sixteen required for admission, excepting those required in mathematics, may be admitted conditionally to the College of Engineering. All such entrance conditions will be removed in case the student passes in all of his Freshman work; otherwise, he will be required to pass entrance examinations to satisfy said conditions before he will be allowed to register for his second year of work at the University.

On March 9th, 1912, the Faculty of the College of Engineering adopted the following Provisional Grade System:

1. **ENTRANCE SUBJECTS**—Students admitted on certificate will be expected to have a working knowledge of all subjects on which the Freshman subjects depend. Failing to show such working knowledge, any student, regardless of how he is admitted, may be conditioned in a subject by his instructor, and be required to show proficiency, to the satisfaction of the instructor, within a period not to exceed four weeks. Should he fail to acquire this working knowledge within the prescribed time, his case will be reported to the faculty, who may give him an entrance condition, which must be removed by examination before the Freshman subject can be repeated.

2. **ADVANCED STANDING**—Students who present credits from approved colleges will be admitted to advanced standing as heretofore, but if it becomes evident that a student's preparation in prerequisite studies is inadequate, he will be conditioned by his instructor for a period not exceeding four weeks. If at the end of this time, he still lacks a working knowledge of the subject, his case will be brought to the attention of the faculty, at the discretion of which he may be required to repeat, in class, the prerequisite course in which he is deficient.

3. **DEGREES**—By a ruling of the faculty March 9th, 1912, the words "satisfactory completion" of a course were given the following interpretation: Since the subjects in engineering courses are definitely prescribed and are nearly all graded in a series of prerequisite and advanced studies, students of all classes will be required to show a working knowledge of related subjects belonging to earlier years of their course. Any student who fails to show a

working knowledge of prerequisite studies will be conditioned and required to prove to the satisfaction of the instructor—within a period not exceeding four weeks—that he has acquired the necessary working knowledge of the subject. Should he fail to do this, his case will be automatically reported to the faculty, at the discretion of which he may be required to repeat the prerequisite course. This regulation affects all students from the date of its adoption.

All applications for advanced credit must be made within three weeks after matriculation to the heads of the departments in which advanced standing is desired. Students may be admitted to advanced standing either upon presentation of a certificate from a college of approved standing or by examination. All students applying for advanced standing must first have satisfied the entrance requirements, the same as regular students.

DEGREES

The technical degrees of Civil Engineer, Chemical Engineer, Electrical Engineer, Mechanical Engineer, and Metallurgical Engineer, are given to those students of the Co-operative Course who complete satisfactorily the work scheduled under the respective departments.

The degrees of Bachelor of Civil Engineering, Bachelor of Chemical Engineering, Bachelor of Electrical Engineering, and Bachelor of Mechanical Engineering, will be given to regular students who satisfactorily complete the work of the four-year course scheduled under the respective departments.

Candidates for the degrees specified above must spend their last year of study in residence in Cincinnati.

THE CO-OPERATIVE SYSTEM

PLAN OF INSTRUCTION

The College of Engineering of the University of Cincinnati offers two courses: a four-year theoretical course similar to that given in other engineering institutions, and a five-year co-operative course in which students spend alternate bi-weekly periods in practical engineering work, and at the University.

In the co-operative plan, the practice of engineering is taught in a shop or on a railroad under actual commercial conditions, and the science underlying the practice is taught in the University. The students are divided into two sections, which alternate every two weeks; that is to say, during one bi-weekly period, one-half of the students are at the University and one-half are in the factories; at the beginning of the next two-week period the sections are changed,

and those who were at the University go to the shops, and those who were in the shops go to the University. Briefly, it is the aim of the co-operative course to give the student a thorough training in the theory and practice of engineering.

The co-operative course is of five years' duration, eleven months in the year, there being a vacation from the middle of August to the middle of September which is divided between two students of one pair.

Students desiring to enter the University are required to begin their work during the month of July preceding their entrance to the University. Their entrance is, in a measure, dependent upon the character of the work done during this probationary period which extends from July to the opening of the University in September.

Co-operative students are required to obey all regulations of the company with which they work, and are subject to all existing labor conditions and laws, including those pertaining to liability for accident.

The entrance requirements for this course are precisely the same as for the regular four-year course. The theoretical work at the University is as thorough as the work given in the regular four-year course. None of the courses are abridged and none are omitted.

The number of positions in the co-operative course is limited each year, and applications for positions should be filed with the Dean of the Engineering College prior to July 1, 1915.

Satisfactory board and lodging may be procured in the neighborhood of the University at prices ranging from \$4.50 to \$5.50 per week. The University recommends the boarding houses to the students.

WAGES OF CO-OPERATIVE STUDENTS

Co-operative students are paid for their work in the shops at the same rate as other employees. A new minimum wage scale, which took effect July 1, 1913, has been agreed upon by the co-operating firms. The new rate begins at 15 cents an hour, and increases 1 cent an hour every year. In some of the larger machine tool shops a modification of this rate is used, beginning at 12 cents an hour, and increasing 2 cents an hour every six months, making a final rate of 30 cents an hour. These rates are for students of no previous practical experience.

In railroad work, city work, and Traction Company work, students are paid at the prevailing rate of regularly employed men;

thus the rate for beginners on track gang work is 16½ cents an hour; in bridge work, 22½ cents an hour; in switch and signal work, 22½ cents an hour; in street paving work, 20 cents an hour; in car barn work, 20 cents an hour, etc.

Students of previous experience are paid what their services are worth. The University makes no guarantee above the minimum scale agreed upon, but uses every effort to place students to their best financial and educational advantage. Students who begin at the minimum rate are not held to this rate if their abilities are such that they can earn more. The wages are paid directly to the students by their employers for the actual time worked in the shops. Machine shops work 55 hours a week; foundries, traction companies, and railroads, 60 hours a week.

EXPENSES

The University expenses for tuition and laboratory fees during the five years of the course are about \$420.00, as follows:

First year.....	\$110.00
Second year.....	85.00
Third year.....	75.00
Fourth year.....	75.00
Fifth year.....	75.00

SHOP WORK

In all cases, the Dean of the Engineering College and the Professor of Civil, Electrical, Mechanical, Chemical, or Metallurgical Engineering, as the case may be, confer with the employers in planning the course in shop work, so that the students get a logically and carefully arranged shop training.

The work of the shop is co-ordinated with the work of the University by a Department of Co-ordination. The shop co-ordinator is a college graduate acquainted with shop or field practice. He spends every morning at the University and every afternoon in the shops. His function is to make as direct co-ordination as possible of the work of the shop with the theory of the University. One afternoon, for example, he may be at the shops of a local manufacturing company, where he will observe the student apprentices at work. He will know what they are turning out, their speeds, their feeds and cuts, the angle of the tool, how the batch of work is ticketed, how the work is set up, the power drive, everything important in connection with the operation. The next week these young men will be grouped together with their classmates for two periods in class, when he will explain the functions of the particular articles, on which the students were working, in the machine which the local manufacturing company builds. He will take up all

questions of speeds, feeds, cuts, accuracy, etc. Figuratively speaking, he will take from the student apprentices the blinders which would restrict their vision except for this explanatory work. Ultimately, all problems of shop organization, shop accounting, cost keeping, shop planning, power transmission, heating, lighting, etc., are discussed during the course. It will be seen, then, that out of the student's own experience is drawn much of his course in mechanism, thermodynamics, machine design, strength of materials, shop economics, etc.

A similar system is followed in railroad work, construction work, and in all the other co-operative fields.

COURSES OFFERED

Co-operative courses are offered in Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, and Metallurgical Engineering.

THE SUMMER TERM

The summer term begins immediately after Commencement in June, and continues for twelve weeks, the students working in bi-weekly periods as in the winter term.

COURSES OF INSTRUCTION

CHEMICAL ENGINEERING

The purpose of the course of study in Chemical Engineering is to provide the young engineer with a broad and well-founded knowledge of chemistry and of mechanical engineering, so that he may be prepared to take up the work of assisting in the design and erection of chemical machinery, in the arrangement of plants, and the working out and improvement of manufacturing processes dependent wholly or in part upon chemistry or metallurgy; further, it aims to equip him so that he may be able to consider propositions, processes, and plans from the combined viewpoint of the chemist and engineer. The chemical engineer naturally begins his professional career as analyst, draughtsman, or assistant engineer; he is much better prepared for the duties of superintendent of a chemical or metallurgical establishment than either chemist or mechanical engineer.

The chemical engineer is essentially a modern product, and the demand for men with this special training is constantly increasing. Indeed, the necessity for the efficient control of plants and processes, the economical utilization of power, the conversion of factory by-products into marketable commodities, and the adaptation and design of mechanical appliances to carry out chemical reaction on a large

scale, all demand that the technical chemist should be an engineer. Graduates from this department of the University are now filling positions as superintendents and chemical engineers at blast furnaces, steel works, electrolytic establishments, coal tar distillation, and paper works, and factories making heavy chemicals, dry colors, printing inks, soaps, etc.

Students who elect this course should be in good physical condition and well prepared, since the work is both extensive and intensive, and almost all the hours of the day not spent in the class-room are occupied with work in the laboratory or in the draughting room.

FOUR-YEAR COURSE IN CHEMICAL ENGINEERING

Students who choose the four-year course in Chemical Engineering will be required to spend at least two summers in chemical plants or in machine shops; this work will be substituted for the customary shop work of an engineering course.

CO-OPERATIVE COURSE IN CHEMICAL ENGINEERING

The studies during the five years of the co-operative course are practically identical with those taken by the four-year student in the College of Engineering. In some cases slight changes in the order have been made to meet the requirements set by the practical needs of the students working in the shops.

During the first two years of the course, a large part of the student's time is devoted to subjects fundamental to an engineering course in chemistry. With the exception of general inorganic chemistry, an elementary course in metallurgy, and an introduction to qualitative analysis, the special courses in chemistry are postponed until the second summer and the years following.

CHEMICAL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. CH. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Gen'l Inorganic Chemistry.....	Ch. E. 1a, 2a, 3b, 4b..	5	5
Algebra and Trigonometry.....	Math. 1.....	5	
Analytical Geometry.....	Math. 1.....		5
English	English 1.....	3	3
Elementary German } or French..... }	{ French 1..... } { German 1..... }	3	3
Descriptive Geometry.....	M. E. 3.....		2
Machine Drawing.....	M. E. 1.....	2	
Gymnasium	Phys. Educ. 1.....	2	2
Summer work in outside shops.			

SOPHOMORE YEAR

Qualitative Analysis.....	Ch. E. 5a, 6a.....	6	
Quantitative Analysis.....	Ch. E. 7b.....		2
Elementary Organic Chem....	Ch. E. 8a, 9a.....	5	
Differential and Integral Calculus	} Math. 5.....	4	4
Physics .....				Phys. 1a, 2a, 21b, 22b.	5	5
German or French.....	} German 2.....	3	3
Gymnasium	Phys. Educ. 2.....	2	2
Summer work in outside shops.			

JUNIOR YEAR

Physical Chemistry	Ch. E. 12.....	3	
Physical Chemistry, Labo- ratory	} Ch. E. 13b.....	2	
Electrochemistry .....				Ch. E. 32.....	3
Electrochemistry Laboratory..	Ch. E. 33.....		2
Metallurgy	Ch. E. 14a.....		5
Technical Analysis.....	Ch. E. 17.....	2	3
Strength of Materials.....	Ap. Math. 2.....	3	
Mechanics of Engineering....	Ap. Math. 1, 3.....		3
Steam Engineering	M. E. 11.....	2½	2½
Testing of Materials.....	M. E. 18.....	1	
Summer work, Land Surv'g..	C. E. 3.....	4	weeks

SENIOR YEAR

Adv'd Organic Chemistry....	Ch. E. 20.....	3	3
Laboratory	Ch. E. 21.....	2	2
Technical Inorganic Chem....	Ch. E. 16a.....	3	
Technical Organic Chem....	Ch. E. 18b.....		3
Chemical Engineering Lab....	Ch. E. 36b.....	3	
Non-Ferrous Metallurgy.....	Met. Eng. 6a.....	3	
Direct Current Machinery....	E. E. 1.....	2½	
Elec. Engineering Lab.....	E. E. 5.....	1	1
Alternating Current Mach....	E. E. 12.....		2½
Thesis	Ch. E. 23b.....		4

Electives (Six hours throughout Senior Year).

Adv'd Inorganic Chem.....	Ch. E. 10b.....	2	
Laboratory	Ch. E. 11b.....		2
Metallurgy of Iron and Steel..	Met. Eng. 4.....	3	
Electro-Metallurgy.....	Met. E. 7b.....		
Metallography.....	Met. E. 2.....		
Assaying.....	Ch. E. 15b.....		1
Gas Engineering.....	M. E. 23.....	2	
Compressed Air and Re- frigeration.....	} M. E. 31.....		2
Geology, Mineralogy.....					5	5
Economics.....	Economics 1.....	2	2
Sanitary Biology.....	Biology 11.....	2	2

**CHEMICAL ENGINEERING
CO-OPERATIVE PLAN**

COURSES REQUIRED FOR THE DEGREE OF CH. E.

SUBJECT	COURSE	Exercises	
		Per I Sem.	Alternate II Sem. Week
FIRST YEAR			
FRESHMAN			
Algebra and Trigonometry	} Math. 1.....	6	6
Analytical Geometry.....			
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	3
Elements of Engineering.....	M. E. 4.....	3	3
Co-ordination	C. 3.....	2	2
FIRST SUMMER TERM			
Problem Work in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	2
Metallurgy	} Met. E. 1a.....	5	
Metallurgy, Laboratory.....			
Qualitative Analysis.....	Ch. E. 5, 6.....		7
English			6
Co-ordination	C. 4.....	2	
SECOND SUMMER TERM			
Qualitative Analysis.....	Ch. E. 5, 6.....	5	
Elementary Organic.....	Ch. E. 8a, 9a.....	11	
THIRD YEAR			
PRE-JUNIOR			
Quantitative Analysis.....	Ch. E. 7b.....	3	5
Steam Engineering.....	M. E. 11.....	6	6
Mechanical Laboratory.....	M. E. 18.....	2	
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics			6
* Modern Language.....		6	6
THIRD SUMMER TERM			
Technical Analysis.....	Ch. E. 17.....	6	
Metallography	Met. E. 2.....	5	
FOURTH YEAR			
JUNIOR			
Technical Analysis.....	Ch. E. 17.....	2	
Physical Chemistry.....	Ch. E. 12a.....	5	
Physical Chemistry Lab.....	Ch. E. 13a.....	2	
Electro-chemistry	Ch. E. 32b.....		5
Electro-chemistry Lab.....	Ch. E. 33b.....		2
Metallurgy of Iron and Steel...Met. E. 4b.....			5
Electrical Machinery.....	E. E. 1, 9.....	6	6

* Students who have a reading knowledge of German may elect French. In other cases, German must be taken first.

Electrical Laboratory.....	E. E. 5.....	2	2
Modern Language.....	German or French....	6	6
Co-ordination	C. 8.....	3	3

FOURTH SUMMER TERM

Chemical Investigation and Thesis.

Engineering Design.

FIFTH YEAR

SENIOR

Technical Chemistry.....	Ch. E. 16a, 18.....	5	5
Technical Chemistry Lab.....	Ch. E. 36b.....		
Thesis		5	5

Electives:

Gas Engineering.....	M. E. 23.....		
Organic Chemistry.....	Ch. E. 20, 21.....		
Inorganic Preparations.....	Chem. 11.....		
Non-Ferrous Metallurgy.....	Met. Eng. 6a.....		
Economics			
Electro Metallurgy.....	Met. Eng. 7b.....		

CHEMICAL ENGINEERING

COURSES IN DETAIL

LAUDER WILLIAM JONES, PH. D., . . . Professor of Chemistry.
 HARRY SHIPLEY FRY, PH. D., . Associate Professor of Chemistry.
 HENRY MAX GOETTSCH, PH. D., Assistant Professor of Industrial
 Chemistry.

JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.

———, Instructor in Physical Chemistry.

EDWIN W. ESSLINGER, A. M., . Instructor in Analytical Chemistry.

CHARLES L. BLOOM, B. Ch. E., . Graduate Assistant in Chemistry.

STUDENT ASSISTANTS: Otto C. F. Lippert, Clifford Rolle, Odin
 Wilhelmy.

1a. General Inorganic Chemistry.—The non-metals. This course gives a definite idea of the fundamental laws of general chemistry and furnishes a survey of the important facts concerning the chemistry of the non-metals and their compounds. Lectures, recitations, and quizzes illustrated by experiments, charts, and specimens. Course 2a forms an integral part of, and must accompany Course 1a. Assistant Professor Goettsch and Assistants.

2a. General Inorganic Chemistry, Laboratory.—Three laboratory exercises per week. *First semester.* Experiments complementary to the subject-matter of Course 1a. M., T., W., 1:00-4:00.

Assistant Professor Goettsch and Assistants.

3b. General Inorganic Chemistry.—The metals. Continuation of Course 1a. The properties of the metals and their compounds. Five hours per week. *Second semester.* Students who have com-

pleted Courses 1a and 2a are eligible for this course. It must be accompanied by Course 4b.

Assistant Professor Goettsch and Assistants.

4b. General Inorganic Chemistry, Laboratory.—Three laboratory exercises per week. *Second semester.* Experiments complementary to the subject-matter of Course 3b.

Assistant Professor Goettsch and Assistants.

10a. Advanced Inorganic Chemistry.—Two exercises a week. *First semester.* The less familiar elements and their compounds, and the more recent theories of inorganic chemistry.

Prerequisite: Courses 5a, 6, and 7b. Associate Professor Fry.

11a. Inorganic Preparations.—Three laboratory exercises a week. *First semester.*

Associate Professor Fry.

Prerequisite: Course 7b.

5a. Qualitative Analysis.—Lectures and recitations on the principles and practice of qualitative analysis. Considerable emphasis is laid upon the application of the laws of chemical equilibrium and the theories of solutions and of electrolytic dissociation to the practical problems of the analyst.

Prerequisite: Courses 3b and 4b. Professor Jones.

6. Qualitative Analysis, Laboratory.—To accompany Course 5. During the first few weeks the student will perform the most important tests commonly used in the processes of analytical chemistry. The later work of the course will furnish training in the qualitative examination of salts, minerals, alloys, etc.

Professor Jones and Mr. Esslinger.

7. Quantitative Analysis.—An introductory laboratory course in gravimetric and volumetric analysis. Occasional conferences will be held at which analytical methods and calculations will be discussed, and at which reports will be submitted covering assigned reading. Three exercises a week. *First or second semester.*

Mr. Esslinger.

Prerequisite: Courses 5a and 6 (first semester).

17. Technical Analysis.—Analyses of typical industrial products. Gravimetric, volumetric, gasometric, electrolytic and colorimetric processes, involving the use of such instruments as polariscopes, refractometers, colorimeters, specific gravity balances, calorimeters, pyrometers, and other apparatus for rapid determinations by physical means. The aim is to study typical methods of analysis. Some of the topics covered in the past have been analyses of fuel, cement, ores, iron and steel, water, gas, fertilizers, soaps, and food.

Assistant Professor Goettsch and Mr. Esslinger.

Prerequisite: Course 7b.

8b. Elementary Organic Chemistry.—Quizzes and lectures which are experimental covering the chief classes of organic compounds of both the aliphatic and the aromatic series. Arranged to meet the needs of those who intend to specialize in chemistry, in medicine, in biology, or in engineering, and serves as a general introduction for those who intend to go deeper into the study of organic chemistry. *Second semester.* Summer term for Co-operative Engineers. Professor Jones.

Prerequisite: Courses 3b and 4b.

9b. Organic Reactions and Preparations.—Laboratory practice, consisting of two exercises a week to accompany the lectures of Course 8b. *Second semester.* Summer term for Co-operative Engineers. Professor Jones and Assistant Professor Reemelin.

Prerequisite: Courses 3b and 4b.

20. Advanced Organic Chemistry.—Lectures, embracing a systematic study of the principles and practices of organic chemistry, and treating of the modes of formation, properties, and constitutional formulae of typical members of the most important classes of organic compounds. Three exercises a week throughout the year. Professor Jones.

Prerequisite: Courses 5a, 6, 7b, 8b, 9b, and a reading knowledge of German and French.

21. Advanced Organic Chemistry, Laboratory.—Practice in the preparation of a number of typical organic compounds. Two or three exercises a week throughout the year. May also be taken during one semester, either first or second. Professor Jones.

12a. Physical Chemistry.—Lectures and recitations. *First semester.* An introductory course which considers the general properties of gases, liquids, solids, and solutions, as well as the principles determining reaction velocity and the equilibria in homogeneous and heterogeneous systems.

Prerequisite: Chemistry 5a, 6a and 7b, Physics 26a and 27b, Mathematics 5.

13a. Physical Chemistry, Laboratory.—Two exercises a week. *First semester.* Designed to illustrate the principles developed in Course 12a, and to provide a working knowledge of the common methods used in physical-chemical measurements. This course must accompany Course 12a.

32b. Electrochemistry.—Lectures and recitations. Three exercises a week. *Second semester.* A general consideration of the electrical properties of matter with special reference to the theory of aqueous solutions.

Prerequisite: 12a.

33b. Electrochemistry, Laboratory.—Two exercises a week. *Second semester.* Determination of conductivity with its application, transference numbers, electromotive force, dielectric constant, etc. Must accompany Course 32b. _____.

[34a. Thermodynamics Applied to Chemistry.] Two exercises a week. *First semester.* Devoted to an elementary consideration of the principles of thermodynamics and their application to physical-chemical problems. The work will be illustrated by the solution of numerous numerical examples. _____.

Prerequisite: Courses 12a and 32b.

Omitted in 1914-15.

41a. Phase Rule.—Lectures and recitations. The phase rule and its applications. Two exercises a week. Hours to be arranged.

Prerequisite: Course 12a. _____.

14b. Metallurgy.—Five periods a week. *Second semester.* A study of fuels, refractories, ferrous and non-ferrous metallurgy, and practice in metallurgical calculations. Especial emphasis is laid upon foundry and steel works processes, and excursions are made to metallurgical establishments in Cincinnati and vicinity.

Assistant Professor Aston.

Prerequisite: Course 5a and Physics 1.

15b. Assaying.—One afternoon a week. *Second semester.* Laboratory practice in the fire assay of ores and base metals for gold, silver and lead.

Assistant Professor Aston.

Prerequisite: Course 7b.

[16a. Technical Inorganic Chemistry.] Three periods a week. *First semester.* Lectures and recitations upon important inorganic chemical industries. Especial attention is paid to plant equipment and costs.

Assistant Professor Goettsch.

Prerequisite: Courses 5a and 6.

Omitted in 1914-15.

18b. Technical Organic Chemistry.—Three periods a week. *Second semester.* Lectures and recitations upon selected organic chemical industries. Especial attention is directed to plant equipment and costs.

Assistant Professor Goettsch.

Prerequisite: Courses 8b and 16a.

36b. Technical Chemistry, Laboratory.—It is not intended that the course should consist of the preparation of a prescribed list of chemical compounds, but rather of a number of independent problems considering the technical manufacture of important inorganic and organic chemicals. The work will include the testing of raw

material and finished product; the preparation of cost sheets, showing prices of material used and time spent; a consideration of the possibility of utilizing any by-products; and, in some cases, the design of a factory calculated for a certain output.

Assistant Professor Goettsch and Assistant.

[29a. Practical Photography.] Laboratory work in the exposure and development of plates predominates, followed by a study of various printing methods. Some time is devoted to copying, enlarging and the making of lantern slides. One lecture and one laboratory exercise per week. *First semester.*

Assistant Professor Goettsch.

Prerequisite: General Inorganic Chemistry (1a, 2a, 3b, 4b).

Omitted in 1914-15.

26. Summer Work (Sophomore).—A memoir, illustrated by drawings, descriptive of some subject of technical interest. An account of work done during the summer in an industrial laboratory or works will, if satisfactory, be accepted as an equivalent of the memoir.

Summer work reports and memoirs must be handed in by November 1st.

27. Summer Work (Junior).—A memoir, illustrated by drawings, descriptive of some manufacturing industry. The memoir should be accompanied by a report of work performed in the laboratory or works.

Summer work reports and memoirs must be handed in by November 1st.

23. Thesis, Laboratory.—Four laboratory periods a week devoted to the solution of some problem in technical chemistry or metallurgy, including collateral reading and practice in bibliography. This course is designed for Senior students who are required to prepare a thesis for graduation.

Professor Jones, Assistant Professor Goettsch,

Assistant Professor Aston.

CIVIL ENGINEERING

The purpose of this course is to give a broad education in those subjects which form the basis of all branches of technical education, and a special training in those subjects comprised under the term "Civil Engineering." Its aim is to prepare the young engineer to take up the work of assisting in the design and construction of bridges, steel mills, and high steel buildings; to aid in the location and construction of steam and electric railways, sewerage and water supply systems; and to undertake, intelligently, supervision of work

in the allied fields of mining, architectural and electrical engineering and general contracting.

CO-OPERATIVE PLAN

The Civil Engineering Department co-operates with railroads, structural steel shops, reinforced concrete construction companies, general contractors, the Engineering Department of the city of Cincinnati, and the United States Government.

Students employed on railroad work start as laborers in a section gang. This work includes main line, yard, and extra gang work. In the bridge and building department, experience is gained in the repair of bridges, the building of culverts, and other construction work done by this department. The signal department affords opportunity for the student to become familiar with the installation, operation, and maintenance of the various signal systems. One summer is spent in a steel fabrication plant. In the last year of the course, the student is assigned to minor supervisory work in connection with heavy construction. As opportunity permits and the ability of the student warrants, he acts as assistant foreman and timekeeper in the various departments.

Students desiring municipal work start as laborers in the street repair department of the city or with contractors doing city work. After sufficient experience, they are appointed as rodmen in the engineering department of the city.

In structural work, the student spends the first year in a structural steel shop familiarizing himself with structural steel fabrication. This is followed by work in reinforced concrete construction and general contracting work.

The outside work in civil engineering aims first, to give students experience in the doing of work, and second, to train them to supervise work that is done by others. While there is a definite plan outlined and agreed to by each employer, promotion is dependent upon the ability and application of the student.

CIVIL ENGINEERING—REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. C. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Algebra and Trigonometry...	Math. 1.....	5	
Analytic Geometry.....	Math. 1.....		5
English	English 1.....	3	3
Chemistry	Ch. E. 1a, 2a, 3b, 4b...	5	5
Descriptive Geometry.....	C. E. 1.....		3
German or French.....	{ German 1..... } { French 1..... }	3	3

Machine Drawing.....	M. E. 1.....	3	
Elements of Engineering.....	M. E. 4.....	2	2
Physical Education.....	Phys. Educ. 1.....	2	2
SOPHOMORE YEAR			
Calculus	Math. 5.....	4	4
Physics	Phys. 1a, 21b, 2a, 22b..	4	4½
Construction Drawing.....	C. E. 4.....		3
Surveying (Theory).....	C. E. 25.....		3
Metallurgy	} Met. 1a.....	} 5	
Metallurgy Lab.....				3
Elements of Engineering.....	M. E. 4.....	2	2
Physical Education.....	Phys. Educ. 2.....	2	2
SUMMER TERM			
Surveying (Field work).....	C. E. 26.....	11	
Hydraulics	C. E. 13.....	6	
JUNIOR YEAR			
Roofs and Bridges.....	C. E. 9.....	5	5
Graphic Statics.....	C. E. 8.....	3	3
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics	Ap. Math. 1.....		6
Electrical Machinery.....	E. E. 1.....	5	
Electrical Lab.....	E. E. 5.....		2
Highway Engineering.....	C. E. 27.....		3
Railroad Surveying Theory.....	C. E. 10.....		3
Field Railroad Surveying.....	C. E. 11.....		3
Engineering Design.....	C. E. 16.....		4
Cement Lab.....	C. E. 5.....	3	
Materials Testing Lab.....	M. E. 18.....	2	
Advanced Mathematics.....	Math. 35.....	2	
Steam Engineering.....	M. E. 11.....	6	
SENIOR YEAR			
Economics	Econ. 1.....	5	5
Engineering Geology.....	Geol. 2.....	2	2
Higher Structures.....	C. E. 29.....	2	
Engineering Design.....	C. E. 16.....	2	2
Engineering Design.....	C. E. 17.....	2	2
Sanitary Engineering Theory.....	C. E. 18.....	3	
Sanitary Engineering Design.....	C. E. 19.....	3	
Water Supply Theory.....	C. E. 21.....		3
Water Supply Design.....	C. E. 22.....		3
Sanitary Biology.....	Biol. 9.....		1
Structural Design Theory.....	C. E. 14.....	3	3
Structural Design Drawing.....	C. E. 15.....	3	3

CIVIL ENGINEERING—CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF C. E.

SUBJECT	COURSE	Exercises	
		Per Alternate Week I Sem.	II Sem.
Algebra, Trigonometry..... and Analytical Geometry..	} Math. 1.....	6	6
General Inorganic Chemistry..	Ch. E. 1a, 3b.....	5	5
General Inorganic.....	} Ch. E. 2a, 4b.....	3	3
Chemistry Lab.....			

Machine Drawing.....	M. E. 1.....	3	
Descriptive Geometry.....	C. E. 1.....		3
Co-ordination	Co-or. 5.....	2	2
Elements of Engineering.....	C. E. 20.....	3	3
English	Eng. 41.....	1	1

FIRST SUMMER TERM

Elements of Engineering.....	C. E. 20.....	6	
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....	C. E. 2.....	5	

SECOND YEAR

SOPHOMORE

Differential and.....	} Math. 5.....	6	6
Integral Calculus.			
General Physics.....	Physics 1a, 21b.....	6	6
Experimental Physics.....	Physics 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a.....	} 5	}
Metallurgy Lab.....				3
English	Eng. 2c.....		5
Co-ordination	Co-or. 6.....	2	2
Construction Drawing.....	C. E. 4.....		3
English	Eng. 42.....	1	1
Plane and Topographic.....	} C. E. 25.....	}	3
Surveying Theory.....			

SECOND SUMMER TERM

Hydraulics	C. E. 13.....	6	
Field Surveying.....	C. E. 26.....	11	

THIRD YEAR

PRE-JUNIOR

Electrical Machinery.....	E. E. 1.....	6	
Electrical Lab.....	E. E. 5.....		2
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics	Ap. Math. 1.....		6
Cement Testing Lab.....	C. E. 5.....	3	
Railroad Surveying Theory.....	C. E. 10.....		3
Field Railroad Surveying.....	C. E. 11.....		3
Highway Engineering Theory.....	C. E. 27.....		3
Highway Engineering Design.....	C. E. 28.....		2
Modern Language.....	Lang. 40.....	5	5
English	Eng. 43.....	1	1
Advanced Mathematics.....	Math. 35.....	2	

FOURTH YEAR

JUNIOR

Steam Engineering.....	M. E. 11.....	6	
Materials Testing Lab.....	M. E. 18.....	2	
Roofs and Bridges.....	C. E. 9.....	5	5
Graphic Statics.....	C. E. 8.....	3	3
Production Engineering.....	Co-or. 8.....	3	3
Modern Language.....	Lang. 41.....	6	6
Engineering Design.....	} C. E. 16.....	}	2
Theory and Drawing.....			
English	Eng. 44.....	1	1

FIFTH YEAR

SENIOR

Economics	Econ. 1.....	5	5
Engineering Geology.....	} Geol. 2.....	}	2
Theory and Lab.....			

Structural Design Theory.....	C. E. 14.....	3	3
Structural Design Drawing...	C. E. 15.....	3	3
Sewerage Theory.....	C. E. 18.....	3	
Sewerage Design.....	C. E. 19.....	3	
Water Supply Theory.....	C. E. 21.....		3
Water Supply Design.....	C. E. 22.....		3
Higher Structures.....	C. E. 29.....	2	
Engineering Design.....	C. E. 17.....	2	2
Sanitary Biology.....	Biol. 9.....		1
English.....	Eng. 45.....	1	1

CIVIL ENGINEERING

COURSES IN DETAIL

HERMAN SCHNEIDER, Sc. D., William Thoms Professor of Civil Engineering.

G. M. BRAUNE, C. E., . Associate Professor of Civil Engineering.

GEORGE R. MOORE, C. E., Instructor in Civil Engineering.

RUSSELL B. WITTE, B. C. E., Instructor in Civil Engineering.

JOHN J. LONG, M. S., Instructor in Civil Engineering.

C. E. 1. Descriptive Geometry.—Projections of lines, planes, and solids. Mr. Witte.

C. E. 2. Descriptive Geometry.—Practical applications. Isometric and perspective. Mr. Witte.

C. E. 3. Elementary Surveying.—Theory and use of common surveying instruments. This course is arranged for Mechanical and Electrical Engineering students. Mr. Moore.

C. E. 4. Construction Drawing.—Application of descriptive geometry to finished working drawings of arches, trestles, abutments, sewers, roof truss details, stacks, etc. Mr. Long.

C. E. 5. Cement Testing Laboratory.—Analysis of raw materials. Manufacture of cement. Standard laboratory tests of cement, mortar, concrete, and reinforced concrete.

Professor Myers.

C. E. 8. Graphic Statics.—Graphic methods applied to the determination of stresses, bending moments, shears, etc., in structures. Mr. Moore.

C. E. 9. Roofs and Bridges.—Theory of stresses in framed structures under static and moving loads by both graphic and analytical methods. Mr. Moore.

C. E. 10. Railroad Surveying Theory.—Simple, compound, reversed, and transition curves. Turnouts and switches. Theory of earthwork computation. Mr. Moore.

C. E. 11. Field Railroad Surveying.—Practice in staking out curves, cross sectioning, setting of slope stakes, etc. Mr. Moore.

C. E. 13. Hydraulics.—Theory of the flow of water through

orifices, tubes, pipes, channels, etc. Theory of sewer and water supply hydraulics, stream gauging, and hydrographic surveying.

Mr. Long.

C. E. 14. Structural Design Theory.—Lectures and discussion of contracts, office work, shops and shop practice. Design of roof truss, plate girder, pin and riveted spans. Specifications.

Associate Professor Braune.

C. E. 15. Structural Design Drawing.—Complete detailed contract drawings of roof truss, plate girder, pin and riveted spans. Inspection trips.

Associate Professor Braune.

C. E. 16. Engineering Design and Drawing.—Practical problems in reinforced concrete, retaining walls, dams, etc.

Associate Professor Braune.

C. E. 17. Engineering Design.—Practical problems in higher structures, reinforced concrete, etc.

Professor Schneider.

C. E. 18. Sewerage.—Theory of design, maintenance, and construction. Collection and disposal of sewage. Purification plants.

Mr. Long.

C. E. 19. Sewerage design.—Design, estimate of cost, and execution of plans for a small town.

Mr. Long.

C. E. 20. Elements of Engineering.—Elementary strength of materials of engineering, and elementary theoretic mechanics.

Professor Faig, Associate Professor Braune,

Mr. Moore, and Mr. Joerger.

C. E. 21. Water Supply Theory.—Consumption by municipalities. Yields from various sources. Examination of water supplies. Impounding reservoirs. Distribution systems. Purification.

Mr. Long.

C. E. 22. Water Supply Design.—Design, estimate of cost of distribution system, standpipe, etc., and execution of plans.

Mr. Long.

C. E. 25. Plane and Topographic Surveying.—Theory relating to the use and adjustments of the instruments; theory of land, topographic and city surveying.

Mr. Moore.

C. E. 26. Field Surveying.—Practice in the use and adjustments of tape, level, transit, plane table, etc.

Mr. Witte.

C. E. 27. Highway Engineering Theory.—Construction, maintenance, and cost of roads and pavements. Consideration of relative merits of various types.

Mr. Long.

C. E. 28. Highway Engineering Design.—Design, estimate of cost and execution of plans of typical pavements.

Mr. Long.

C. E. 29. Higher Structures.—Continuous girders, cantilever, draw, suspension and arched structures.

Mr. Long.

Co-or. 5. Co-ordination.—Elementary papers on subjects connected with his outside work are written by each student and then

read and discussed before the class under the direction of the instructor. Professor Myers.

Co-or. 6. Co-ordination.—Advanced papers on subjects connected with his outside work are written by each student, and then read and discussed before the class under the direction of the instructor. Associate Professor Braune,
Mr. Moore, and Mr. Witte.

Co-or. 8. Production Engineering.—Development of present industrial system. The laws of management. Routing of work; cost methods and efficiency. Contracts and specifications. Professor Myers.

ELECTRICAL ENGINEERING

The Department of Electrical Engineering offers courses on two distinct plans. The first is called the regular course and is completed in four years, the student working in the University each week during the college year and in the shops during the summer. The second is called the co-operative course and is completed in five years, the student working alternately in the College of Engineering one period of two weeks and in a city shop for the alternate period of two weeks. Every four weeks, the student will have spent two weeks in the University and two weeks in some business enterprise. A description of the co-operative plan is given elsewhere in this catalogue.

During the first two years, the work in the University is chiefly in elementary mechanics, mathematics, physics, chemistry, and mechanical drawing, and forms a basis for more specialized work in later years. Beginning with the third and Junior years, specialized work is taken up. Inasmuch as the professional electrical engineer needs a comprehensive knowledge of mechanical engineering, most of the technical subjects of the Mechanical Department are included in the Electrical Course. Thus steam engineering and machine design with laboratory work and drafting, together with applied mathematics, are studied during the third year.

In addition to the purely technical subjects, cultural subjects are introduced throughout the course, subjects which every man of education should know something about; for a professional engineer should be a broadly educated man, capable of filling the highest positions in active life.

The curricula and details of the courses are given below.

ELECTRICAL ENGINEERING CO-OPERATIVE PLAN

The co-operative students of electrical engineering follow many diverse lines of practical experience. It is hardly possible to discuss

these activities in detail. But there is a general method underlying all forms of practical work, so that practically the same degree of progressive development is obtained.

As a rule, Freshmen spend a year in some foundry or machine shop, for the purpose of becoming familiar with general shop practice and the conditions of labor. Those who take up manufacturing work, such as is offered by the Bullock Electric Company or the Triumph Electric Company, spend practically the first, second, and third years in the machine, controller, winding, and assembling departments. In this way, they become thoroughly familiar with the varied processes involved in the manufacture of electrical machinery, and with the details of shop organization. The fourth year is usually spent in testing direct current machinery, and the fifth year in the testing of alternating current machinery.

During the past year, arrangements have been made with the Cincinnati Traction Company, so that a number of our students spend at least two years in the car barns. The work includes the inspection, repair, and testing of the various types of equipment used by the Traction Company.

At present, a number of students are employed in telephone work. Their practical experience depends upon the operating conditions, and involves both inside and outside inspection, repair, testing, and construction.

Students of electrical engineering are also engaged in co-operative work with the local Gas and Electric Company. The practical experience with this company is of a varied character, and depends largely upon the ability of the students.

The Warner Elevator Company employs a number of students in the co-operative course in electrical engineering. This work furnishes the very best opportunities for the observation of the mechanical and electrical details of modern elevator practice.

ELECTRICAL ENGINEERING REGULAR PLAN

COURSES REQUIRED FOR THE DEGREE OF B. E. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Algebra and Trigonometry...	Math. 1.....	5	
Analytical Geometry.....	Math. 1.....		5
Chemistry	Ch. E. 1a, 2a, 3b, 4b...	5	5
Descriptive Geometry.....	M. E. 3.....	3	
Freehand Drawing.....		1	1
Machine Drawing.....	M. E. 1.....		2
German or French.....	{ German 1..... } { French 1..... }	3	3
English	English 1.....	3	3
Physical Education.....	Phys. Educ. 1.....	2	2
Summer work in shops.			

SOPHOMORE YEAR

Calculus	Math. 5.....	3	3
Physics	Physics 1, 21b.....	3	3
Experimental Physics.....	Physics 2a, 22b.....	2	2
Mechanism	M. E. 6.....	2	
Drawing and Sketching.....	M. E. 7.....	1	1
Steam Engineering.....	M. E. 11.....	3	3
Mechanical Laboratory.....	M. E. 18.....	1	1
Machine Drawing.....	M. E. 9.....	2	
Metallurgy	Met. E. 1a.....	2½	
Metallurgical Laboratory.....		1.5	0
History		1	1
English	Eng. 2.....		2.5
German or French.....	{ German 2..... } { French 2..... }	3	3
Physical Education.....	Phys. Educ. 2.....	2	2
Summer work in shops.....			5
Electrical Engineering.....	E. E. 12.....		3

(Alt. weeks)

JUNIOR YEAR

Elementary Design.....			3
Elementary Problems.....	E. E. 12.....	3	
Electrical Machinery.....	E. E. 1, 9.....	3	3
Electrical Laboratory.....	E. E. 5.....	1	1
			(Alt. weeks)
Mechanics of Engineering....	Ap. Math. 1, 3.....	5	5
Physics	Physics 5, 13.....	3	2
Machine Design.....	M. E. 13, 14, 19.....	5	2
Graphics of Mechanics.....	M. E. 17.....		2
Summer Term, Land Surv'g..	C. E. 3.....	4 weeks	

SENIOR YEAR

Alternating Current Mach....	E. E. 3.....	3	3
Advanced Design.....	E. E. 15.....	3	3
Elec. Power Transmission....	E. E. 4.....	3	
Advanced E. E. Laboratory....	E. E. 7.....	3	3
Electric Power Stations.....	E. E. 11.....		1
Gas Engineering.....	M. E. 23.....	3	0
Advanced Mechan. Lab.....	M. E. 25.....	1	1
Mechanical Power Stations....	M. E. 29.....		1
Advanced Integral Calculus....	Math. 8a.....	3	
Differential Equations.....	Math. 9b.....		3
Thesis	E. E. 8.....	3	3

Electives

Telegraphy and Telephony....	E. E. 13.....	3	
Illumination	E. E. 10.....	2	
Advanced Physics.....		3	3
Railroad Construction.....	C. E. 10.....	3	
Steam Turbines.....	M. E. 24.....	2	
Economics	Economics 1.....	2	2
Heating and Ventilation.....	M. E. 30.....		2
Geology	Geol. 2.....	5	5
Electric Railways.....			3
Thermodynamics	M. E. 21.....		3

ELECTRICAL ENGINEERING CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF E. E.

SUBJECT	COURSE	Exercises	
		Per I Sem.	Alternate Week II Sem.
FIRST YEAR			
FRESHMAN			
Algebra and Trigonometry..	Math. 1.....	6	6
Analytical Geometry.....			
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	
Co-ordination	C. 1.....	2	2
Physical Education.....		2	2
Elements of Engineering.....	M. E. 4.....	3	3
FIRST SUMMER TERM—Five weeks.			
Problems in Industrial Chemistry.....		4	
Descriptive Geometry.....		5	
Elements of Engineering.....	M. E. 4.....	6	
Elementary Elec. Lab.....		2	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	3
Metallurgy	Met. E. 1a.....	5	
Metallurgical Laboratory.....		3	
Drawing and Sketching.....	M. E. 7.....		2
Co-ordination	C. 2.....	2	2
Physical Education.....		2	2
English			5
SECOND SUMMER TERM.			
Mechanical Laboratory.....	M. E. 18.....	4	
Mechanism	M. E. 6.....	6	
Drawing and Sketching.....	M. E. 7.....	7	
THIRD YEAR			
PRE-JUNIOR			
Physics, Laboratory.....	Phys. 13.....		2
Modern Language.....		5	5
Steam Engineering.....	M. E. 11.....	6	6
Mechanical Laboratory.....	M. E. 18.....	2	2
Strength of Materials.....	Ap. Math. 2.....	6	6
Mathematics		4	
Inspection Trips.....		1	1
THIRD SUMMER TERM			
English		6	
Elementary Problems.....	E. E. 12.....	4	
Elementary Laboratory and Reports.....	E. E. 13.....	7	
FOURTH YEAR			
JUNIOR			
Electrical Machinery.....	E. E. 1, 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2

Machine Design.....	M. E. 13.....	5	
Machine Drawing and Shop Inspection.....	} M. E. 14.....	3	
Modern Language.....			6	6
Co-ordination	C. 8.....	3	3
Hydraulic Mach.....	M. E. 27.....		5
Electrical Design.....	E. E. 2.....		3

FOURTH SUMMER TERM

Ap. Math. in Elec. Eng.....	E. E. 4.....	6	
Special Problems.....	E. E. 8.....	4	
Elec. Design.....	E. E. 2.....	3	
Elec. Lab.....	E. E. 7.....	4	

FIFTH YEAR

SENIOR

Alternating Current Ma- chinery	} E. E. 3.....	5	5
Electrical Laboratory and Visits			
Electrical Design adv.....	E. E. 15.....	2	2
Gas Engineering.....	M. E. 23.....	5	
Production Engineering.....	C. 9.....	5	
Economics		6	6
Thesis	E. E. 8.....		5

Electives

Telegraphy and Telephony....	E. E. 13.....	5	
Illumination	E. E. 10.....	4	
Electric Railways.....	E. E. 6.....		5
Advanced Integral Calculus...Math. 8a.....		5	
Differential Equations.....	Math. 9b.....		5

No time is provided in the co-operative schedule for these electives. They are offered only to those who may have credits in any of the regularly scheduled subjects, and consist of individual reading and laboratory work, with occasional consultations.

ELECTRICAL ENGINEERING

COURSES IN DETAIL

ALEXANDER MASSEY WILSON, M. E., Professor of Electrical Engineering.

CLARENCE RAYMOND WYLIE, M. E., Assistant Professor of Electrical Engineering.

CHARLES BARTH HOFFMANN, M. E., E. E., Instructor in Electrical Engineering.

1. Direct Current Machinery.—Fundamental principles of direct current machinery; characteristics, construction and operation of dynamos, motors and instruments.

Assistant Professor Wylie, Mr. Hoffmann.

9. Alternating Currents.—Alternating electromotive force and current; resistance, inductance, and capacity in alternating current circuits, graphical and analytical treatment; theory of the alternating current generator; polyphase currents.

Assistant Professor Wylie, Mr. Hoffmann.

5. Electrical Engineering, Laboratory.—Use and care of electrical instruments; characteristics of electric circuits; study of magnetic properties of iron and steel; operation of direct current dynamos and motors, with tests for characteristics, efficiency and losses.

Assistant Professor Wylie, Mr. Hoffmann.

2. Electrical Design.—Principles and methods employed in the design of direct current machinery.

Professor Wilson, Mr. Hoffmann.

3. Alternating Current Machinery.—Theory, characteristics, and performance of alternators, synchronous motors, rotary converters, transformers, frequency converters, induction motors, and commutator motors. Analytical and graphical treatment of alternating current circuits.

Professor Wilson.

4. Electric Power Transmission.—Electric conductors; distributing systems; interior wiring; long-distance transmission; economy in the design of circuits; line construction.

Assistant Professor Wylie.

6. Electric Railways.—The railway motor; controllers; rolling stock and equipment; train performance; power distribution; interurban electric railways.

Assistant Professor Wylie.

7. Advanced Electrical Engineering, Laboratory.—Measurement of power in alternating current circuits; experimental study of characteristics of alternators, transformers; single and polyphase induction motors; rotary converters, etc.

Assistant Professor Wylie, Mr. Hoffmann.

10. Illumination.—Principles of photometry; light sources—flame, illuminants, electric incandescent lamps, electric arc lamps; shades and reflectors; domestic illumination; lighting of large interiors; street lighting; decorative illumination.

Professor Wilson, Mr. Hoffmann.

11. Electric Power Stations.—The central power station, location and general arrangement; selection of generating units; switch gear; station wiring; storage battery. The substation.

Professor Wilson.

8. Thesis.—Special assignments.

15. Electrical Design (Advanced).—A continuation of Course 2, attention being given especially to the construction of alternating current machinery and installations.

Professor Wilson, Mr. Hoffmann.

12. Elementary Problems.—For students during third summer.

13. Elementary Laboratory.—For students during third summer. Miscellaneous laboratory in connection with problems.

MECHANICAL ENGINEERING

The University of Cincinnati is situated in the very heart of the manufacturing district of the Middle States, and is surrounded on all sides, within easy reach, by manufacturing communities, whose reputation is international. The students, therefore, have exceptional opportunities for visiting and studying many kinds of factories, and may see carried out in practice what is discussed in the class-room and laboratory. These extensive and varied manufacturing plants are, as it were, a great laboratory where machines, tools, and motors of every kind are made and tested. This is a rare condition of things, indeed, and offers to the student advantages quite superior to those provided by the largest engineering laboratory. The managers of these plants afford every opportunity to the students for study and tests.

Again, these large and diversified manufacturing interests surround the student with the proper engineering atmosphere, and bring him into almost daily contact with work and men in his chosen field. Naturally there is a great demand for young and trained engineers in such surroundings. Graduates are actively and successfully engaged in the different branches of mechanical engineering.

CO-OPERATIVE PLAN

The student of mechanical engineering finds at Cincinnati a wide field from which to select work fitted to his ability and temperament. Besides the power plants and railroad and car shops that are to be found in its vicinity, there are many factories which work up raw materials into a wide variety of machines. One group of factories is composed of machine tool builders; another group manufactures steam and air machinery, refrigerating plants, valves and fittings, pipe coverings, and insulating materials.

Co-operative students in mechanical engineering spend half of their time working in the factories, some of which are the largest of their kind in the world, and thus obtain the training that will make it possible for them to hold responsible positions as production engineers, superintendents, assistant superintendents, mechanical engineers, and designers. Co-operative students are at present working in foundries, steel works, machine tool shops, power plants, engine-building shops, drawing rooms, and time-setting and planning departments. More than half of the graduates secure positions in the factories in which they have worked.

The training given at the University covers the work of the

usual four-year course in mechanical engineering. Shop practice courses and purely descriptive matter have been eliminated, since this experience is gained in the factories of the city. The University work and the work in the factories are complementary, and the courses within the University have been carefully co-ordinated. The mechanical engineering laboratory is new and modern, and is fitted for experimental work in the testing of materials, machine tools, turbines, steam engines, producers, gas engines, and air machinery. Tests on refrigerating machinery are made in a plant of full size near the University. The University power plant of 900 H. P. has been arranged particularly for the testing of boilers.

MECHANICAL ENGINEERING—REGULAR PLAN
COURSES REQUIRED FOR THE DEGREE OF B. M. E.

SUBJECT	COURSE	Exercises Per Week	
		I Sem.	II Sem.
FRESHMAN YEAR			
Algebra and Trigonometry	Math. 1	5	
Analytical Geometry	Math. 1		5
English	English 1	3	3
Chemistry	Ch. E. 1a, 2a, 3b, 4b	5	5
Descriptive Geometry	C. E. 1		2
German or French	{ German 1 French 1 }	3	3
Machine Drawing	M. E. 1	2	
Elements of Engineering	M. E. 4	2	2
Physical Education	Phys. Educ. 1	2	2
Summer work in shops.			
SOPHOMORE YEAR			
Calculus	Math. 5	4	4
Physics	Physics 1a, 21b, 2a, 22b	4	4½
Steam Engineering	M. E. 11	3	3
Machine Drawing	M. E. 9	1	2½
Metallurgy	Met. E. 1a	4	
German or French	{ German 2 French 2 }	3	3
Physical Education	Phys. Educ. 2	2	2
M. E. Laboratory	M. E. 18	1	1
Elements of Engineering	M. E. 4	2	2
Summer work in shops.			
JUNIOR YEAR			
Mechanics of Engineering	Ap. Math. 2, 1	3	3
Machine Design	M. E. 13	2½	
Machine Design	M. E. 14, 19	2	2
Physics	Physics 13	2	1
Electrical Machinery	E. E. 1, 9	3	3
Electrical Laboratory	E. E. 5	2	2
Economics		2½	2½
Mathematics		1	
Hydraulic Machinery	M. E. 27		2½
English			2½
Summer work, Land Surv'g	C. E. 3	4 weeks	

SENIOR YEAR

Thermodynamics	M. E. 21.....		2½
Valve Gears.....	M. E. 22.....	5	
Gas Engineering.....	M. E. 23.....	2½	
Steam Turbines.....	M. E. 24.....		2
Mechanical Laboratory.....	M. E. 25.....	2	2
Engineering Design.....	M. E. 28.....	4	3
Heating and Ventilating.....	M. E. 30.....		2
Production Engineering.....		2½	
Machine Shop Tools.....	M. E. 15.....		1½
Thesis	M. E. 39.....		

Electives:

Astronomy	Astronomy 2a, 3b.....	1	1
Electric Power Trans- mission	} E. E. 4.....	3	
Geology			5	5
Alternating Current Mach'y.....	E. E. 3.....	5	5
Electrical Laboratory.....	E. E. 7.....	2	2

MECHANICAL ENGINEERING CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF M. E.

SUBJECT	COURSE	Exercises	
		Per Alternate I Sem.	Week II Sem.
FIRST YEAR	FRESHMAN		
Algebra and Trigonometry. } Analytical Geometry.....	Math. 1.....	6	6
General Inorganic Chemistry. } General Inorganic Chemistry } Laboratory	Ch. E. 1a, 3b..... Ch. E. 2a, 4b.....	5 3	5 3
Machine Drawing.....	M. E. 1.....	3	
Descriptive Geometry.....	C. E. 1.....		3
Co-ordination	C. 1.....	2	2
Elements of Engineering.....	M. E. 4.....	3	3
English	Eng. 41.....	1	1

FIRST SUMMER TERM

Elements of Engineering.....	M. E. 4.....	6	
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
English	Eng. 41.....	1	

SECOND YEAR

SOPHOMORE

Differential and Integral Calculus	} Math. 5.....	6	6
Physics (General).....				Physics 1a, 21b.....	6	6
Experimental Physics.....	Physics 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a.....	5	
Metallurgy, Laboratory.....			3
English	English		5
Drawing	M. E. 9.....		2
Co-ordination	C. 2.....	2	2
English	Eng. 42.....	1	1

1. Machine Drawing.—Details of standard machine parts, bolts, nuts, screws, etc. Methods of detailing pulleys, gears, shafting, and machine elements. Elementary descriptive geometry.

Mr. Joerger, Mr. Witte, Mr. Hoffmann.

4. Elements of Engineering.—The solution of problems by the triangle of forces; stresses in simple structural parts and beams.

Professor Faig, Professor Wilson,
Professor Braune, Mr. Moore, Mr. Joerger.

6. Mechanism.—A study of the transformation and modification of motion by means of toothed wheels, cams, screws, links, belts and chains. Kinematics of cone pulleys, speed boxes, back-gears and complete trains of mechanism; feeds and speeds on machine tools; curves of velocity and acceleration for shapers, engines, riveters and other linkages; proportions for spur, bevel, worm and spiral gears; advantages of the various standard proportions for gear teeth.

Associate Professor Jenkins and Mr. Joerger.

7. Drawing and Sketching.—Graphic representation of various methods of transmitting and modifying motions by means of mechanical devices. Cams, links, and toothed wheels.

Associate Professor Jenkins and Mr. Joerger.

9. Machine Drawing.—Detail drawings from measurements of machines. Assembled drawings of machines. Mr. Joerger.

11. Steam Engineering.—Elements and economy of simple and complete steam plants. Fuels, combustion, boilers, furnaces, stokers, smoke prevention, superheaters, coal and ash handling, chimneys, mechanical draft, steam engines, turbines, condensers.

Professor Faig, Mr. Collins, Mr. Joerger.

13. Machine Design.—Rational and empirical formulæ for the design of fastenings, links, shafts, couplings, clutches, belting, chains, and toothed wheels. Design of frames for engines, machine tools, and cranes. Associate Professor Jenkins.

14. Machine Design.—Design of a punching and shearing machine. Development of rational and empirical formulæ for determining the size of each element. Assembled and detailed drawings and complete calculations for a given machine are required of each student. Associate Professor Jenkins.

15. Machine Shop Tools.—A study of the forces, power and speed required to remove metal by turning, drilling, milling, and planing; the change in the efficiency and durability of tools produced by varying the angles, feeds, and speeds; feeds and speeds of various metal cutting machines compared with experimental laws based on authoritative tests. Associate Professor Jenkins.

17. Graphics of Mechanism.—A study of the forces involved

in mechanisms, their direction and magnitude, and of the mechanical efficiencies of various combinations of elements.

Associate Professor Jenkins.

18. Engineering Laboratory.—Tensile, compressive, and torsional tests of materials of construction, including iron, brass, steel, wood, brick, stone, leather belting, and concrete. Standardization of instruments; indicating; brake tests of steam engines, hot-air engines, and gas engines. Tests of machine tools. Tests of bearing metals and oils.

Mr. Collins, Mr. Joerger.

19. Machine Design.—A definite problem involving the design of a complete machine, to be presented in the form of working drawings, with written description and calculation of parts. Catalogues, text-books, and engineering journals are freely consulted.

Associate Professor Jenkins.

21. Thermodynamics.—Elastic media as heat carriers. Thermodynamics of gases, saturated vapors, and superheated steam. Temperature-entropy diagrams of the various cycles. Application of thermodynamics to steam and gas engines, air compressors, and refrigerating machines.

Professor Faig.

22. Valve Gears.—Analytical and graphical analysis of valve mechanisms. Methods of laying out the various forms of valve gears, link motions and reversing gears for the economical distribution of steam. Design of valves and governors for prime movers.

Professor Faig.

23. Gas Engineering.—Gas and oil engines. Power and efficiency. Frictional and valvular losses. Design, based upon an assumed card. Gas characteristics. Producer gas equipments and gas distribution.

Professor Faig.

24. Steam Turbines.—Historical development. Modern types. Critical study of the turbine as a heat motor and as a machine. Comparison with the most approved types of reciprocating engines.

Professor Faig.

25. Experimental Engineering.—Characteristics and economy of heat motors and their variation with conditions of operation. Analysis and full accounting of power losses. Experimental study of the forces acting on metal cutting tools. The efficiencies of machine tools. Determination of highest cutting speed of tools.

Professor Faig and Mr. Collins.

27. Hydraulic Machinery.—A study of the various types of hydrostatic presses, elevators, motors, turbines, accumulators, intensifiers, jacks, and tools. Hydraulic transmission of power and accessories; high pressure control; various types of pumps, their efficiencies and uses.

Associate Professor Jenkins.

28. Engineering Design.—A definite problem in the design or investigation of a machine, prime mover, auxiliary or plant. Free reference to machines and plants in the city bearing on the problem and to the library.
Professor Faig.

[29. Power Plants.] Lectures on the mechanical engineering of power plants.
Professor Faig.

Omitted in 1914-15.

30. Heating and Ventilation.—Methods of heating buildings by hot air, steam, and water. Motors, blowers, and mechanisms used in ventilating.
Professor Faig.

31. Compressed Air and Refrigeration.—Air compressors, motors and tools. Air storage and power transmission. Refrigeration.
Professor Faig.

39. Thesis.—Modified research or original design. Hours to be arranged.
Professor Faig, Associate Professor Jenkins,
Mr. Collins and Mr. Joerger.

Co-ordination 2. Discussion of questions arising in the student's shop work whenever such are of interest to the entire class. A continuation of the individual co-ordination, begun in the first year, of specialized types of shop work. Students are required to secure certain information and data from their shops as an aid in their study of Mechanism, Machine Design, Mechanics, Strength of Materials, Hydraulics, and Power Engineering.

A brief study is made of special shop processes which may not be encountered in the outside shop work of the students. The following subjects are typical: hot and cold drawing and heading, hot sawing, die-casting, special forms of precision work.

Mr. Robinson.

METALLURGICAL ENGINEERING

Students who select this course will receive shop training in foundries, steel works and other similar establishments. It is contemplated to make the experience cover not only the purely metallurgical department, but also the related machine shop and mechanical departments. The entire course, including shop experience and university work, is arranged with a view to training men for executive positions in metallurgical works.

The first two years of the course will be identical with those of the co-operative course in Chemical Engineering. During the remaining years, courses in chemistry and other engineering subjects will form part of the curriculum, but special attention will be paid to metallurgy.

METALLURGICAL ENGINEERING CO-OPERATIVE PLAN

The aim of the Co-operative Course in metallurgical engineering is to train men for executive positions in metallurgical industries; and since Cincinnati is in the center of an iron manufacturing district, and since also this branch is the predominant one of the metallurgical industries of the Central States, the attention of the course has been centered upon the problems in the metallurgy of iron and steel.

The practice of metallurgy is in large part the application of general engineering principles, and the course is built upon a foundation of mathematics and sciences which are generally recognized as fundamental to a sound engineering training; in addition, considerable time is devoted to the study of applied subjects in mechanical and electrical engineering. But metallurgy as a specialized branch of engineering practice is primarily dependent upon chemistry, and this subject occupies a prominent place in the earlier years of the course.

Direct instruction in metallurgy is given by means of class-room and laboratory work in the general principles of the art, and their application to the manufacture and treatment of iron and steel, and to the recovery of the more common metals other than iron. Considerable attention is given to the rapidly expanding field of utility of the electric current in the production of high temperatures for metallurgical operations. And the greatest emphasis is placed upon the application of the various metals and alloys to engineering construction; this training being gained by the study of the constitution of alloys, by chemical and physical tests of these materials, and by metallographic examination with the microscope and pyrometer.

The laboratories are equipped with the necessary furnaces, pyrometers, microscopes, and other accessory apparatus for the instruction work involved in the general subjects, and for the more advanced study of a specialized and investigative nature, which occupies a prominent place in the later years of the course.

Students in metallurgical engineering are placed in direct contact with the work and problems of this profession through co-operation with the industries of Cincinnati and vicinity. The first year is usually spent in the foundry, and the second in the machine shop. After this preliminary stage, more direct specialization is obtained by placing the men in foundries, coke ovens, blast furnaces, steel works and rolling mills, forge works, heat treatment departments, and industries of like metallurgical interest.

During the whole of the student's course, the shop work is planned and supervised by the University shop co-ordinators, and

the problems encountered are discussed in special classes at the University which are arranged for this purpose.

METALLURGICAL ENGINEERING

CO-OPERATIVE PLAN

COURSES REQUIRED FOR THE DEGREE OF MET. E.

SUBJECT	COURSE	Exercises	
		Per Alternate Week I Sem.	II Sem.
FIRST YEAR			
FRESHMAN			
Algebra and Trigonometry.....	} Math. 1.....	6	6
Analytical Geometry.....			
Chemistry	Ch. E. 1a, 3b.....	5	5
Chemistry, Laboratory.....	Ch. E. 2a, 4b.....	3	3
Machine Drawing.....	M. E. 1.....	3	3
Co-ordination	C. 3.....	2	2
History		6	6
FIRST SUMMER TERM			
Problems in Industrial Chemistry.....		6	
Descriptive Geometry.....		5	
Elements of Engineering.....		6	
SECOND YEAR			
SOPHOMORE			
Calculus	Math. 5.....	6	6
Physics, Lectures.....	Phys. 1a, 21b.....	6	6
Physics, Laboratory.....	Phys. 2a, 22b.....	2	3
Metallurgy	} Met. E. 1a.....	5	
Metallurgy, Laboratory.....			
Qualitative Analysis.....	Ch. E. 5, 6.....		5
English			6
Co-ordination	C. 4.....	2	2
SECOND SUMMER TERM			
Qualitative Analysis.....	Ch. E. 5, 6.....	} 12	
Quantitative Analysis.....	Ch. E. 7.....		
THIRD YEAR			
PRE-JUNIOR			
Quantitative Analysis.....	Ch. E. 7.....	3	
Physical Chemistry.....	Ch. E. 12a.....	5	
Physical Chemistry, Lab.....	Ch. E. 13a.....	2	
Electro Chemistry.....	Ch. E. 32b.....		5
Electro Chemistry, Lab.....	Ch. E. 33b.....		2
Steam Engineering.....	M. E. 11.....	6	6
Strength of Materials.....	Ap. Math. 2.....	6	
Mechanics			6
Modern Language.....		6	6
Testing Laboratory.....	M. E. 18.....		2
THIRD SUMMER TERM			
Metallography.....	} Met. E. 2.....	} 5	} 3
Metallography Lab.....			
Technical Analysis.....	Ch. E. 17.....	5	

FOURTH YEAR JUNIOR

Metallurgical Calculations.....	Met. E. 3a.....	5	
Metallurgy of Iron and Steel..	Met. E. 4b.....		5
Geology	Geology	5	5
Electrical Machinery.....	E. E. 1 and 9.....	6	6
Electrical Laboratory.....	E. E. 5.....	2	2
Modern Language.....		6	6
Co-ordination		3	3

FOURTH SUMMER TERM

Metallurgical Investigation....	Met. E. 5.....	5	
Metallurgical Design.....	Met. E. 10.....	5	
Conference	Met. E. 9.....	2	

FIFTH YEAR SENIOR

Non-Ferrous Metallurgy.....	Met. E. 6a.....	5	
Electro-Metallurgy	} Met. E. 7b..... }		4
Electro-Metallurgy, Lab.....			
Thesis	Met. E. 8.....	2	4
Economics		6	6
Conference	Met. E. 9.....	2	2
Hydraulic Machinery.....	M. E. 27.....		5
Gas Engineering.....	M. E. 23.....	5	
Machine Design.....	{ M. E. 13..... }	5	3

METALLURGY AND METALLURGICAL ENGINEERING

COURSES IN DETAIL

- LAUDER WILLIAM JONES, Ph. D., Professor of Chemistry.
 HENRY MAX GOETTSCH, Ph. D., Assistant Professor of Industrial
 Chemistry.
 JAMES ASTON, Ch. E., Assistant Professor of Metallurgy.
 _____, Instructor in Physical Chemistry.
 R. G. KNICKERBOCKER, B. S., Instructor in Metallurgy.

COURSES IN CHEMISTRY: A detailed description of the courses in Chemistry which form a part of the work required of the student in Metallurgical Engineering will be found under "Courses in Detail, Chemical Engineering," pp. 182-186.

- General Inorganic Chemistry, p. 182.
- Qualitative Analysis, p. 183.
- Quantitative Analysis, p. 183.
- Physical Chemistry, p. 184.

Electro-Chemistry, p. 184.

Technical Analysis, p. 183.

The following courses in Metallurgy and related subjects constitute the special training of students pursuing the course in Metallurgical Engineering.

1a. Engineering Metallurgy.—Lecture and laboratory course dealing with general principles in the metallurgy of constructive materials. Fuels, fluxes, slags, and refractory materials. Furnace types, efficiencies, and control. The extraction of iron, copper, lead, and zinc. Properties of industrial metals and alloys.

2. Metallography.—Lectures and laboratory work in the theory of the constitution of alloys. Pyrometry and the interpretation of cooling curves and freezing point diagrams. Microscopic examination of alloys and the relations of structure and physical properties. The heat treatment of steel.

3a. Metallurgical Calculations.—Class room study in the use of physical and chemical data in the calculation of metallurgical problems. Thermal reactions and their application to the efficiency of apparatus and processes.

4b. Metallurgy of Iron and Steel.—Lectures on the ores of iron and their treatment. Furnaces and materials of service in the iron industry. The manufacture of pig iron and steel. Rolling mill and casting methods. The properties of iron and steel.

5. Metallurgical Investigation.—Individual problems in advanced metallurgical research. Pyrometry, microscopic examination, heat treatment, slags, refractory materials, and study of special steels and industrial alloys.

6a. Non-Ferrous Metallurgy.—Lectures on the more common metals other than iron. The ores and their treatment, and the processes for the recovery of copper, lead, zinc, and some of the minor metals.

7b. Electro-Metallurgy.—Lectures and laboratory work on the principles of the generation of heat by means of the electric current. Types of furnaces and development in special industries. The electrometallurgy of iron and steel.

8. Thesis.—A special metallurgical problem of experiment or design.

9. Conference.—A weekly meeting for the discussion of specific problems or details of processes or operations which cannot con-

sistently be covered in the regular classes. A clearing house for the consideration of scattered topics of interest to the metallurgical engineer.

10. Metallurgical Design.—Problem and drafting room work in the design of metallurgical equipment.

CO-ORDINATION

CURTIS C. MYERS, M. M. E., Professor in Charge of Co-ordination.
 JOHN T. FAIG, M. E., . . . Professor of Mechanical Engineering.
 LAUDER W. JONES, Ph. D., Professor of Chemistry.
 ALEXANDER M. WILSON, M. E., Professor of Electrical Engineering.
 GUSTAVE M. BRAUNE, C. E., Associate Professor of Civil Engineering.
 ALEXANDER L. JENKINS, M. E., Associate Professor of Mechanical
 Engineering.
 JAMES ASTON, Ch. E., . . . Assistant Professor of Metallurgy.
 MAX B. ROBINSON, M. E., Instructor in Co-ordination.
 GEORGE R. MOORE, C. E., Instructor in Civil Engineering.
 CHARLES A. JOERGER, M. E., Instructor in Mechanical Engineering.
 JOHN J. LONG, M. S., Instructor in Civil Engineering.
 R. G. KNICKERBOCKER, B. S., Instructor in Metallurgy.

C-1. For First Year M. E., E. E., and Ch. E. Students

Lectures and recitations supplementing those types of the student's shop work that are of interest to the entire class. A study and co-ordination of specialized types of work, not of general interest, by means of individual conferences and a specially devised system of shop co-ordination pamphlets.

A series of inspection trips to foundries, to electrical, mechanical, and chemical industries, and to the Cincinnati water works plant, showing the scope of the engineering professions. Lectures are given covering each trip, and written reports are required.

Mr. Robinson.

C-3. For First Year Met. E. Students

Discussion of questions arising from the student's work in the foundries. Selected topics dealing with special phases of foundry operation, such as foundry materials, foundry lay-outs, melting practice, etc.

Assistant Professor Aston.

C-5. For First Year C. E. Students

Discussion of questions arising from the student's outside work. Lectures and recitations supplementing and co-ordinating the outside work. Inspection trips as in C. 1. Professor Myers.

C-2. For Second Year E. E. Students

See outline of courses in Electrical Engineering Department.

For Second Year M. E. Students

See outline of courses in Mechanical Engineering Department.

C-4. For Second Year Ch. E. and Met. E. Students

A study of the mechanical equipment used in the chemical industries: crushers, mixers, stills, evaporators, condensers, presses, dryers, pumps. Materials used in the construction of these, with reasons, and the application of the student's experience to the construction, maintenance, and repair of such equipment.

A continuation of the individual study begun in the first year of the specialized types of the student's work and the problems in connection therewith. Mr. Robinson.

C-6. For Second Year C. E. Students

See outline of courses in Civil Engineering Department.

Courses 8, 9. For All Co-operative Engineers

C. 8. Production Engineering.—Lectures and recitations. Factory organization and cost accounting. Routing of work. Labor and time-saving machinery. Power economy. Inspection and testing. Contracts. For fourth year students.

C. 9. Production Engineering.—Lectures and recitations.—Fatigue and incentive. Sales organization. Process efficiency. Business economy. Special problems. For fifth year M. E. and E. E. students.

C. 10. Shop Processes and Tools.—Jigs and fixtures. Punches and dies. Labor saving devices. Processes in the shop. Analysis of necessary tools which enter into the manufacture of various machine parts on an interchangeable basis.

SPECIAL COURSES IN ENGINEERING

Special courses for young men who have had practical experience in some branch of Engineering and who desire to become more efficient in the advanced theory of their work, will be arranged by the Dean of the College of Engineering, and every facility will be offered to enable such men to obtain the special work which they desire without their being candidates for the engineering degree.

GENERAL COURSES

APPLIED MATHEMATICS

1. Technical Mechanics.—Slocum, *Theory and Practice of Mechanics*; Sanborn, *Mechanics Problems*. A course in applied mechanics, comprising kinematics, kinetics, statics, and dynamics, with technical applications. *Second semester*, Sec. I, 9:30-10:30, Sec. II, 10:30-11:30, daily. Professor Slocum.

2. Strength of Materials.—Slocum and Hancock, *Strength of Materials*; Shepard, *Problems in the Strength of Materials*. An introductory course in the mechanics of materials, including the fundamental relations between stress and deformation, tensile, compressive and shearing stresses, Hooke's law and Young's modulus, Poisson's ratio, modulus of rigidity, theory of beams, elastic curve, shear and bending moment diagrams, columns, torsion, and combined bending and torsion, with numerous practical applications. *First semester*, Sec. I, 9:30-10:30, Sec. II, 10:30-11:30, daily. Sec. II, 10:30-11:30, daily. Professor Slocum.

16a. Theoretical Mechanics. *First semester*, M., 4:00-6:00; W., 4:00-5:00. Professor Slocum.

16b. The Mathematical Theory of Elasticity. *Second semester*, M., 4:00-6:00; W., 4:00-5:00. Professor Slocum.

[10a. Theory of Errors and Method of Least Squares.] *First semester*, M., 4:00-5:00; W., 4:00-5:00. Professor Slocum.

Omitted in 1914-15.

[11b. Fourier's Series and Spherical Harmonics.] *Second semester*, M., 4:00-5:00; Th., 4:00-6:00. Professor Slocum.

Omitted in 1914-15.

[26. The History and Teaching of Mathematics.] M., 4:00-6:00. *Throughout the year*. Professor Slocum.

Omitted in 1914-15.

30. Seminary.—Hours by special arrangement. Professor Slocum.

For detailed description of Courses 16a, 16b, 10a, 11b, 26, and 30, see Mathematics, College of Liberal Arts.

ASTRONOMY

3. Spherical and Practical Astronomy.—Text-books: Campbell's *Elements of Practical Astronomy*; Chauvenet's *Spherical and Practical Astronomy*. Once a week throughout the year. Professor Porter.

4. Celestial Mechanics.—Investigation of the fundamental equations of motion and of the formulae for determining the positions of bodies revolving about the sun. Computation of orbits. Text-books: Watson's *Theoretical Astronomy*. Once a week throughout the year. Professor Porter.

Courses 3 and 4 will be given ordinarily at the Observatory. Hours to be arranged.

ECONOMICS

(The Sinton Professorship)

40. General Economics.—This course aims to give the student a general understanding of the working of the economic world. It includes the study of (1) the fundamental concepts of the science; (2) the determination of prices, wages, rent, interest, and profits; and (3) discussions of such economic problems as money, banking, tariffs, trusts, labor organizations, railroads, plans for economic reform, and taxation.

ENGLISH

1. English Composition.—This course presents a general survey of the principles of English composition and endeavors to enforce them by practice in writing. A certain amount of reading in English literature is also required. (For regular students only.)

Assistant Professors McVea, Young, Van Wye,
Park, Stevens.

2a. Argumentation.—(For regular students only.) *First semester*, T., Th., 8:30-9:30. Assistant Professor Van Wye.

2c. Advanced English Composition.—This course includes practice in the writing and criticism of expository and argumentative compositions. Models for class exercises are taken from current issues of a standard technical journal. The collection and use of bibliography for long themes is an important part of the work. Some time is devoted to the study of literary types. (For second year co-operative students only.) *Second semester*, M., T., W., Th., F., 10:30-11:30. Assistant Professor Park, Mr. Plock.

In the following courses for co-operative students, inspection-trip, laboratory, and special reports are written under the direction of the English Department. One hour of credit is given for the work of each semester and for that of each summer term. Written

criticism of reports is supplemented by conferences, and, in the first year, by lectures on the principles of English Composition. Conference hours to be arranged.

41. First-Year Reports and Conferences.—Three credits.

42. Second-Year Reports and Conferences.—Two credits.
(Omitted during the first semester.)

43. Third-Year Reports and Conferences.—Three credits.

44. Fourth-Year Reports and Conferences.—Three credits.

45. Fifth-Year Reports and Conferences.—Two credits. The work of this year includes the preparation of a thesis.

Assistant Professor Park, Mr. Plock.

GEOLOGY AND GEOGRAPHY

1. An introductory study of minerals and rocks, dynamic geology, origin and classification of topographic forms, atmosphere and ocean; followed by a brief study of the physiography of the United States. Lectures, M., W., F., 8:30-9:30. Laboratory sections meet as follows:

M., W., 2:00-4:30.

T., Th., 9:30-12:00.

T., Th., 2:00-4:30.

T., Th., 1:00-3:30.

Professor Fenneman, Dr. Bucher, and Assistant.

2. General Geology.—This course is primarily for co-operative engineering students. An introductory study of minerals and rocks, dynamic geology and topography, followed in the second semester by structural and economic geology. Lectures, T., Th., F., 9:30-10:30; Laboratory, M., W., 9:30-11:30.

Assistant Professor Carman.

5b. Field Geology and Survey Methods.—The study and mapping of assigned areas in the vicinity of Cincinnati. Students work singly or in parties of two, and submit typewritten reports with topographic and geologic maps. *Second semester.* Hours to be arranged by agreement with each party. Credit according to number of hours elected. Course 1 is prerequisite.

Assistant Professor Carman.

9. Historical Geology.—Chiefly the geology of North America, its physical history, life development and structure; special attention given to the economic deposits of each period. Frequent local (half-day) excursions noting fossils, stratigraphy, physiography, and economic relations. Lectures, T., Th., 8:30-9:30; Laboratory, M., 2:00-5:00. Course 1 is prerequisite.

Assistant Professor Carman.

[15. An Introductory Course in Geology for First-Year Co-operative Engineers.] Lecture, M., T., 9:30-10:30.

Omitted in 1914-15.

Assistant Professor Carman.

GERMAN, FRENCH, OR SPANISH

40. Elementary German, French, or Spanish, for Co-operative Students.—Grammar, translation from German, French, or Spanish, into English, and elementary exercises in translating into German, French, or Spanish. Conversation in the foreign tongue.

Mr. Ludwich.

41. Second Year German, French, or Spanish, for Co-operative Students.—Translation from German, French, or Spanish, into English, with special emphasis on scientific and commercial German, French, or Spanish. This course is given wholly in the foreign tongue.

Mr. Ludwich.

MATHEMATICS

1. Algebra—Trigonometry—Analytic Geometry.—Selected portions of algebra and the elementary theory of equations. Rietz and Crathorne, *College Algebra*. Trigonometry: Murray, *Trigonometry*. Analytic Geometry: Riggs, *Analytic Geometry*.

Sec. I, Mr. Kindle, 8:30-9:30, daily.

Sec. II, Mr. Smith, 8:30-9:30, daily.

Sec. III, Assistant Professor Brand, 8:30-9:30, daily.

Sec. IV, Assistant Professor Moore, 8:30-9:30, daily.

Sec. V, Assistant Professor Moore, 10:30-11:30, M., T., Th., F. (for regular engineers).

5. Calculus, Differential and Integral.—Osborne, *Calculus*; Davis, *Calculus*.

Sec. I, Professor Hancock, 10:30-11:30, M., T., Th., F.

Sec. II, Assistant Professor Brand, 9:30-10:30, daily.

Sec. III, Mr. Kindle, 9:30-10:30, daily.

Sec. IV, Mr. Smith, 9:30-10:30, daily.

35. Colloquium.—Calculus; applications.

Sec. I, Assistant Professor Brand.

Sec. II, Mr. Kindle.

Sec. III, Mr. Smith.

} W., Th., 1:00-5:00.

[6a. Advanced Analytic Geometry of Two Dimensions.] C. Smith, *Conic Sections*. Lectures. Mr. Kindle.

Course 6a is open to those who have passed in Course 5.
Omitted in 1914-15.

[7b. Analytic Geometry of Three Dimensions.] The plane, straight line, and quadric surfaces; theory of surfaces and curves.

C. Smith, *Solid Geometry*. Lectures. Mr. Kindle.

Course 7b is open to those who have passed in Course 5.
Omitted in 1914-15.

8a. Advanced Integral Calculus.—Byerly, *Integral Calculus*. Lectures. Professor Hancock.

36. Vector Analysis.—Theory and applications. Lectures.

Prerequisite: Math. 5. Assistant Professor Brand.

PHYSICAL EDUCATION

Physical Training.—All students are required to take five hours per week in the Department of Physical Education. It is expected that these hours will be distributed as follows: Three hours per week for all members of the Freshman class (lectures on hygiene, one hour; work in the gymnasium, two hours), and two hours per week for all members of the Sophomore class. Departures from this rule will be allowed under exceptional conditions only, for which special permission must be secured from the Dean in advance.

A physical examination is required of each student of the two lower classes upon entrance and upon completion of the required work. Appointments for the examination should be made with the Physical Director at the beginning of the first semester.

Credit: One credit will be given for each semester's work.
Mr. Brodbeck.

PHYSICS

1a. General Physics.—Lectures and recitations on Mechanics and Heat, illustrated with experimental demonstrations. M., T., W., Th., F., S., 8:30-9:30.

21b. General Physics.—Lectures and recitations on Light, Electricity, and Magnetism, illustrated with experimental demonstrations. M., T., W., Th., F., S., 8:30-9:30. Dr. Gowdy.

2a. Experimental Physics.—Laboratory work arranged to accompany Course 1a. M., F., 1:00-4:00. Dr. Gowdy.

22b. Experimental Physics.—Laboratory work arranged to accompany Course 21b. W., F., 1:00-4:00; S., 10:30-1:00.

Dr. Gowdy.

13b. Electrical Measurements.—Laboratory exercises with instruments of precision. W., Th., 1:00-5:00.

Associate Professor Allen.

32. Principles of Physical Science.—Lectures on the fundamental principles of mathematical physics and their application to the most important problems. Twice weekly. Professor More.

COLLEGE OF MEDICINE

FACULTY AND INSTRUCTORS

- CHARLES WILLIAM DABNEY, Ph.D., LL.D., President of the University.
CHRISTIAN R. HOLMES, M. D., Professor of Otology and Dean of
8 E. Eighth St. the College of Medicine.
FRANK B. CROSS, M. D., Assistant Clinical Professor of Ophthalmology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
J. C. MACKENZIE, M. D., Clinical Professor of Medicine, Emeritus.
624 W. Eighth St.
CHAUNCEY D. PALMER, M. D., Professor of Obstetrics and Gynecology, Emeritus.
Reading Rd. and Forest Ave., Avondale.
BYRON STANTON, M. D., Professor of Diseases of Women and Children, Emeritus.
Savannah Ave., College Hill.
ALEXANDER GREER DRURY, A. M., M. D., Professor of Hygiene, Emeritus.
886 Lincoln Ave., Walnut Hills.
STEPHEN COOPER AYRES, A. M., M. D., Professor of Ophthalmology, Emeritus.
4 W. Seventh St.
PHILIP ZENNER, A. M., M. D., . Professor of Neurology, Emeritus.
14 Glenn Building.
E. W. WALKER, M. D., . Professor of Clinical Surgery, Emeritus.
30 W. Eighth St.

The names of the teaching staff are arranged by departments:

- HENRY McELDERRY KNOWER, Ph. D., . . . Professor of Anatomy.
3438 Middleton Ave., Clifton.
EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.
The Maplewood, Clifton.
ROBERT CHAMBERS, JR., Ph. D., Assistant Professor of Histology and Comparative Anatomy.
345 Thrall Ave., Clifton.
MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.
The Maplewood, Clifton.
EDMUND M. BAEHR, M. D., . Assistant Professor of Physiology.
Fourth and Sycamore Sts.
LAUDER W. JONES, Ph. D., Professor of Chemistry.
3457 Whitfield Ave., Clifton.
HARRY SHIPLEY FRY, Ph. D., . Associate Professor of Chemistry.
2269 Washington Ave., Norwood.
EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Chemistry and of Physiological Chemistry.
3471 Cheviot Ave., Westwood.

- PAUL GERHARDT WOOLLEY, B. S., M. D., Mary M. Emery Professor of Pathology.
343 Bryant Ave., Clifton.
- WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor of Bacteriology.
759 E. Ridgeway Ave., Avondale.
- CHARLES GOOSMANN, M. D., Instructor in Pathology.
1203 Walnut St.
- GILBERT MOMBACH, M. D., Instructor in Pathology
22 W. Seventh St.
-
- JULIUS H. EICHBERG, Ph. G., Ph. D., M. D., Professor of Materia Medica, Pharmacology, and Therapeutics.
55 Groton Building.
- C. C. FIHE, M. D., Lecturer in Dietetics and Instructor in Therapeutics.
19 W. Seventh St. (32)
- RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Therapeutics.
Fountain Ave., Glendale.
- WILLIAM C. HERMAN, Ph. G., M. D., Instructor in Materia Medica and Pharmacology.
19 W. Seventh St.
- SIDNEY LANGE, A. B., M. D., Lecturer and Demonstrator of Radiology.
5 Garfield Pl.
- H. KENNON DUNHAM, M. D., Lecturer and Demonstrator of Electrotherapeutics.
McMillan St. and Auburn Ave., Mt. Auburn.
- LOUIS G. SCHRICKEL, Ph. G., M. D., Instructor in Pharmacy and Pharmacist to Dispensary.
1635 Walnut St.
- DAVID ANDREW TUCKER, JR., A. M., Instructor in Pharmacology in Charge of the Laboratory.
No. 11, The Westmoreland, Mt. Auburn.
-
- EDWIN W. MITCHELL, A. B., M. D., Professor of Medicine.
4 W. Seventh St.
- GEORGE A. FACKLER, M. D., Professor of Clinical Medicine.
19 W. Seventh St.
- OLIVER P. HOLT, M. D., Clinical Professor of Medicine.
134 W. Ninth St.
- JOHN ERNEST GREIWE, A. M., M. D., Associate Professor of Medicine.
32 Garfield Pl.
- MARK A. BROWN, M. D., Associate Professor of Medicine.
628 Elm St.
- HENRY WALD BETTMANN, B. L., M. D., Adjunct Professor of Medicine.
4 W. Seventh St.
- ALLAN RAMSEY, B. S., M. D., Assistant Professor of Medicine.
19 W. Seventh St.
- OSCAR BERGHAUSEN, A. B., M. D., Assistant Professor of Medicine.
19 W. Seventh St.
- CHARLES SUMNER ROCKHILL, M. D., Clinical Instructor in Medicine.
Lancaster Building.
- C. C. FIHE, M. D., Clinical Instructor in Medicine.
19 W. Seventh St.
- LOUIS G. HEYN, M. D., Clinical Instructor in Medicine.
22 W. Seventh St.

- OTTO J. SEIBERT, M. D., Clinical Instructor in Medicine.
913 Dayton St.
- CHARLES P. KENNEDY, M. D., . . . Clinical Instructor in Medicine.
3329 Gilbert Ave., Walnut Hills.
- J. D. SPELMAN, M. D., Clinical Instructor in Medicine.
1828 Freeman Ave.
- JULIUS G. STAMMEL, M. D., . . . Clinical Instructor in Medicine.
3477 Montgomery Ave., Evanston.
- MARCUS E. WILSON, M. D., . . . Clinical Instructor in Medicine.
248 Pike St.
- HENRY LYNDE WOODWARD, M. D., Demonstrator of Clinical
No. 1, Melrose Building, Walnut Hills. Microscopy in Medicine.
- C. E. SHINKLE, M. D., Clinical Instructor in Medicine.
705 Livingston Building.
-
- B. K. RACHFORD, M. D., Professor of Paediatrics.
323 Broadway.
- ALFRED FRIEDLANDER, A. B., M. D., Associate Professor of Paediatrics.
4 W. Seventh St.
- FRANK H. LAMB, A. M., M. D., Assistant Clinical Professor of
940 E. McMillan St. Paediatrics.
- MAX DREYFOOS, M. D., Clinical Instructor in Paediatrics.
19 W. Seventh St.
- EDWARD A. WAGNER, M. D., . . . Clinical Instructor in Paediatrics.
3104 Jefferson Ave., Clifton.
- EDWARD D. ALLGAIER, A. B., M. D., Clinical Instructor in Paediatrics.
Epworth and Junietta Aves., Westwood.
- JOHN T. BATTE, M. D., Clinical Instructor in Paediatrics.
19 W. Seventh St.
- CHARLES K. ERVIN, M. D., . . . Clinical Instructor in Paediatrics.
2 Klinckhamer Building.
- E. I. FOGEL, M. D., Clinical Instructor in Paediatrics.
723 W. Eighth St.
- WILLIAM J. GRAF, M. D., . . . Clinical Instructor in Paediatrics.
No. 1, Melrose Building, Walnut Hills.
- GEORGES RASSETTI, M. D., . . . Clinical Instructor in Paediatrics.
16 Garfield Pl.
- IDA M. WESTLAKE, M. D., . . . Clinical Instructor in Paediatrics.
No. 1, Melrose Building, Walnut Hills.
- JAMES M. BENTLEY, M. D., . . . Clinical Instructor in Paediatrics.
705 Livingston Building.
- FRANK W. CASE, M. D., Clinical Instructor in Paediatrics.
2807 Erie Ave., Hyde Park.
- ERIC R. TWACHTMAN, A. B., M. D., Clinical Instructor in Paediatrics.
1401 Union Central Building.
- CHARLES A. STAMMEL, JR., M. D., Clinical Instructor in Paediatrics.
113 W. McMillan.
- J. VICTOR GREENBAUM, M. D., . Clinical Instructor in Paediatrics.
4 W. Seventh St.
-

- FRANK WARREN LANGDON, M. D., . . . Professor of Psychiatry.
4003 Rose Hill Ave., Avondale.
- HERMAN HENRY HOPPE, A. M., M. D., . Professor of Neurology.
19 W. Seventh St.
- DAVID I. WOLFSTEIN, M. D., Assistant Clinical Professor of Nervous
22 W. Seventh St. Diseases
- EDMUND M. BAEHR, M. D., Assistant Clinical Professor of Nervous
Fourth and Sycamore Sts. Diseases
- ROBERT INGRAM, M. D., Clinical Instructor in Psychiatry.
20, Norfolk Building.
- CHARLES E. KIELY, A. B., M. D., Clinical Instructor in Neurology.
City Hospital.
- WILLIAM L. SHANNON, A. B., M. D., Assistant Clinical Instructor in
City Hospital. Neurology.

-
- MEYER L. HEIDINGSFELD, Ph. B., M. D., Professor of Dermatology
19 W. Seventh St. and Syphilology.
- AUGUSTUS RAVOGLI, A. M., M. D., Clinical Professor of Dermatology
5 Garfield Pl. and Syphilology.
- ELMORE B. TAUBER, M. D., Clinical Instructor in Dermatology and
19 W. Seventh St. Syphilology.
- JAMES W. MILLER, M. D., Clinical Instructor in Dermatology and
Seventh and Race Sts. Syphilology.
- MOSES SCHOLTZ, M. D., Clinical Instructor in Dermatology and
22 W. Seventh St. Syphilology.

-
- JOSEPH RANSOHOFF, M. D., F. R. C. S. (Eng.), Professor of Surgery.
19 W. Seventh St.
- JOHN CHADWICK OLIVER, M. D., . Professor of Clinical Surgery.
Berkshire Building.
- CHARLES EDWARD CALDWELL, A. M., M. D., Associate Professor of
Surgical Anatomy and Clinical Professor of Surgery.
4 W. Seventh St.
- E. OTIS SMITH, M. D., Adjunct Professor of Genito-Urinary Dis-
19 W. Seventh St. eases
- FRANK FEE, M. D., Clinical Professor of Surgery.
22 W. Seventh St.
- ARCHIBALD I. CARSON, M. D., . . Clinical Professor of Surgery.
410 Broadway.
- CARL HILLER, M. D., . . Assistant Clinical Professor of Surgery.
19 W. Seventh St.
- HARRY HAYES HINES, M. D., Assistant Clinical Professor of Surgery.
34 W. Eighth St.
- GOODRICH BARBOUR RHODES, A. B., M. D., Assistant Clinical Professor
4 W. Seventh St. of Surgery.
- DUDLEY WHITE PALMER, B. S., M. D., Assistant Clinical Professor of
4 W. Seventh St. Surgery.

- CHARLES A. LANGDALE, M. D., Assistant Clinical Professor of Surgery.
5 Garfield Pl.
- CASPER F. HEGNER, M. D., . . . Assistant Professor of Surgery.
Berkshire Building.
- JOHN A. CALDWELL, M. D., . . . Clinical Instructor in Surgery.
350 Ludlow Ave., Clifton.
- DUDLEY WEBB, M. D., Clinical Instructor in Genito-Urinary Surgery.
409 Broadway.
- J. EDWARD PIRRUNG, M. D., . . . Clinical Instructor in Surgery.
1218 Walnut St.
- CARLETON G. CRISLER, M. D., . Assistant Demonstrator in Surgery.
Groton Building.
- RALPH STALEY, M. D., Clinical Instructor in Genito-Urinary Surgery.
421 Clark St.
- CHARLES T. SOUTHER, M. D., . . . Clinical Instructor in Surgery.
Berkshire Building.
- GUY G. GIFFEN, M. D., Clinical Instructor in Surgery.
5 Garfield Pl.
-
- SIMON PENDLETON KRAMER, M. D., Professor of Clinical Surgery.
22 W. Seventh St.
-
- ALBERT HENRY FREIBERG, M. D., Professor of Orthopedic Surgery.
19 W. Seventh St.
- ROBERT CAROTHERS, M. D., Clinical Professor of Orthopedic Surgery.
409 Broadway.
- ROBERT DANIEL MADDON, M. D., Clinical Instructor in Orthopedic
4 W. Seventh St. Surgery.
- R. B. COFIELD, M. D., . Clinical Instructor in Orthopedic Surgery.
19 W. Seventh St.
- OWEN C. FISK, M. D., Assistant Clinical Instructor in Orthopedic
3444 Liston Ave., Riverside. Surgery.
-
- E. GUSTAV ZINKE, M. D., Professor of Obstetrics.
4 W. Seventh St.
- WILLIAM D. PORTER, A. M., M. D., Clinical Professor of Obstetrics.
No. 1, Melrose Building, Walnut Hills.
- GEORGE M. ALLEN, M. D., . . . Clinical Professor of Obstetrics.
2404 Auburn Ave., Mt. Auburn.
- JAMES WILLIAM ROWE, A. B., M. D., Assistant Professor of Obstetrics.
20 W. Ninth St.
- HENRY LYNDE WOODWARD, M. D., . . . Instructor in Obstetrics.
No. 1, Melrose Building, Walnut Hills.
-
- CHARLES LYBRAND BONIFIELD, M. D., . Professor of Gynecology.
409 Broadway.
- CHARLES ALFRED LEE REED, A. M., M. D., Professor of Clinical
60 Groton Building. Gynecology.
- JOHN M. WITHROW, A. M., M. D., Professor of Clinical Gynecology.
22 W. Seventh St.

- RUFUS BARTLETT HALL, A. M., M. D., Professor of Clinical
19 Berkshire Building. Gynecology.
- SIGMAR STARK, M. D., Professor of Clinical Gynecology.
11½ E. Eighth St.
- JOHN D. MILLER, M. D., . . . Clinical Instructor in Gynecology.
Cor. Eighth and Elm Sts.
- BENJAMIN W. GAINES, M. D., . Clinical Instructor in Gynecology.
409 Broadway.
- JOHN E. STEMLER, M. D., . . . Clinical Instructor in Gynecology.
103 W. McMillan St.
- JOSEPH S. PODESTA, M. D., . . Clinical Instructor in Gynecology.
428 Broadway.
- GEORGE B. TOPMOELLER, M. D., . Clinical Instructor in Gynecology.
30 Findlay St.
-
- ROBERT SATTLER, M. D., Professor of Ophthalmology.
30 Groton Building.
- DERRICK T. VAIL, M. D., . Clinical Professor of Ophthalmology.
24 E. Eighth St.
- WALTER FORCHHEIMER, A. B., M. D., Clinical Professor of Ophthal-
Fourth and Sycamore Sts. mology.
- CHARLES W. TANGEMAN, M. D., Clinical Professor of Ophthalmology.
20 W. Ninth St.
- VICTOR RAY, M. D., Assistant Clinical Professor of Ophthalmology.
30 Groton Building.
- WYLIE MCLEAN AYRES, A. B., M. D., Assistant Clinical Professor of
4 W. Seventh St. Ophthalmology.
- FRANK B. CROSS, M. D., Assistant Clinical Professor of Ophthal-
mology and Secretary of the Faculty of the College of Medicine.
4 W. Seventh St.
- JOHN RANLY, M. D., . . . Clinical Instructor in Ophthalmology.
936 Clark St.
- CLARENCE J. KING, M. D., . Clinical Instructor in Ophthalmology.
Groton Building.
- K. L. STOLL, M. D., . . . Clinical Instructor in Ophthalmology.
19 W. Seventh St.
- HORACE F. TANGEMAN, M. D., Assistant Clinical Instructor in
20 W. Ninth St. Ophthalmology.
- FRANK U. SWING, M. D., Assistant Clinical Instructor in Ophthal-
705-06 Livingston Building. mology.
- EDWARD KING, M. D., Assistant Clinical Instructor in Ophthalmology.
936 Clark St.
- CHRISTIAN R. HOLMES, M. D., Professor of Otology and Dean of the
8 E. Eighth St. College of Medicine.
- JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryn-
Berkshire Building, 628 Elm St. gology.
- JOHN WESLEY MURPHY, A. M., M. D., Clinical Professor of Laryn-
4 W. Seventh St. gology and Otology.

- SAMUEL IGLAUER, B. S., M. D., . Associate Professor of Otology.
22 W. Seventh St.
- WALTER E. MURPHY, M. D., Associate Professor of Laryngology and
Clinical Instructor in Rhinology, Laryngology, and Otology.
Berkshire Building.
- WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- W. J. THOMASSON, M. D., Clinical Instructor in Rhinology,
942 York St., Newport, Ky. Laryngology, and Otology.
- GEORGE L. KRIEGER, M. D., Clinical Instructor in Laryngology and
4804 Central Ave., Madisonville. Otology.
- CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology,
19 W. Seventh St. Laryngology, and Otology.
- ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryn-
22 W. Seventh St. gology and Otology.

JOHN HOWARD LANDIS, M. D., Professor of Hygiene.
City Hall.

LECTURER ON SPECIAL TOPICS

OTIS H. FISK, Ph. D., Dr. Juris., LL. B., . Medical Jurisprudence.
Mercantile Library Building.

OTHER OFFICERS

- J. DEWITT SCHONWALD, M. D., Director of Dispensary.
5654 Hamilton Ave., College Hill.
- L. M. PRINCE, Optician.
108 W. Fourth St.
- FRANK B. CROSS, M. D., . . . Secretary of the Medical Faculty.
4 W. Seventh St.
- DANIEL LAURENCE, B. S., Secretary of the University.
Office, 6 McMicken Hall, Burnet Woods
- FRANCES CURRIE, . Secretary and Librarian of the Medical College.
111 E. Auburn Ave.
- ANNA L. HOOK, . . Secretary to the Dean of the Medical College.
2123 Sinton Ave.

TECHNICAL ASSISTANTS

- HENRY LOUHIER, Anatomy.
McMicken Cottage.
- DAISY CLARK, Pathology.
40 E. McMillan St.
- JOSEPH KUPKA, Physiology.
2221 Victor St.

THE COLLEGE DISPENSARY

- Director of Dispensary: J. DEWITT SCHONWALD, M. D.
Physician-in-Chief: EDWIN MITCHELL, M. D.
Professor of Surgery: JOSEPH RANSOHOFF, M. D., F. R. C. S. (Eng.).
Professor of Clinical Surgery: JOHN C. OLIVER, M. D.

Paediatrician-in-Chief: B. K. RACHFORD, M. D.

Neurologist-in-Chief: H. H. HOPPE, M. D.

Ophthalmologist-in-Chief: ROBERT SATTLER, M. D.

Otologist-in-Chief: CHRISTIAN R. HOLMES, M. D.

Laryngologist-in-Chief: JOHN ALBERT THOMPSON, B. S., A. M., M. D.

Genito-Urinary Surgeon-in-Chief: E. O. SMITH, M. D.

Dermatologist-in-Chief: MEYER L. HEIDINGSFELD, M. D.

Orthopedic Surgeon-in-Chief: ALBERT H. FREIBERG, M. D.

Gynecologist-in-Chief: CHARLES L. BONIFIELD, M. D.

Obstetrician-in-Chief: E. GUSTAVE ZINKE, M. D.

DEPARTMENT OF MEDICINE

A. GENERAL MEDICINE

Chief of Clinic: OSCAR BERGHAUSEN, M. D.

Assistant Physicians:

OTTO J. SEIBERT, M. D.

MARCUS E. WILSON, M. D.

CHARLES P. KENNEDY, M. D.

J. D. SPELMAN, M. D.

JULIUS G. STAMMEL, M. D.

C. E. SHINKLE, M. D.

B. TUBERCULOSIS

(Clinics held at Sanitarium)

Chief of Clinic: H. KENNON DUNHAM, M. D.

Associates:

DUDLEY PALMER, B. S., M. D., Surgery

WM. MITHOEFER, M. D., Nose and Throat

R. D. MADDOX, M. D., Orthopedics

WYLIE McLEAN AYRES, A. B., M. D., Eye and Ear

C. NEUROLOGY

Chief of Clinic: CHARLES E. KIELY, A. B., M. D.

Assistant Neurologist: WILLIAM L. SHANNON, A. B., M. D.

D. PAEDIATRICS

Paediatrician-in-Chief: B. K. RACHFORD, M. D.

Assistant Paediatricians:

MAX DREYFOOS, M. D.

WILLIAM J. GRAF, M. D.

EDWARD A. WAGNER, M. D.

GEORGES RASETTI, M. D.

EDWARD D. ALLGAIER, M. D.

IDA M. WESTLAKE, M. D.

JOHN T. BATTE, M. D.

JAMES M. BENTLEY, M. D.

CHARLES K. ERVIN, M. D.

FRANK W. CASE, M. D.

E. I. FOGEL, M. D.

ERIC R. TWACHTMAN, A. B., M. D.

CHARLES A. STAMMEL, JR., M. D.

DEPARTMENT OF SURGERY

A. GENERAL SURGERY

Chief of Clinic: FRANK FEE, M. D.

Assistant Surgeons:

JOHN A. CALDWELL, M. D.

J. E. PIRRUNG, M. D.

DUDLEY W. PALMER, M. D. GUY G. GIFFEN, M. D.
 C. G. CRISLER, M. D. CHARLES A. LANGDALE, M. D.
 CHARLES T. SOUTHER, M. D.

B. OPHTHALMOLOGY

Chief of Clinic: CHARLES W. TANGEMAN, M. D.

Assistant Ophthalmologists:

WALTER FORCHHEIMER, M. D.	JOHN RANLY, M. D.
VICTOR RAY, M. D.	CLARENCE J. KING, M. D.
WYLIE McL. AYERS, M. D.	HORACE F. TANGEMAN, M. D.
FRANK B. CROSS, M. D.	FRANK U. SWING, M. D.

C. OTO-LARYNGOLOGY

Chief of Clinic: WALTER E. MURPHY, M. D.

Assistant Oto-laryngologists:

CHARLES JONES, M. D.	GEORGE KRIEGER, M. D.
WILLIAM MITHOEFER, M. D.	EDWARD KING, M. D.
W. T. THOMASSON, M. D.	ROBERT STEVENSON, M. D.

D. GENITO-URINARY SURGERY

Chief of Clinic: DUDLEY WEBB, M. D.

Assistant Genito-Urinary Surgeon: RALPH STALEY, M. D.

E. DERMATOLOGY

Chief of Clinic: MOSES SCHOLTZ, M. D.

Assistant Dermatologists:

ELMORE B. TAUBER, M. D.	JAMES W. MILLER, M. D.
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F. ORTHOPEDIC SURGERY

Orthopedic Surgeon: ALBERT H. FREIBERG, M. D.

Assistant Orthopedic Surgeons: ROBERT D. MADDOX, M. D.

R. B. COFIELD, M. D.	OWEN C. FISK, M. D.
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DEPARTMENT OF GYNECOLOGY AND OBSTETRICS

A. GYNECOLOGY

Chief of Clinic: JOHN D. MILLER, M. D.

Assistant Gynecologists:

BENJAMIN W. GAINES, M. D.	JOSEPH S. PODESTA, M. D.
JOHN E. STEMLER, M. D.	GEORGE B. TOPMOELLER, M. D.

B. OBSTETRICS

Obstetrician: E. GUSTAV ZINKE, M. D.

Assistant Obstetrician: HENRY LYNDE WOODWARD, M. D.

Physicians of the Maternity Society

J. H. CALDWELL, M. D.	IDA M. WESTLAKE, M. D.
GILBERT MOMBACH, M. D.	JAMES M. BENTLEY, M. D.
GRACE M. BOSWELL, M. D.	J. D. SCHONWALD, M. D.
W. J. GRAF, M. D.	E. SILBERSTEIN, M. D.
G. RASETTI, M. D.	ROBERT W. HART, M. D.

EQUIPMENT

BUILDINGS

The College is located on the McMicken homestead lot, between McMicken and Clifton Avenues, at the head of Elm Street. The lot has a frontage of three hundred feet between these avenues, the college building being nearer Clifton Avenue, and the dispensary building on McMicken Avenue. The college building contains lecture, recitation, and laboratory rooms. It is a four-story structure, of brick and cut stone, with iron stairways and internal finish of substantial character.

On the basement floor are the laboratories of anatomy, and a locker-room. On the first floor are the Dean's office, museum, and the library and reading-room. The second floor provides accommodations for the laboratories of pharmacology and experimental surgery. On the third floor are two large lecture rooms, furnished with opera chairs with tablet arms. The fourth floor is occupied by the laboratory of pharmacy.

The dispensary building is a one-story brick structure, 123 by 50 feet, and contains fourteen rooms, a dispensing drug-room, and a room for the necessary chemical microscopical investigation of cases presenting themselves for treatment.

LABORATORIES

The laboratories of pathology, bacteriology, and clinical microscopy are located in the laboratory building of the new Cincinnati General Hospital, and are equipped in a thoroughly modern fashion.

The basement of this building is occupied by the work-rooms where the culture media are made and where the routine bacteriology and histology are done. Here are the general sterilizers, autoclaves, and stills; the cold storage room and incubators, as well as the coroner's post-mortem room. The second floor is occupied by the student laboratory of clinical microscopy, the reading room, a treatment room, a special laboratory for serology, and one for special work upon the secretions and excretions of the body. Attached to the latter laboratories is a spectroscopic room.

The third floor is devoted to pathology. One side is occupied by the student laboratory which is capable, like that of clinical microscopy, of accommodating fifty students. The other side is devoted to the private laboratory of the Director of the Laboratories, his office, the stenographer's office, the record room, and a small private laboratory. The end of this floor is occupied by the amphitheatre, which will seat 150 persons. This large amphitheatre is provided with the most modern equipment and conveniences and is in direct connection with the student laboratories of pathology and bacteriology. On either side of it are small special post-mortem or

preparation rooms, and under it to the north is a large private laboratory which will be devoted to work in neuro-pathology.

The fourth floor is devoted to bacteriology. It has, like the lower floors, a large student laboratory to accommodate fifty students, and opposite this is a series of private laboratories, one of which is the private laboratory of the Professor of Bacteriology. The fifth floor is occupied by the photographic suite, the museum with its preparation room, store-room, and the Curator's office. The sixth floor is devoted to the animal rooms, each with its open run-way, and to two small, modern operating rooms.

MUSEUMS

The museum contains a large number of anatomical and pathological specimens, including the Mussey and the Shotwell collections. Both of these valuable collections illustrate the effects of diseases and injuries of bone and joints. The former was the gift of the late Dr. Nathaniel Pendleton Dandridge. The museum also contains a number of anatomical specimens, wet and dry, including a collection of skeletons for student use, and models and charts illustrating the anatomy of the organs of the special senses.

In the laboratories of anatomy and pathology there are also fairly complete collections of specimens which are used for teaching and demonstration. The laboratory of anatomy has a large number of well preserved specimens of the central nervous system and several series of sections of the human body, beside preparations to illustrate the structure of the various organs. The laboratory of pathology possesses a very good collection of Kaiserling specimens illustrating pathological changes in the different organs of the body. Students of pathology also have access to the excellent museum of the Cincinnati Hospital, which contains hundreds of specimens, many of them rare or unusual. Most of the specimens in this museum are wet, but there is a large collection of dry osteological specimens, and a hundred or more gelatine preparations.

MEDICAL LIBRARIES

The library facilities of the College of Medicine are large. In 1911 Miss Lena Dandridge presented to the college the library and library furniture of the late Dr. N. P. Dandridge, and, in addition to this gift, Miss Dandridge gives annually, a sum of money for the equipment and endowment of the surgical library, which is known as the Dandridge Memorial. The Whittaker Medical Library, bequeathed by the late Professor James T. Whittaker, comprises 1,547 volumes and 538 pamphlets. The Seely Library, of the

late Professor W. W. Seely, given to the college by Mrs. Seely, contains over a thousand volumes and many pamphlets. Mrs. Eichberg has recently presented to the college the library of the late Dr. Joseph Eichberg, and the Library Association of Cincinnati has given to the college its very valuable collection of books. The library of the Cincinnati Hospital contains about 20,000 volumes, consisting largely of complete files of the most important medical periodicals of the world. Students of this college have access therefore to a very complete literary material, which covers every branch of the medical and related sciences.

CURRENT LITERATURE IN THE UNIVERSITY LIBRARY.

Current literature in the University Library comprises not only the more important American journals, but also nearly one hundred copies of foreign publications.

REQUIREMENTS FOR ADMISSION

The candidate for admission must obtain the medical student's entrance certificate issued by the examiner for the Ohio State Board. The regulations for securing this certificate may be obtained from Professor K. D. Swartzel, secretary of the Ohio State Medical Board, Columbus, Ohio.

The candidate must present satisfactory evidence of having completed, in addition to a first grade high school course (four years' work representing sixteen credits), the requirements stated in the pre-medical college course as outlined on page 283; or he will be required to take an examination in these subjects or satisfy the admission committee of this institution that the courses which he offers to cover this ground are equivalent to those specified in our pre-medical course. Candidates are advised to obtain from the Liberal Arts announcement the detailed description of the contents of the course in order to understand the scope of this work.

CONDITIONAL ENTRANCE

Candidates who lack a part of the requirements for admission to this College may be admitted conditionally to the first year's medical work, provided the admission committee can be convinced that such conditions are not too excessive to interfere with the regular work. Conditional entrance will only be permitted to those who evidently can remove such conditions before the beginning of the second year. Candidates shall communicate with the College in advance, but must meet the admission committee in September at the time scheduled for entrance examinations.

The candidate must present a certificate of moral character, signed by two physicians of good standing in the state in which he last resided.

The certificate issued by the examiner has two uses:

(1) It certifies that the holder has satisfied the minimum educational requirements, as fixed by law, for admission to medical colleges. It is therefore a prerequisite for matriculation in any medical college of the state. An applicant for admission to a medical college having entrance requirements that are higher than the requirements for this certificate must: (a) secure this certificate, and (b) satisfy the registrar of that college with reference to all additional requirements.

(2) It, together with the medical diploma, must be submitted to the secretary of the State Medical Board by an applicant for admission to the examinations required of all who wish to practice medicine in the State of Ohio. It is also required of practitioners of other states who wish to take advantage of a reciprocity agreement.

ADVANCED STANDING, GRADUATION, AND OTHER INFORMATION

CREDIT FOR COURSES IN COLLEGES OF LIBERAL ARTS

The Ohio State Medical Board has ruled that advanced time credit to liberal arts college graduates can only be recognized when the candidate has done, during his academic course, the science work comprised in the first year of the medical course. This ruling prevents the giving of advanced standing, except to graduates of colleges maintaining a definitely organized pre-medical course, including human anatomy.

The Federation of Examining and Reciprocating Boards has also ruled that it will not recognize advanced time standing given for work in colleges of liberal arts unless the college gives one or more years of the regular medical course and holds itself open to inspection by medical boards. No advanced standing can thus be allowed on account of any ordinary literary or scientific degree whatever.

Students who have taken, in colleges of liberal arts recognized by this University, courses the full equivalent of similar courses offered in this Medical College, and produce certificates of this fact, need not repeat these courses here. Such credits do not entitle the student to advanced time standing; for, according to the rulings above cited, such subject credits for work not taken at a medical college can not shorten the required residence to less than four years.

CREDIT FOR WORK IN MEDICAL COLLEGES

Students from accredited medical colleges may be admitted to advanced standing under the following rules:

1. They must present satisfactory evidence that they have met our requirements for admission to a medical college. They must present evidence that they have satisfactorily completed courses of the same scope and extent as the courses for which they seek credit.

2. They must present credentials from the registrar or corresponding officer of the medical college attended, showing that they have been registered medical students in residence for the time for which credit is sought.

3. In order to obtain credit for a whole or any part of a course, the student must file with the Dean, before the opening of the college year, a credit application blank, in duplicate, showing where the work was done, the names of the professors, dates of the beginning and the end of the course, the number of hours per week and weeks in the course, the total number of lectures or quizzes of laboratory or clinical work, and the grades received in it. This application should be accompanied by certificates, supporting the above facts, from the registrar of the college or the professor under whom the work was done, by the catalogue or schedule of the institution, and by note-books of the student in laboratory courses. In the absence of satisfactory certificates, an informal examination may be required on the whole or a part of the subject. This application, with the supporting evidence, will be submitted to the professors in charge, who will decide what credits are recommended. This recommendation must then be approved by the Committee on Advanced Standing, and returned to the Dean, in duplicate. One copy will be filed and one returned to the student.

4. Any course or part of a course required by this college which has not been sufficiently covered by the previous work of the students must be taken in a manner satisfactory to the professor in charge of the department.

GRADUATES IN MEDICINE

A graduate from another medical college may obtain a diploma from this college only under the following conditions:

1. He must comply with the conditions for admission to this college, submit the required time and subject credits from the col-

lege from which he graduated, as required above, together with his diploma.

2. He must be in residence at this college one full college year, and take all the courses not covered by his subject credits, repeating such courses of the fourth year as the faculty may require. When this has been done, he may elect such additional courses as he may choose.

3. The total of all courses taken in this college must not be less than required of the fourth-year class.

4. He must pass examinations in all the courses in which he has been found deficient and all the regular examinations of the fourth year, and conform to all other requirements for graduation applying to the students of this college.

SPECIAL STUDENTS

Graduates of medicine or others desiring to take courses not leading to graduation may be registered as special students and be admitted to such courses as they are fitted to undertake without preliminary examinations, but only by permission of the professor in charge of the course and upon payment of the fees required. The work so done may be accepted for credit later, under the rules of "Credit for Work in Medical Colleges," above stated.

REQUIREMENTS FOR COMPLETION OF A COURSE

The satisfactory completion of a course shall be determined by the professor in charge, through examinations, records of attendance, and the work of the student. To pass in a course the student must comply with the following:

1. He must have attended 80 per cent of the scheduled lectures, recitations, quizzes, laboratory periods, and clinical or other appointments in the course.

2. He must have received a grade of 75 per cent.

A student who has failed in a course may be required, at the discretion of his professor, to repeat his attendance upon a part or the whole of the course, or he may only be re-examined after a suitable period of study. Attendance on vacation courses or private instruction will only be accepted by the faculty on recommendation of the professor in charge.

PROMOTIONS

Promotions from one class to another will be made by the Committee on Advanced Standing and Promotion after the last

examination of the session, and the student will be advised of his standing within thirty days. Students will not be permitted to enter a higher class until they have shown their fitness to carry on the work of the lower class.

Candidates for graduation failing in any subjects may be required to repeat their attendance in such courses as the faculty directs. Those who have failed in three courses or more must repeat their attendance on all the courses in which they have failed and such others as the faculty may direct. When these conditions of attendance have been satisfied, re-examination will be granted in one subject in September or October; in two subjects in January.

REQUIREMENTS FOR GRADUATION

To receive a diploma from this college the student must comply with the following conditions:

1. The regulations of the Ohio State Medical Board in regard to registration as a medical student and admission to the college (as above explained).

2. He must have been in residence in a medical college recognized by this University for at least four years, and his last year of residence must have been in this college.

3. He must have attended at least 80 per cent of all the scheduled appointments of the courses, and have attained to a satisfactory standing in all the required courses.

4. He must have passed all courses of the first three years before beginning his Senior year.

5. He must have discharged all his financial obligations.

6. Diplomas will only be granted at the regular examinations of this college, when they will be conferred upon the candidates in person by the President of the University.

OHIO STATE MEDICAL BOARD EXAMINATIONS

Examinations for license to practice medicine and surgery in the State of Ohio are given twice each year by the State Medical Board. The dates are usually announced six months in advance. They usually occur in June and December, about the 10th of the month. Conditions for entrance to these examinations may be summed up as follows:

1. The candidate must have a preliminary training equivalent to graduation from a first-class high school having a four-year course.

2. He must have registered with the Board of Ohio or some other state at least three years previous to the time of examination.

3. Except in cases of men with the bachelor's degree who have completed in an undergraduate liberal arts college all the scientific work of the first medical year, the period of residence in medical colleges must have been four years.

4. He must present a diploma of a medical college recognized by the Ohio Board.

5. He must pay an examination fee of twenty-five dollars to the Board, which will be returned to him in case he is not admitted to examination, but is not returned if he is admitted or fails.

Licensure by the Ohio State Board carries with it the privilege of registering for practice in certain other states, *provided, in certain states, that a definite premedical course has been followed.* As the regulations governing medical education and licensure to practice in Ohio, are high, the permission to practice is likely to be effected in all the states in which the laws permit reciprocity in these matters. Details in regard to the conditions in any particular state may be learned by addressing the Secretary of the Ohio State Medical Board, The State House, Columbus, Ohio.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF ENGLAND

The Ohio-Miami Medical College has been officially notified by the Conjoint Examining Boards of the Royal Colleges of Physicians and Surgeons of England that "it has been added to the list of schools recognized by this Board, whose graduates may be admitted to the final examination, on producing the required certificates of professional training and of having passed a recognized preliminary examination in general education."

SIX-YEAR COMBINED COLLEGIATE AND MEDICAL COURSE

(Leads to the degrees B. S., M. D.)

The entrance requirements to this course will be those of the College of Liberal Arts of the University of Cincinnati. The B. S. degree will be granted at the end of the fourth year, and the M. D. degree at the sixth. The first year of the course will consist of the following courses, which are described in the Announcement of the College of Liberal Arts under the corresponding numbers. *It should be noted that five hours of credit for a laboratory course includes three lecture hours and two laboratory periods of three hours each.*

FIRST YEAR

Chemistry—*5 hours*: First semester, Courses 1 and 2; second semester, Courses 3 and 4. If a student enters with advanced credits in chemistry, he shall take physical chemistry.

Physics—*5 hours*: Lecture Courses 26 and 27; Laboratory Courses 2 and 22.

English—*3 hours*: Course 1.

German—*3 hours*, Course 1; or French—*3 hours*, Course 1.

Physical Education—*1 hour*.

The one-year college course in German is equivalent to two years in the High School, and in addition to this, as will be seen, there will be required, in the second year, a course in Scientific German, aimed to give the student a reading knowledge of German. Students who present on entrance an equivalent of German 1, and a reading knowledge of German, are required to take French 1 in their first year, and may substitute an elective for Scientific German in the second year; or those who present only the equivalent of German 1 will be obliged to take the Scientific German of the second year schedule in their first year. In this case French may be taken in the second year in place of German.

SECOND YEAR

Chemistry—*5 hours*: First semester, Courses 5 and 6 which have been formed by abbreviating and combining courses formerly described as 5, 6, and 7. Second semester, organic chemistry, Courses 8 and 9.

Zoology—*5 hours*: First semester, Courses 1 and 2; second semester, Courses 3 and 4. In addition to this, students are recommended to take a summer course in Biology at the Marine Biological Laboratory, Woods Hole, Mass.

Scientific German—*2 hours* (see paragraph on French and German under "First Year").

Elective—*4 hours*.

The third, fourth, fifth, and sixth years of this combined course are the regular years of the Medical College.

COURSES OF INSTRUCTION ANATOMY

HENRY McELDERRY KNOWER, Ph. D., . . . Professor of Anatomy.
 EDWARD F. MALONE, A. B., M. D., Assistant Professor of Anatomy.
 ROBERT CHAMBERS, JR., A. M., Ph. D., Assistant Professor of
 Histology and Comparative Anatomy.

1. Embryology.—This course gives the embryological history of the body. Special attention is devoted to those stages which help to interpret adult conditions in man. An effort is made to study the developmental phases of organs and regions when these problems arise in the courses dealing with the gross and microscopic structure of the adult. Ninety hours. Two credit hours.

Assistant Professor Chambers.
 Required of Freshmen.

The medical Freshmen are taking a course in Embryology offered by the Zoological Department (See Catalogue of the College of Liberal Arts, Courses 19a and 20a).

The Anatomical Department now plans to substitute an elementary course of a different character; concerned not chiefly with comparisons of the early stages of lower animals, but with the development of the relations of the adult human body. This includes the problems of human reproduction, relation of embryo to mother, inheritance, histo-genesis, etc.

It is very desirable that pre-medical students elect elementary vertebrate embryology before entering this department. This would permit of the development of the courses outlined here into an advanced study of human embryology.

2. Histology and Organology.—This course is planned to emphasize the view that the subject is merely a further microscopic analysis of the gross structure of the body. The course is concerned with the anatomy of functional units and their combinations. The structure of tissues and organs is studied by approved methods and the best technical procedures are taught. Embryological interpretations are constantly introduced. The material is human wherever possible. A laboratory course with supplemental lectures. One hundred and eighty hours. Three credit hours.

Assistant Professor Chambers with Dr. Malone or Dr. Knower.

Required of Freshmen.

3. Gross Human Anatomy.—Practical study of the human body in the dissecting room, where the students' work demonstrates all aspects of the gross structure of the body. The laboratory work is accompanied by frequent lectures and informal conferences aimed to make clear the correct principles of the analysis and reconstruction of the body. Osteology is included in this course, and embryo-

logical relations are constantly insisted upon. The anatomy of parts is studied in close correlation with their physiology. Seven credit hours (300 hours for Freshmen; 108 hours for Sophomores).

Professor Knower, Assistant Professor Malone.

Required of Freshmen and Sophomores.

4. Regional and Topographical Anatomy.—Regional relations reviewed with the aid of sections of the body, special preparations, and models. The main facts of the embryological history of topographical relations are reviewed in connection with this work. Seventy-two hours. One and one-half credit hours.

Professor Knower and Dr. Chambers.

Required of Freshmen.

5. Advanced Anatomy.—A number of advanced students are availing themselves of the opportunities for special work offered by this department. October to June. Professor Knower.

6a. Neurological Anatomy.—A.—Gross and Microscopic Anatomy of the Central Nervous System.—This course consists of laboratory exercises, lectures, and lantern demonstrations. The nervous system is studied from two points of view: (1) The gross and microscopic structure, and (2) the connections of different portions of the nervous system to form the mechanisms which underlie its various functions. Fifty-four hours. One credit hour.

Required of Freshmen.

Assistant Professor Malone.

6b. Correlational Anatomy.—B.—Neurological Anatomy.—This course is planned to furnish the student with a valuable review of anatomy from a novel point of view. The relations of the nervous system to the various activities of the entire body are studied. This presupposes a knowledge of the gross and microscopic structure of the body. The student must necessarily bring together, in considering each system, all of his knowledge of the anatomy and physiology previously learned piecemeal. He learns to correlate the various functional mechanisms of the human nervous system with those of the rest of the body. The mechanisms involved in the heart beat, respiration, speech, mastication, voluntary and visceral movements, secretion, etc., will be considered with reference to the actual anatomical structure and relations of those portions of the body which co-operate to carry on such activities. Seventy-two hours. One and one-half credit hours. Assistant Professor Malone.

Required of Sophomores, who must have already finished dissection and have taken Course A or an equivalent.

7. Advanced Neurology.—Open to two or three persons who have had the necessary preliminary training. Neuro-histological technique, experimental pathological histology, studies in the finer histology, the comparative anatomy of the vertebrate nervous

system, or the construction of models may be selected. There are available very extensive series of the brain of man and the higher vertebrates, and of human embryos of various stages of development. October to June. Assistant Professor Malone.

Any of the above courses are open to undergraduate or graduate students of the University who can show the necessary preliminary preparation, and desire credits in these subjects toward degrees other than the Medical Degree. As special rulings giving the conditions under which such work may be undertaken have been passed by the faculties of both the College of Liberal Arts and the Graduate School, applicants should first consult the Deans of those faculties. Those interested in research or other special work in Anatomy are requested to apply to the Professor of Anatomy.

8. Surgical Anatomy.—Lectures with demonstrations are given in this subject, in the Junior year, by a member of the Surgical Staff. (See page 248.)

PHYSIOLOGY

(The Joseph Eichberg Chair of Physiology)

MARTIN H. FISCHER, M. D., Joseph Eichberg Professor of Physiology.
EDMUND M. BAEHR, M. D., . . . Assistant Professor of Physiology.

For the coming academic year only such courses in physiology will be given under the direction of this department as are required for graduation in medicine, and such as are necessary to meet the desires of graduate or special students and practitioners of medicine. The courses will be given in the buildings of the University in Burnet Woods and, in part, in the Ohio-Miami Medical College Building. Courses in physiology for general science students are offered by the Department of Zoology; courses in physiological chemistry for general science and medical students, by the Department of Chemistry.

FRESHMAN YEAR

1. Medical Physiology.—The general physiology of the cell; the physiology of the blood and the circulation; the physiology of respiration; the physiology of muscle and nerve. A lecture and conference course. Fifty hours. Three credit hours.

Professor Fischer.

2. Medical Physiology.—The physiology of alimentation; the physiology of absorption and secretion; the physiology of animal heat. A lecture and conference course. Fifty hours. Three credit hours.

Professor Fischer.

3. Medical Physiology.—A laboratory course designed to illustrate the classical experiments upon which our present knowledge of

the subject rests. The work is arranged to parallel, as nearly as possible, the didactic work of Courses 1 and 2. One hundred hours. Two credit hours.

Professor Fischer and Assistant Professor Baehr.

SOPHOMORE YEAR

4. Medical Physiology.—The physiology of metabolism; the physiology of the ductless glands; the physiology of the spinal cord. A lecture and conference course. Forty-five hours.

Professor Fischer.

5. Medical Physiology.—The physiology of the brain and the special senses. A lecture and conference course. Forty-five hours. Three credit hours.

Assistant Professor Baehr.

6. Medical Physiology.—A laboratory course in the physiology of the central nervous system and the special senses. This course parallels Course 5. Eighty hours. Four credit hours.

Professor Baehr.

RESEARCH

7. Research.—Open to any qualified person after consultation with the head of the department.

CHEMISTRY

LAUDER W. JONES, PH. D., Professor of Chemistry.
 HARRY SHIPLEY FRY, PH. D., Associate Professor of Chemistry.
 EDWARD B. REEMELIN, A. B., M. D., Assistant Professor of Chemistry and of Physiological Chemistry.

During the year 1914-15 the courses in chemistry will be given at the University. The courses announced below will be taken by Freshmen.

Students who have received full credit for general inorganic chemistry and for organic chemistry may elect work at the University in analytical chemistry (Courses 5a, 6, 7) or in physical chemistry (Courses 12 and 13). These courses are entirely optional, but students who can arrange to take them are strongly urged to do so.

22b. Bio-Chemistry.—Among other subjects the course will take up for discussion the nature of carbohydrates, fats, and proteid substances; the facts and theories relating to the processes of digestion and metabolism; the chemical composition of the body tissues, secretions, and excretions, including the methods employed in their analysis. *Second semester*, forty-five hours. Three credit hours.

Assistant Professor Reemelin.

22b. Bio-Chemistry, Laboratory.—Laboratory exercises arranged to accompany the lectures, and to acquaint the student with the distinctive reactions of carbohydrates, fats, and proteid substances. The student will be expected to learn the application of these tests to the qualitative detection of, and the quantitative estimation of, these substances in body tissues, secretions, and excretions. Digestion, the analysis of gastric and fecal matter, and of urine will be considered from the chemical point of view. *Second semester*, 135 hours. Three credit hours.

Assistant Professor Reemelin.

Premedical Courses

8a. Elementary Organic Chemistry.—The course comprises quizzes and lectures which are experimental to a certain extent, and deals with the chief classes of organic compounds of both the aliphatic and the aromatic series. *First semester*, forty-five hours. Three credit hours. To be accompanied by laboratory course 9a.

Professor Jones and Dr. Reemelin.

9a. Organic Reactions and Preparations.—A course of laboratory practice arranged to accompany the lectures of Course 8a. A number of simple organic substances will be made with the view to furnishing, by the fewest illustrations possible, the largest variety of typical reactions and manipulations. *First semester*, ninety hours. Two credit hours.

Professor Jones and Assistant Professor Reemelin.

For other premedical courses in general inorganic chemistry, etc., see Chemistry, College of Liberal Arts (Courses 1a, 2a, 3b, 4b, 5, 6, 7).

PATHOLOGY AND BACTERIOLOGY

(The Mary M. Emery Chair of Pathology)

PAUL GERHARDT WOOLLEY, B. S., M. D., Professor of Pathology.
 WILLIAM BUCHANAN WHERRY, A. B., M. D., Associate Professor
 of Bacteriology.
 CHARLES GOOSMANN, M. D., Instructor in Pathology.
 GILBERT MOMBACH, M. D., Instructor in Pathology.

The work of the Department of Pathology and Bacteriology is progressive. Commencing with bacteriology and with lectures and conferences in general pathology in the fall semester, it is continued, after January first, by a laboratory course in parasitology. This is followed by a systematic course in special pathology, which extends through the second semester. Also during the second semester a course in serum reactions (see Medicine 3) is given which forms a connecting link between general pathology and clinical medicine. In the Junior year, students see a considerable amount of animal

pathology in the course of their work in the slaughter house and meat inspections. In the Senior year, students are given demonstrations in gross pathology with informal discussions on systemic pathology.

1. Infection and Immunity.—Lectures on infection and immunity, together with recitations covering the ground gone over by the students in their laboratory work, and the special text-book assignments. The course must be taken in conjunction with Course 2. *First semester*, twenty-five hours. One and one-half credit hours.

Associate Professor Wherry.

Course 1 is open only to those students who have qualified in inorganic and organic chemistry, biology, and histology.

2. Bacteriology.—The course is designed to give the student a general survey of the subject. In the laboratory the student prepares his own culture media, thus gaining an intimate acquaintance with the principles of sterilization. Representative types of the non-pathogenic and the important pathogenic organisms are studied. Pathologic material from the City Hospital gives the student a first-hand acquaintance with many of the organisms which are pathogenic for man, and with the methods of isolating and identifying them. Some of the more pathogenic protozoa are demonstrated. *First semester*, one hundred and forty-eight hours. Three credit hours.

Associate Professor Wherry.

3. General Pathology.—Lectures in general pathology, with especial reference to inflammation, progressive and regressive cellular changes, tumors and the causes of disease, and recitations covering the ground gone over in the lectures and laboratory work. Thirty hours.

Professor Woolley.

Course 3 must be taken in conjunction with Course 4 and must be preceded by Courses 1 and 2.

4. General and Special Pathology.—The basis of the work is a laboratory course in which microscopic work is combined with a study of fresh gross and museum specimens. Sections of diseased tissues are stained and mounted by the student, who records a description of each and makes drawings of them. All of the tissues of the body are studied in this way, and the various lesions are discussed from cellular, organic, and systemic standpoints. *Second semester*, one hundred and thirty-five hours. Three credit hours.

Professor Woolley and Dr. Goosmann.

5. Post-Mortem Demonstrations.—The course consists of the demonstration of fresh gross material and of materials preserved on ice. Autopsies are witnessed by the students of the Junior and Senior years who are required to assist in making them and to take notes and record them in protocols. Sixty hours.

Professor Woolley and Assistants.

6. Parasitology.—Lectures on the more important parasites of man. Illustrated by gross and microscopic specimens. Thirty-six hours. Professor Wherry.

7. Conferences.—Special topics are studied by individual students and presented before the instructor and class for discussion. Professor Woolley, Associate Professor Wherry.

8. Research.—Open to any qualified person after consultation with the head of the department.

9. Gynecologic Pathology.—Lectures and demonstrations illustrating the abnormal physiologic and anatomic changes connected with the female pelvic organs. Senior year, 16 hours. Dr. Mombach.

10. Surgical Pathology.—Lectures and demonstrations illustrating certain processes connected with pathologic diagnosis of specimens removed at surgical operations. Senior year, 16 hours.

MATERIA MEDICA, PHARMACOLOGY, AND THERAPEUTICS

JULIUS H. EICHBERG, Ph. G., Ph. D., M. D., Professor of Materia Medica, Pharmacology, and Therapeutics.

RUFUS SOUTHWORTH, A. M., M. D., Assistant Professor of Therapeutics.

C. C. FIFE, M. D., Instructor in Dietetics.

WILLIAM C. HERMAN, Ph. G., M. D., Instructor in Materia Medica and Pharmacology.

SIDNEY LANGE, A. B., M. D., Lecturer and Demonstrator of Radiology.

H. KENNON DUNHAM, M. D., Lecturer and Demonstrator of Electrotherapeutics.

LOUIS G. SCHRICKEL, Ph. G., M. D., . . . Instructor in Pharmacy.

DAVID ANDREW TUCKER, JR., A. M., Instructor in Pharmacology in Charge of the Laboratory.

The work of the Department of Pharmacology, Materia Medica, and Therapeutics is carried on in the lecture rooms of the College, in the dispensary clinics, and in the wards and laboratories of the Cincinnati Hospital.

1. Pharmacology.—A lecture course, supplemented by Course 3, in which the physiological action of drugs is presented, and which is intended to give the student a clear idea of the general principles of drug therapy. Continued in Course 4. Professor Eichberg and Mr. Tucker.

2. Pharmacology and Metrology.—Recitations in pharmacology and instruction in metrology, incompatibilities, and prescription writing. Thirty hours. Dr. Herman.

3. Pharmacology, Laboratory.—The work will consist of exercises in gross pharmacognosy; plant histology; general reaction of plant constituents; metrology; pharmaceutic methods and preparations; dispensing; incompatibilities; isolation of alkaloids; study of changes in urine induced by drugs; the action of drugs on hemoglobin, and on red corpuscles; chemic antidotes; and experiments which the students will conduct for themselves illustrating the physiological and toxicological action of the more important drugs. Mr. Tucker.

4. Therapeutics.—Lectures on the specific indications, as well as the general principles, of treatment. Professor Eichberg.

5. Therapeutics.—Lectures in the methods of treatment without drugs, including higher therapy, etc., and recitations in general therapeutics. Assistant Professor Southworth.

6. Dietetics.—A lecture course on the composition and effects of diet, including the methods of preparation. Dr. Fihe.

7. Electrotherapeutics.—Lectures on the principles of magnetism and electricity; units and measurements of electricity, both dynamic and static; induced electricity; applications of electricity to diagnosis; electrical apparatus, coils, interruptors, etc. Fifteen hours. Dr. Dunham.

8. Radiology.—Lectures on radiology; considerations on the physics of the X-Ray; effect of the X-Ray upon the tissues of the body; radio-diagnosis and radio-therapeutics. Fifteen hours. Dr. Lange.

9. Radiology and Electrotherapeutics.—A practical course in the electrotherapeutic laboratory of the College, in the radiographic department of the Cincinnati Hospital and at the Tuberculosis Hospital. Forty hours. Drs. Dunham and Lange.

10. Therapeutic Clinics.—These clinics are all in connection with the dispensary medical clinics and the Hospital.

MEDICINE

EDWIN W. MITCHELL, A. B., M. D., . . . Professor of Medicine.
 GEORGE A. FACKLER, M. D., . . . Professor of Clinical Medicine.
 OLIVER P. HOLT, M. D., . . . Clinical Professor of Medicine.
 JOHN ERNEST GREIWE, M. D., . Associate Professor of Medicine.
 MARK A. BROWN, M. D., . . . Associate Professor of Medicine.
 HENRY WALD BETTMANN, B. L., M. D., Adjunct Professor of Medicine.
 ALLAN RAMSEY, B. S., M. D., . Assistant Professor of Medicine.
 OSCAR BERGHAUSEN, A. B., M. D., Assistant Professor of Medicine.
 CHARLES SUMNER ROCKHILL, M. D., Clinical Instructor in Medicine.
 C. C. FIHE, M. D., . . . Clinical Instructor in Medicine.

- LOUIS G. HEYN, M. D., Clinical Instructor in Medicine.
 HENRY LYNDE WOODWARD, M. D., . . . Demonstrator of Clinical
 Microscopy.
 OTTO J. SEIBERT, M. D., Clinical Instructor in Medicine.
 CHARLES P. KENNEDY, M. D., . . Clinical Instructor in Medicine.
 J. D. SPELMAN, M. D., Clinical Instructor in Medicine.
 MARCUS E. WILSON, M. D., . . . Clinical Instructor in Medicine.
 JULIUS G. STAMMEL, M. D., . . . Clinical Instructor in Medicine.
 C. E. SHINKLE, M. D., Clinical Instructor in Medicine.

The work of the Department of Medicine is carried on in the lecture rooms of the College building, in the College Dispensary, in the wards, laboratories, and amphitheatres of the Cincinnati General and the Good Samaritan Hospitals, and in the wards of the Contagious Disease Hospital.

1. Physical Diagnosis.—Lectures, demonstrations, and practical exercises illustrating the methods of physical exploration of the body. Two credit hours. Associate Professor Greiwe.

2. Clinical Microscopy.—A practical laboratory course in the methods of examining blood, sputum, urine, gastric contents, feces, cerebro-spinal fluid, exudates, and transudates. Dr. Woodward.

3. Serum Reactions in the Infectious Diseases.—A conference and laboratory course illustrating the methods of investigating the serum reactions in various infectious diseases. It includes the application of the Wassermann and Noguchi methods and other useful diagnostic and curative procedures. Assistant Professor Berghausen.

3a. Serum Diagnosis and Therapeutics.—A lecture and conference course with practical demonstrations in immunology and immuno-diagnostics, including the preparation and administration of vaccines, sera, etc. Sophomore year, fifteen hours. Assistant Professor Berghausen.

3b. Infectious Diseases.—A lecture-conference course on the infectious diseases which are not taken up in the Department of Paediatrics. Junior year, fifteen hours. Assistant Professor Berghausen.

4. The Diseases of the Stomach, Intestines and Liver.—A series of lectures on the diagnosis and treatment of disorders of the gastro-intestine tract. Adjunct Professor Bettmann.

5. The Diseases of the Heart and Lungs.—A series of lectures on the diagnosis and treatment of disorders of the cardiac and respiratory systems. Professor Mitchell and Assistant Professor Ramsey.

6. Diseases of the Kidneys and Constitutional Diseases and Diseases of the Blood and Ductless Glands.—A series of lectures on the diagnosis and treatment of these diseases. Thirty hours.

Associate Professor Brown.

7. Dispensary Clinics.—Each member of the Junior class spends two hours daily throughout half the year in the medical clinic, where he has practical experience and instruction in history taking, physical examination, diagnosis, and treatment of medical cases.

Assistant Professor Berghausen, Drs. Seibert, Kennedy, Spelman, Stammel, Wilson, and Shinkle.

8. Hospital Ward Classes.—Each member of the Senior class spends two hours daily for two months in the medical wards of the Cincinnati General Hospital. During this time he serves as a clinical clerk in taking histories, making clinical examinations, etc., becoming thoroughly acquainted in the wards with the methods of examining and caring for hospital patients. Part of this time is spent in making rounds with the staff officers under whose direction he is working.

Professors Mitchell, Fackler, Holt, Eichberg;
Associate Professors Greiwe and Brown;
Dr. Bell and Assistants.

9. Clinical Lectures.—Clinical lectures on selected topics are delivered daily throughout the year in the amphitheatre of the Cincinnati General Hospital and of the Good Samaritan Hospital. These lectures are delivered at times that do not conflict with bedside work.

Professors Mitchell, Fackler, Holt; Associate Professors Greiwe and Brown.

PAEDIATRICS

B. K. RACHFORD, M. D.,	Professor of Paediatrics.
ALFRED FRIEDLANDER, A. B., M. D.,	Associate Professor of Paediatrics.
FRANK H. LAMB, A. M., M. D.,	Assistant Clinical Professor of Paediatrics
MAX DREYFOOS, M. D.,	Clinical Instructor in Paediatrics.
EDWARD A. WAGNER, M. D., . . .	Clinical Instructor in Paediatrics.
CHARLES K. ERVIN, M. D., . . .	Clinical Instructor in Paediatrics.
E. I. FOGEL, M. D.,	Clinical Instructor in Paediatrics.
WILLIAM J. GRAF, M. D.,	Clinical Instructor in Paediatrics.
EDWARD D. ALLGAIER, M. D., . .	Clinical Instructor in Paediatrics.
JOHN T. BATTE, M. D.,	Clinical Instructor in Paediatrics.
GEORGES RASETTI, M. D.,	Clinical Instructor in Paediatrics.
IDA M. WESTLAKE, M. D.,	Clinical Instructor in Paediatrics.
JAMES M. BENTLEY, M. D., . . .	Clinical Instructor in Paediatrics.
FRANK W. CASE, M. D.,	Clinical Instructor in Paediatrics.

ERIC R. TWACHTMAN, M. D., . . . Clinical Instructor in Paediatrics.
 CHARLES A. STAMMEL, M. D., . . . Clinical Instructor in Paediatrics
 J. VICTOR GREENBAUM, M. D., . . . Clinical Instructor in Paediatrics.

The work of the Department of Paediatrics is conducted in the lecture rooms of the College building, in the College Dispensary, in the wards, amphitheatres, and laboratories of the Cincinnati General Hospital, in the amphitheatres of the Good Samaritan Hospital, and in the wards of the Contagious Disease Hospital.

1. Diseases of Children.—A series of lectures on diseases of the gastro-intestinal-tract and nutritional disorders; genito-urinary diseases; functional diseases of the nervous system; tuberculosis; and diseases of the blood. Thirty hours. Professor Rachford.

2. Diseases of Children.—A series of lectures on the acute infectious diseases (especially the acute exanthema, cerebro-spinal meningitis, anterior poliomyelitis); diseases of the heart; and diseases of the ductless glands. Thirty hours.

Associate Professor Friedlander.

3. Dispensary Clinics.—Each member of the Senior class attends the paediatric clinic two hours daily for five weeks, during which time he has an excellent opportunity to see and study the more common, and some of the uncommon, diseases of children. This clinic is a large one, the attendance in 1912-13 being 5,011. In addition to the attention paid to the patient, much pains are spent in this clinic in following patients to their homes and in remedying the social causes of disease. For this purpose three special nurses are employed, and students have opportunities, and are urged to accept them, of seeing and studying home conditions.

Professor Rachford; Associate Professor Friedlander;
 Drs. Dreyfoos, Wagner, Allgaier, Batte, Ervin,
 Fogel, Graf, Rasetti, Westlake, Bentley, Case,
 Twachtman, and Stammel.

4. Hospital Ward Classes.—Each member of the Senior class spends a certain amount of time (see bedside schedule) in the children's wards of the Cincinnati General Hospital, and in the contagious disease wards of the new Hospital. Here instruction and opportunities for study are offered by the various members of the staff. Ninety hours.

Professors Rachford and Eichberg; Associate Professor Friedlander; Assistant Professor Lamb; Drs. Bell and Wagner.

5. Clinical Lectures.—Clinical lectures are delivered at regular intervals, in the amphitheatres of the Cincinnati General and Good

Samaritan Hospitals, to Senior students. One hundred and eight hours. Professor Rachford, Associate Professor Friedlander, and Assistant Professor Lamb.

PSYCHIATRY AND NEUROLOGY

FRANK WARREN LANGDON, M. D., . . . Professor of Psychiatry.

HERMAN HENRY HOPPE, A. M., M. D., . . . Professor of Neurology.

DAVID I. WOLFSTEIN, M. D., Assistant Clinical Professor of Nervous Diseases.

EDMUND M. BAEHR, M. D., Assistant Clinical Professor of Nervous Diseases and Lecturer on the History of Medicine.

ROBERT INGRAM, M. D., Clinical Instructor in Psychiatry.

CHARLES E. KIELY, A. B., M. D., Clinical Instructor in Neurology.

WILLIAM L. SHANNON, A. B., M. D., Assistant Clinical Instructor in Neurology.

1. Psychiatry.—Lectures on Mental Diseases.

Professor Langdon.

2. Psychiatric Clinics.—

Bedside and conference study of mental diseases in the wards of the Cincinnati General Hospital and, through the courtesy of Dr. F. W. Harmon, at Longview State Hospital for the Insane.

Professors Langdon and Hoppe; Assistant Professors Wolfstein and Baehr, and Drs. Zenner and Ingram.

3. Nervous Diseases.—

Lectures on the functional and organic diseases of the brain, spinal cord, and peripheral nerves, illustrated by charts and by a large collection of mounted sections.

Professor Hoppe.

4. Neurologic Clinics.—

Each Senior student devotes a specified number of two-hour periods to bedside and conference study of neurologic cases in the Cincinnati General Hospital.

Professor Hoppe, Assistant Professor Wolfstein, and Dr. Kiely.

5. Dispensary Clinics in Neurology.—

Professor Hoppe, Assistant Professor Baehr; Drs. Kiely and Shannon.

DERMATOLOGY AND SYPHILOLOGY

MEYER L. HEIDINGSFELD, Ph. B., M. D., Professor of Dermatology and Syphilology.

AUGUSTUS RAVOGLI, A. M., M. D., Clinical Professor of Dermatology and Syphilology.

ELMORE B. TAUBER, M. D., Clinical Instructor in Dermatology and Syphilology.

JAMES W. MILLER, M. D., Clinical Instructor in Dermatology and Syphilology.

MOSES SCHOLTZ, Clinical Instructor in Dermatology and Syphilology.

1. Lectures on the hyperemias, inflammations, hypertrophies, atrophies, new growths, tuberculosis, and parasitic diseases of the skin; syphilis, diseases of the nails, hair, hair follicles, sweat and sebaceous glands. The lectures are supplemented with demonstrations from several hundred colored lantern slides.

Professor Heidingsfeld.

2. Dermatologic Clinics.—Each Senior devotes a definite amount of time to the clinical study of syphilis and dermatologic cases in the dispensary. Professor Heidingsfeld, and Drs. Tauber, Miller, and Scholtz.

SURGERY

JOSEPH RANSOHOFF, M. D., F. R. C. S. (Eng.), Professor of Surgery.

JOHN CHADWICK OLIVER, M. D., . Professor of Clinical Surgery.

CHARLES EDWARD CALDWELL, A. M., M. D., Associate Professor of Surgical Anatomy and Clinical Professor of Surgery.

_____, Adjunct Professor of Surgery.

E. OTIS SMITH, M. D., . . Adjunct Professor of Genito-Urinary Diseases.

FRANK FEE, M. D., Clinical Professor of Surgery.

ARCHIBALD I. CARSON, M. D., . . Clinical Professor of Surgery.

CARL HILLER, M. D., . . Assistant Clinical Professor of Surgery.

HARRY HAYES HINES, M. D., Assistant Clinical Professor of Surgery.

CASPER F. HEGNER, M. D., . . . Assistant Professor of Surgery.

GOODRICH BARBOUR RHODES, A. B., M. D., Assistant Clinical Professor of Surgery.

DUDLEY WHITE PALMER, B. S., M. D., Assistant Clinical Professor of Surgery.

CHARLES A. LANGDALE, M. D., Assistant Clinical Professor of Surgery.

JOHN A. CALDWELL, M. D., Clinical Instructor in Surgery.

DUDLEY WEBB, M. D., Clinical Instructor in Genito-Urinary Surgery.

J. EDWARD PIRRUNG, M. D., . . . Clinical Instructor in Surgery.

RALPH STALEY, M. D., Clinical Instructor in Genito-Urinary Surgery.

CHARLES T. SOUTHER, M. D., . . . Clinical Instructor in Surgery.

GUY G. GIFFEN, M. D., Clinical Instructor in Surgery.

CARLETON G. CRISLER, M. D., Demonstrator in Surgery.

SIMON PENDLETON KRAMER, M. D., . Professor of Clinical Surgery.

The work of the Department of Surgery is carried on in the lecture rooms of the College, in the College Dispensary, in the wards, operating rooms, amphitheatre, and laboratories of the Cin-

cinnati General Hospital, and in the amphitheatre, wards, and operating rooms of the Good Samaritan Hospital.

1. Surgical and Applied Anatomy.—This course consists of lectures which are illustrated by dissections of, and demonstrations upon, the cadaver. Associate Professor Caldwell.

2. The Principles of Surgery.—Wounds, infections, diseases of bones, fractures and dislocations, diseases of blood-vessels, lymphatics, muscles and tendons, nerves, tumors. Aseptic and antiseptic principles. Thirty hours. Dr. Hegner.

3. Surgical Laboratory.—Physiologic surgery, shock, anesthesia, hemorrhage, experimental infections; surgical technique, surgical dressings, minor operations. Thirty hours.

Assistant Professor Hiller.

4. Surgery.—Informal lectures on the surgery of the head, spine, back, and chest. The causes, effects, methods of diagnosis and methods of treatment are discussed. Professor Ransohoff.

5. Surgery.—Informal lectures on the surgery of the abdomen, rectum, and anus. The causes, effects, methods of diagnosis and the methods of treatment are discussed. Professor Ransohoff.

6. Surgery.—Informal lectures on the surgical diseases of the thyroid and mammary glands. The causes, effects, methods of diagnosis and the methods of treatment are discussed.

Professor Oliver.

7. Genito-Urinary Surgery.—Lectures on the surgery of the genito-urinary organs, including the causes, effects, diagnosis and methods of treatment. Thirty hours.

Adjunct Professor Smith.

8. Dispensary Clinics.—Each member of the Junior class spends two hours daily throughout half the year in the Surgical Clinic, where he has practical experience and instruction in history taking, methods of examination, diagnosis and treatment of ambulatory surgical cases.

Drs. Caldwell, Pirrung, Lucas, Souther, Langdale, and Giffen.

9. Hospital Ward Classes.—Each member of the Senior class spends two hours daily for two months in the surgical wards of the Cincinnati General Hospital. During this time he serves as a clinical clerk, taking histories, making clinical examinations, etc., becoming thoroughly acquainted in other wards with the methods of caring for hospital patients. The student is present at operations on all his own patients and at many others. Part of the time is spent in making rounds with the staff officer under whose direction he is working.

Professors Ransohoff, Oliver, Caldwell, Fee, Drs. Carson, Kramer, and Assistants.

10. Clinical Lectures.—Clinical lectures on selected topics are delivered daily throughout the year in the amphitheatres of the Cincinnati General and Good Samaritan Hospitals. These lectures are given at times which do not conflict with bedside work.

Professors Ransohoff, Oliver, Caldwell, Fee,
Drs. Carson and Kramer.

ORTHOPEDIC SURGERY

ALBERT HENRY FREIBERG, M. D., Professor of Orthopedic Surgery.

ROBERT CAROTHERS, M. D., Clinical Professor of Orthopedic Surgery.

ROBERT DANIEL MADDOX, M. D., Clinical Instructor in Orthopedic
Surgery.

R. B. COFIELD, M. D., . Clinical Instructor in Orthopedic Surgery.

OWEN C. FISK, M. D., Assistant Clinical Instructor in Orthopedic
Surgery.

1. Orthopedic Surgery.—Lectures on the etiology of deformities. Diagnostic principles; principal chapters of special orthopedic surgery. Illustration by stereopticon, radiograms, and orthopedic apparatus. Thirty hours. Professor Freiberg.

2. Dispensary Clinics.—Each member of the Senior class devotes a specified number of days to service in the Orthopedic Clinic, where a fair number of interesting cases are treated. This clinic is equipped with the necessary equipment for treating certain classes of orthopedic cases, and the patients are under the supervision of a trained nurse, part of whose duty it is to follow patients to their homes, and there instruct them.

Professor Freiberg, Drs. Maddox, Cofield, and Fisk.

3. Hospital Ward Classes.—A certain amount of the time of each Senior student is devoted to study of orthopedic cases in the wards of the Cincinnati General Hospital.

Professors Freiberg and Carothers, and Assistants.

4. Clinical Lectures.—Clinical lectures are delivered at stated times in the amphitheatre of the Cincinnati General Hospital.

Professors Freiberg and Carothers.

OBSTETRICS

E. GUSTAV ZINKE, M. D., Professor of Obstetrics.

WILLIAM D. PORTER, A. M., M. D., Clinical Professor of Obstetrics.

GEORGE M. ALLEN, M. D., . . . Clinical Professor of Obstetrics.

JAMES WILLIAM ROWE, A. B., M. D., . . Assistant Professor of
Obstetrics.

HENRY LYNDE WOODWARD, M. D., . . . Instructor in Obstetrics.

1. **The Anatomy and Physiology of Pregnancy.**—Menstruation and ovulation; the diseases of the fetus. The changes within the maternal organism and the diseases of the new-born. Mechanism and management of labor and the pathology of pregnancy. Lectures, sixty hours.
Assistant Professor Rowe.

2. **Obstetrics.**—Lectures on the pathology of labor and the puerperium, with indications for, and methods of operative procedures.
Professor Zinke.

3. **Clinical Lectures.**—Clinical lectures are delivered at stated times in the amphitheatre of the Cincinnati General Hospital.
Professors Porter and Allen.

4. **Obstetrics.**—Recitations in Obstetrics. Supplementary to Courses 1 and 2.
Dr. Woodward.

5. **Obstetric Clinics.**—Obstetric clinics are held in the wards of the Cincinnati General Hospital, and in the homes of patients who make applications to the out-patient department. The hospital work is attended by very small groups of Senior students. The out-patient work is attended by Junior students, one student being present at each case.

The out-patient work is in charge of the physicians of the Maternity Society of Cincinnati, to whom all out-patients are referred, and these cases, together with those applying to the Maternity Society, make, altogether, about 300 cases per annum. The teaching in connection with these cases is strictly personal and practical, and each case is cared for at the time of labor and in convalescence by a visiting nurse of the Maternity Society.

GYNECOLOGY

CHARLES LYBRAND BONIFIELD, M. D., . . . Professor of Gynecology.

CHARLES ALFRED LEE REED, A. M., M. D., Professor of Clinical Gynecology.

JOHN M. WITHROW, A. M., M. D., Professor of Clinical Gynecology.

RUFUS BARTLETT HALL, A. M., M. D., . . . Professor of Clinical Gynecology.

SIGMAR STARK, M. D., Professor of Clinical Gynecology.

JOHN D. MILLER, M. D., . . . Clinical Instructor in Gynecology.

BENJAMIN W. GAINES, M. D., Clinical Instructor in Gynecology.

JOHN E. STEMLER, M. D., . . . Clinical Instructor in Gynecology.

JOSEPH S. PODESTA, M. D., . . Clinical Instructor in Gynecology.

GEORGE B. TOPMOELLER, M. D., . Clinical Instructor in Gynecology.

1. **Gynecology.**—Lectures on gynecology, embracing a general consideration of gynecologic etiology. Diagnosis; malformations, diseases, and displacements of the uterus; disorders of menstruation; diseases of the urethra, bladder, and ureters; endometritis; diseases

of the vulva and vagina; pelvic inflammation, pyosalpinx. Fifteen hours. Professor Bonifield.

2. Gynecology.—Lectures on gynecology, embracing fibroid tumors, malignant diseases, and tuberculosis of the uterus; tumors of the ovaries, solid and cystic; tuberculosis of the tubes and ovaries; tubal pregnancy; technique and after-treatment of abdominal section for pelvic diseases. Fifteen hours. Professor Bonifield.

3. Dispensary Clinics.—Each member of the Senior class spends two hours daily for a specified number of days in the gynecologic clinic of the dispensary. Here he receives practical instruction and experience in the methods of examination, diagnosis and treatment of ambulatory cases.

4. Hospital Ward Classes.—Each member of the Senior class spends a specified number of days in the gynecological wards of the Cincinnati General Hospital, where he serves as clinical clerk, and as a spectator at operations. He therefore obtains valuable and practical experience in the methods of caring for hospital patients.

5. Clinical Lectures.—Clinical lectures on selected topics are delivered at stated times in the amphitheatres of the Cincinnati General and Good Samaritan Hospitals.

OPHTHALMOLOGY

- ROBERT SATTLER, M. D., Professor of Ophthalmology.
 DERRICK T. VAIL, M. D., . . . Clinical Professor of Ophthalmology.
 WALTER FORCHHEIMER, A. B., M. D., . . . Clinical Professor of
 Ophthalmology.
 CHARLES W. TANGEMAN, M. D., Clinical Professor of Ophthalmology.
 VICTOR RAY, M. D., Assistant Clinical Professor of Ophthalmology.
 WYLIE McLEAN AYRES, A. B., M. D., Assistant Clinical Professor of
 Ophthalmology.
 FRANK B. CROSS, M. D., Assistant Clinical Professor of Ophthalmology.
 JOHN RANLY, M. D., . . . Clinical Instructor in Ophthalmology.
 CLARENCE J. KING, M. D., . . . Clinical Instructor in Ophthalmology.
 K. L. STOLL, M. D., . . . Clinical Instructor in Ophthalmology.
 HORACE F. TANGEMAN, M. D., Assistant Clinical Instructor in
 Ophthalmology.
 FRANK U. SWING, M. D., Assistant Clinical Instructor in Ophthalmology.
 EDWARD KING, M. D., Assistant Clinical Instructor in Ophthalmology.

The aim of instruction in Ophthalmology is to afford the student ample opportunity to study the essentials of the pathology of the more important ocular lesions, and to impress him with the importance of a practical knowledge of Ophthalmology and its close

relationship to Internal medicine. The course is divided into didactic and clinical teaching, the first semester being devoted to recitations and lectures, and the second wholly to clinical work at the University dispensary and Cincinnati General Hospital, under the personal direction of Professor Ray and a corps of assistants.

An effort will be made to make the clinical course eminently practical and supplementary to the various departments of Internal medicine for those students who, through predilection and proficiency, desire to prepare for postgraduate instruction in Ophthalmology.

1. Dispensary Clinics.—Each Senior student spends a specified number of two-hour periods in daily attendance at the ophthalmologic clinic of the dispensary. Here he receives practical instruction and experience in dealing with the common affections of the eyes. Thirty hours.

Professors W. Forchheimer and Tangeman; Assistant Professors Ray, Ayres, and Cross; Drs. Ranly, C. King, Stoll, Tangeman, Swing and E. King.

2. [Hospital Ward Classes.] Each Senior student spends a specified number of two-hour periods in ward examinations of ophthalmic cases in the Cincinnati General Hospital.

Omitted in 1914-15.

3. Clinical Lectures.—A certain number of clinical lectures in diseases of the eyes are delivered in the amphitheatre of the Cincinnati General Hospital. Professors Ray and Vail.

OTO-LARYNGOLOGY

CHRISTIAN R. HOLMES, M. D., Professor of Otology.

JOHN ALBERT THOMPSON, B. S., A. M., M. D., Professor of Laryngology.

JOHN WESLEY MURPHY, A. M., M. D., . . . Clinical Professor of Laryngology and Otology.

SAMUEL IGLAUER, B. S., M. D., . . . Associate Professor of Otology.

WALTER E. MURPHY, M. D., Associate Professor of Laryngology, and Clinical Instructor in Rhinology, Laryngology, and Otology.

WILLIAM MITHOEFER, M. D., Clinical Instructor in Rhinology, Laryngology, and Otology.

W. J. THOMASSON, M. D., Clinical Instructor in Rhinology, Laryngology, and Otology.

GEORGE L. KRIEGER, M. D., Clinical Instructor in Laryngology and Otology.

CHARLES JONES, M. D., Assistant Clinical Instructor in Rhinology, Laryngology, and Otology.

ROBERT STEVENSON, M. D., Assistant Clinical Instructor in Laryngology and Otology.

1. Laryngology.—A series of lectures on the diseases of the nose, mouth, pharynx, and larynx. These lectures are illustrated by wet and dry specimens and supplemented by demonstrations of operative technique. Professor Thompson.

2. Otology.—A series of lectures on diseases of the ear. Professor Holmes and Associate Professor Iglauer.

3. Dispensary Clinics.—Each Senior spends a specified number of two-hour periods in the oto-laryngologic clinic of the Dispensary, where he receives practical experience in the diagnosis and treatment of cases.

Professor J. W. Murphy; Associate Professors Iglauer and Murphy (W. E.), and Drs. Mithoefer, Thomasson, Weintz, Krieger, Stevenson, and Jones.

4. Ward Classes.—Ward classes of Senior students are held at the Cincinnati General Hospital. During this service many operations may be witnessed.

5. Clinical Lectures.—At the Cincinnati General Hospital.

HYGIENE

The hygiene of the home, factories, hospitals, public buildings, food, etc., and personal hygiene; Quarantine—house, municipal, state, and national; Fumigation and disinfection; Air, water, soil, public water supplies, disposal of sewage, garbage, and the dead. Immunity and preventive inoculation. One credit hour.

CO-OPERATIVE COURSE WITH THE BOARD OF HEALTH

The course, under the direction of Assistant Health Officer Peters, covers a period of thirty-two days, and includes practical work in the field, demonstrations, routine work in the laboratory, conferences with heads of divisions, quizzes, and written tests.

The Ohio-Miami students will serve on Tuesday and Thursday of each week.

The thirty-two days have been arranged as follows:

Laboratory—Microscopic	3 days
“ Milk and Water.....	2 days
Meat Inspection.....	3 days
Milk and Dairy Inspection.....	3 days
Bake-shop Inspection.....	1 day
Barber-shop Inspection.....	1 day
Outdoor Sanitation.....	3 days
School Inspection.....	14 days
Fumigation	2 days

MEDICAL JURISPRUDENCE AND ECONOMICS

OTIS H. FISK, Ph. D., Dr. Juris., LL. B., Lecturer on Medical Jurisprudence and Economics.

1. Medical Jurisprudence.—Branches of the law; courts and procedure; evidence; ordinary witnesses; expert witnesses; rights and duties of medical practitioners as expert witnesses. Rights and duties of physicians and surgeons; assistants, students, and nurses; hospitals; rights and duties of patients; ethics of the medical profession. Workmen's Compensation Law. Malpractice. Crimes. Insanity. Ability to contract. Testamentary capacity. Entire course illustrated by cases from reported decisions of courts.

CLINICAL INSTRUCTION

Just as the development of practical laboratory work marks the evolution of teaching in the first two years of medical training of this day, so does the greater employment of demonstrative methods in hospital and dispensary indicate the excellence of the curriculum of a modern school of medicine, in its Junior and Senior years. The Ohio-Miami Medical College of the University of Cincinnati has, in this respect, a wealth of available material to offer the student in his third and fourth years which is excelled in few if any cities in the United States. This is true both in regard to the quantity and variety of clinical material, and to its accessibility to the student.

THE CINCINNATI GENERAL HOSPITAL

Cincinnati has six large hospitals. The largest is the *Cincinnati General Hospital*, with a capacity of 850 beds. The clinical material at this hospital alone would amply suffice for the thorough teaching of practical medicine in all of its branches to a large medical school. During the college year the amphitheatre and several other operating rooms in the surgical pavilion are used for operative clinics and informal clinical lectures to the Senior class. Twelve hours per week are also utilized for bedside teaching by the Senior and Junior Attending Staff of the hospital, the classes being subdivided into sections for this purpose. The student is thus enabled to spend the entire forenoon of each day during his Senior year in practical clinical work. The sections of the Senior class attending the clinical lectures at the Good Samaritan Hospital on Tuesdays, Thursdays, and Saturdays are given bedside instruction in this hospital on these days. The morgue in the pathological building contains a large amphitheatre in which autopsies are made. The abundant material in this department is demonstrated by the pathologist of the hospital and his several assistants. The Cincin-

nati General Hospital has been described by Dr. W. C. Gorgas, Surgeon General of the United States Army, as follows:

"This is the most complete hospital I have ever seen, both from the viewpoint of taking care of patients and of teaching. The laboratory facilities are a distinct advance over anything else in America. The co-operation of this great hospital and the already advanced University of Cincinnati, makes this a chief center of medical education."

The thoroughly equipped laboratory of radiography is utilized for demonstration of both the therapeutic and diagnostic uses of the X-Ray. This work is given to the class in sections.

The contagious wards of the new City Hospital were opened during the summer of 1911. The group of buildings contains 120 beds, and students are assigned in groups to study the cases and receive instruction by the attending physicians.

THE CINCINNATI GENERAL HOSPITAL

A. C. BACHMEYER, M. D., Superintendent and Medical Director of
the Cincinnati Hospitals.

WALTER E. LIST, M. D., Assistant Superintendent and Director of
the Cincinnati General Hospital.

MEDICAL STAFF

President: B. K. RACHFORD, M. D.

Vice-President: ROBERT CAROTHERS, M. D.

Secretary: M. L. HEIDINGSFELD, M. D.

Librarian: E. W. MITCHELL, M. D.

CONSULTING STAFF

Physician: J. C. MACKENZIE, M. D.

Neurologist: PHILIP ZENNER, M. D.

Obstetrician and Gynecologist: C. D. PALMER, M. D.

Oculists:

C. R. HOLMES, M. D.

S. C. AYRES, M. D.

VISITING STAFF

Physicians:

E. W. MITCHELL, M. D.

MARK A. BROWN, M. D.

GEORGE A. FACKLER, M. D.

OLIVER P. HOLT, M. D.

JOHN E. GREIWE, M. D.

H. L. WOODWARD, M. D.

Physicians to the Contagious Wards of the new Hospital:

ALBERT J. BELL, M. D.

JULIUS C. EICHBERG, M. D.

Neurologists:

H. H. HOPPE, M. D.

D. I. WOLFSTEIN, M. D.

Surgeons:

JOSEPH RANSOHOFF, M. D.	C. E. CALDWELL, M. D.
JOHN C. OLIVER, M. D.	S. P. KRAMER, M. D.
ARCH I. CARSON, M. D.	FRANK FEE, M. D.

Orthopedic Surgeons:

A. H. FREIBERG, M. D.	ROBERT CAROTHERS, M. D.
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Dermatologists:

A. RAVOGLI, M. D.	M. L. HEIDINGSFELD, M. D.
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Laryngologists and Aurists:

SAMUEL IGLAUER, M. D.	J. W. MURPHY, M. D.
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Oculists:

VICTOR RAY, M. D.	D. T. VAIL, M. D.
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Obstetricians:

W. D. PORTER, M. D.	G. M. ALLEN, M. D.
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Gynecologists:

CHARLES A. L. REED, M. D.	RUFUS B. HALL, M. D.
JOHN M. WITHROW, M. D.	SIGMAR STARK, M. D.

Pædiatrists:

B. K. RACHFORD, M. D.	ALFRED FRIEDLANDER, M. D.
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Pathologist and Director of the Laboratories:

P. G. WOOLLEY, M. D.

Bacteriologist and Assistant Director of the Laboratories:

W. B. WHERRY, M. D.

Radiographer: SIDNEY LANGE, M. D.

Cystoscopists:

E. O. SMITH, M. D.	DUDLEY WEBB, M. D.
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Dentists:

H. C. MATLACK, M. D.	E. G. BETTY, M. D.
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JUNIOR VISITING STAFF

Physicians:

L. G. HEYN, M. D.	CLEMENT C. FIFE, M. D.
ALLAN RAMSEY, M. D.	A. E. OSMOND, M. D.
OSCAR BERGHAUSEN, M. D.	STARR FORD, M. D.

Neurologists:

E. M. BAEHR, M. D.	ROBERT INGRAM, M. D.
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Surgeons:

CARL HILLER, M. D.	D. W. PALMER, M. D.
H. H. HINES, M. D.	C. F. HEGNER, M. D.
CHARLES A. LANGDALE, M. D.	G. B. RHODES, M. D.

Orthopedic Surgeons:

ROBERT D. MADDOX, M. D.	ROBERT B. COFIELD, M. D.
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Otologists and Laryngologists:

G. A. HINNEN, M. D.	C. H. WEINTZ, M. D.
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Oculists:

FREDERICK W. LAMB, M. D.	JESSE WYLER, M. D.
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Obstetrician:

WILLIAM GILLESPIE, M. D.	M. A. TATE, M. D.
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Pædiatrists:

F. H. LAMB, M. D.	E. A. WAGNER, M. D.
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Dermatologists:

ELMORE E. TAUBER, M. D.	C. J. BROEMAN, M. D.
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Gynecologist:

JAMES W. ROWE, M. D.	JOSEPH A. HALL, M. D.
GILBERT MOMBACH, M. D.	

Assistant Bacteriologist: WILLIAM H. PETERS, M. D.

Assistant Radiographer: WM. M. DOUGHTY, M. D.

Clinical and Pathological Laboratory and Museum:

A. E. OSMOND, M. D.	STARR FORD, M. D.
CHARLES GOOSMANN, M. D.	GILBERT MOMBACH, M. D.
OSCAR BERGHAUSEN, M. D.	JOHN A. CALDWELL, M. D.
HERBERT BROWN, M. D.	WILLIAM GRAF, M. D.
E. C. STEINHARTER, M. D.	

Resident Physician in Pathology: E. D. ALLGAIER, M. D.

Resident Physician: CHARLES T. McDEVITT, M. D.

In 1887 the Board of Trustees of the Cincinnati Hospital authorized the organization of the staff for the purpose of teaching, under the title of the Clinical and Pathological School of the Cincinnati Hospital. Since 1896 this school has been in affiliation with the medical department of the University of Cincinnati.

The hospital requires the payment of a fee of ten dollars for the privilege of clinical instruction in this school. This privilege is open to all third and fourth year medical students in the city who are registered under the state law.

The fees collected from the students are used to support the hospital library and museum.

**CLINICAL AND PATHOLOGICAL SCHOOL
CINCINNATI HOSPITAL
AMPHITHEATER CLINICS AND BEDSIDE INSTRUCTION
1913-14**

	HOUR	MON.	TUES.	WED.	THURS.	FRI.	SAT.
Oct. 1913 TO Feb. 1914	8:30 to 9:30	Greiwe Mitchell	Ransohoff Oliver	Caldwell Eolt	Hoppe Carothers Friedlander	G. M. Allen Withrow Stark	Ravogli Sattler Iglauer
	9:30 to 11:30	BEDSIDE CLASSES					
February TO June 1914	8:30 to 9:30	Brown Fackler	Carson Fec	Kramer Woodward	Wolfstein Freiberg Rachford	Porter Hall Reed	Heldingsfeld Vall Murphy
	9:30 to 11:30	BEDSIDE CLASSES					

THE GOOD SAMARITAN HOSPITAL

The clinical instruction of this important hospital is conducted exclusively by the faculty, as follows: Dr. C. L. Bonifield, President, and Dr. C. C. Fihe, Secretary. The members of the staff are: Medicine, Drs. John E. Greiwe and C. C. Fihe; Juniors, Drs. A. E. Osmond and Starr Ford; Surgery, Drs. Robert Carothers and Carl Hiller; Junior, Drs. J. E. Pirrung and Goodrich B. Rhodes; Gynecology, Drs. C. L. Bonifield, C. A. L. Reed, and John D. Miller; Junior, Dr. B. W. Gaines; Neurology, Dr. Herman H. Hoppe; Junior, Dr. E. M. Baehr; Nose and Throat, Drs. A. B. Thrasher and William Mithoefer; Junior, Dr. Robert Stevenson; Eye, Drs. Wylie Ayres and John Ranly; Junior, Dr. W. Keller; Children, Dr. Frank Lamb; Genito-urinary, Dr. E. O. Smith; Junior, Dr. Dudley Webb; Skin, Dr. J. W. Miller; X-Ray, Dr. Sidney Lange.

The Good Samaritan contains about one hundred beds. There is also, as a tributary, an outdoor department in connection with the hospital, adding materially to its resources. An abundance of clinical material is thus afforded both in the Departments of Medicine and Surgery, and this material is utilized for the instruction

of groups of students on three mornings of each week. See bedside schedule.

Students of this College only are eligible for internship in the Good Samaritan Hospital. There are four positions filled annually.

CINCINNATI TUBERCULOSIS HOSPITAL

The Cincinnati Tuberculosis Hospital is a municipal institution of 350 beds. It is organized on modern lines with a full-time medical superintendent and an independent staff of specialists. In this hospital the members of the Junior class spend 128 hours during the second semester in a detailed clinical and sociologic study of tuberculosis. This study forms a continuation of the work in the Board of Health.

The members of the staff are as follows:

A. C. BACHMEYER, M. D., . . . Superintendent and Medical Director.
 HARRY FREUDENBERGER, M. D., . . . Assistant Superintendent and
 Medical Director.
 PAUL MORTON STEWART, M. D., Resident Physician.
 H. KENNON DUNHAM, M. D., . . . Chief of the Tuberculosis Clinic.
 William Mithoefer, M. D.; Dudley Palmer, M. D.; R. D. Maddox,
 M. D.; Kennon Dunham, M. D.; W. McL. Ayres, M. D.; and
 Clifford Kennedy, M. D.

OTHER HOSPITALS OF CINCINNATI

The Faculty of the Ohio-Miami Medical College is also very largely represented in the staffs of Christ's Hospital, the Jewish Hospital, the German Deaconess Hospital, St. Mary's Hospital, and the Episcopal Hospital for Children. While no regular place in the college schedule is allotted for clinical teaching in these institutions, there is abundant opportunity for utilizing their large amount of clinical material.

LONGVIEW STATE HOSPITAL FOR THE INSANE

A course of clinical lectures on mental diseases is given at Longview State Hospital for the Insane from February to March each year. This course is given through the courtesy and under the supervision of Dr. F. W. Harmon, the superintendent of the Hospital, and by members of the Faculty of the Ohio-Miami Medical College. There is an enormous amount of material in this hospital available for the purpose of illustration, and it is unsurpassed in its variety. Admission to these lectures is open to practitioners and Senior students. Provision is made in the schedule of the Senior year for attendance upon this course; it is mandatory and entitles to credit.

In 1914 the lectures at Longview were as follows: February 7, Dr. Langdon, *Introductory: Psychoneuroses*; February 14, Dr. Hoppe, *Dementia Praecox*; February 21, Dr. Wolfstein, *Paranoia*; February 28, Dr. Zenner, *Melancholia*; March 7, Dr. Baehr, *Paresis*; March 14, Dr. Ingram, *Drug and Alcohol Psychoses*; March 21, Dr. Hoppe, *Senile Dementia*; March 28, Dr. Wolfstein, *Manic-Depressive Psychoses*.

THE COLLEGE DISPENSARY

The College conducts a dispensary for ambulatory cases in a building devoted entirely to this purpose. The clinic building is situated on the north side of McMicken avenue, at the head of Elm Street, upon the McMicken homestead grounds, and is therefore conveniently close to the College building. It is in charge of a salaried director.

The clinics are open from 10:30 a. m. to 1:00 p. m. for medical and surgical cases, and from 3:30 to 6:00 p. m. for paediatric, gynecologic, ophthalmologic, oto-laryngologic, neurologic, dermatologic, orthopedic, obstetric, and genito-urinary surgical cases. The morning clinics are exclusively for Junior students; the afternoon for Seniors.

Each clinic has the use of at least two rooms; one for consultations and examinations; one for demonstrations.

The annual attendance at these clinics is large. During the year 1914 about 25,000 cases were recorded, of which number, at least half were new cases. These cases are studied by small groups of students under the supervision of the clinicians. The attendance of the clinicians is arranged so that two are always on duty to advise and demonstrate. Efficient teaching is therefore obtained.

CHILDREN'S CLINIC

The division of Paediatrics has charge not only of the usual patients who come for treatment, but also of those of the Ohio Maternity Society. This division has an annual sum of money, placed at its disposal by Mrs. Emery, which is expended in distributing certified milk, and in paying two visiting nurses who follow patients to their homes.

ORTHOPEDIC CLINIC

The division of Orthopedics also has been given an annual sum of money by an anonymous donor, and this money is to be expended in equipping a gymnasium, and in paying for the services of an attending nurse and a visiting nurse.

OBSTETRIC CLINIC

During the spring of 1912, an agreement was consummated with the Maternity Society of Cincinnati, whereby all of the patients making application to our clinic should be taken care of by the physicians and nurses of that society, provided students were allowed to attend such cases and receive instruction. The obstetrical work of the Maternity Society is under the supervision of Dr. Woodward of the Faculty of the College, and a corps of competent physicians. The nurses of the Visiting Nurse Association attend all cases. Students therefore see obstetrical cases under the most fortunate scientific and moral conditions. The number of cases attended each year is about 300.

COLLEGE OF COMMERCE

FACULTY

- CHARLES WILLIAM DABNEY, PH. D., LL. D., PRESIDENT OF THE
Office, 10 McMicken Hall. UNIVERSITY.
- FREDERICK C. HICKS, PH. D., DEAN and Professor of Economics and
Office, 8 McMicken Hall. Commerce.
- JOHN C. DUNCAN, PH. D., Professor of Administration and Ac-
Office, 320 Engineering Building. countancy.
- _____, Professor of Commerce.
- HOWARD P. WARREN, M. C. S., Instructor in Finance.
Office, 34 McMicken Hall.
- NATHAN ISAACS, PH. D., LL. B., . . . Lecturer on Commercial Law.
Member of the Faculty of the Cincinnati Law School
- CHARLES W. DUPUIS, Lecturer on Banking.
Cashier Second National Bank.
- HARVEY M. MANSS, A. B., Lecturer on Advertising.
Of the J. Walter Thompson Advertising Company.
- EDWARD A. SISSON, A. B., Lecturer on Investments.
Assistant Secretary, The Central Trust and Safe Deposit Company.
- WILLIAM HAMMOND PARKER, PH. D., . . . Lecturer on Commerce.
Assistant Professor of Economics and Social Science in the College of
Liberal Arts.
- GUY M. FREER, Lecturer on Transportation.
Traffic Manager, Cincinnati Chamber of Commerce.
- WILLIAM SIMPSON GROOM, Lecturer on Transportation.
Traffic Manager, The Whitaker Paper Company.
- HENRY M. BROUSE, Lecturer on Administration.
Auditor, The Gale Brothers Co.
- ERNEST A. RODEN, Lecturer on Accounting.
Public Accountant and Auditor.
- GEORGE R. LAMB, C. P. A., Lecturer on Accounting.
Accountant.
- TEASDALE FISHER, Assistant in Accounting.
1330 Chapel St.

OTHER ADMINISTRATIVE OFFICERS

- HENRY S. WEST, PH. D., Director of School Affiliation.
Office, 2 McMicken Hall.
- ALFRED BRODBECK, Director of Physical Education.
Gymnasium Building.

- DANIEL LAURENCE, B. S., *Secretary of the University.*
Office, 5 McMicken Hall.
- CHARLES ALBERT READ, A. B., . . . *Librarian of the University Library.*
Van Wormer Library Building.
- LELIA GARVIN HARTMANN, B. L., *Registrar.*
Office, 7 McMicken Hall.
- THOMAS L. MCJOYNT, *Secretary, College of Commerce.*
Office, 33 McMicken Hall.

COLLEGE OF COMMERCE

GENERAL STATEMENT

The College of Commerce has been organized for the purpose of providing opportunity for higher commercial education. It was established in 1906 as a separate institution, largely the outgrowth of evening classes held under the patronage of the Cincinnati Chapter of the American Institute of Banking, and became a part of the University in 1912.

The time has come when it is worth while for the young man who desires to achieve success in a business career to begin by learning what the experience of others has to teach. The saving of waste is an important element in modern industry. It is in keeping with this idea that the wasteful method which requires business men to learn everything anew for themselves through their own experience should give place to a system which provides opportunity for each generation to know the results of the efforts of the preceding generation. It is thereby enabled to start somewhat in advance of where its predecessor did, and so to attain larger results.

There are, of course, many phases of business which every man must learn for himself, but business experience has developed principles and methods of procedure which can be taught. Moreover, these principles and methods have become so far standardized as to constitute a useful foundation upon which to build the experience of the individual.

In this respect, an interesting parallel may be drawn between preparation for the legal and medical professions, on the one hand, and preparation for a commercial career, on the other. Not very many years ago it was believed that training for law could best be secured in the office of a practicing attorney, and training for medicine, in the office of a physician. Today, those desiring to enter these professions avail themselves of the facilities offered by the colleges

of law and of medicine. None of these colleges professes to qualify its graduates to become at once leaders in their respective fields. To their college training must be added practical experience. Yet few, if any, now question that the preparation afforded by such institutions makes possible more rapid progress in the practice of those professions and, what is even more important, a far greater ultimate achievement.

In like manner, colleges for commercial training do not undertake to turn out ready-made captains of industry, but they do expect to assist in laying a foundation which, when combined with the training of practical experience, will enable the business man to attain larger results.

ADMISSION

The courses offered are open to all who are qualified to pursue them with profit. The College has been established for the purpose of supplying scientific instruction in the fundamental principles and practices of commerce with a view to increasing the efficiency of those who contemplate engaging in business or who have already entered upon such a career. To this end its facilities are available to every one whose training, either in school or in actual business, is such as to enable him to utilize them to advantage.

Students are admitted (a) as candidates for a degree, (b) as candidates for a diploma, or (c) as special students.

Candidates for a degree are expected to satisfy the regular college entrance requirements and to complete a pre-commercial course in the College of Liberal Arts consisting of forty college credit hours and two years' approved business experience, or of sixty college credit hours, i. e., the equivalent of two years' college work.

A credit hour is one recitation hour a week carried through a semester or half year.

The college credit hours must include the following:

English Composition.....	4	credit	hours
Economics	4	"	"
Economic History.....	4	"	"
Commercial Geography.....	4	"	"
Statistics	4	"	"
Logic	4	"	"
Ethics	4	"	"
Psychology	4	"	"
Mathematics	8	"	"

Six credit hours in science may be substituted for four of the eight credit hours in mathematics.

Eight credit hours in German, French, or Spanish may be substituted for an equal amount of the required work listed above, subject to the approval of the faculty.

Opportunity to secure this preparation is afforded by the College of Liberal Arts of the University of Cincinnati, which offers, in addition to the regular day classes, late afternoon and evening classes so adjusted as to enable the students to combine class work with practical business training. The following schedule has been arranged:

		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
First Year	4:45 to 6:45		English Composition		Logic	
	7:30 to 9:30			Economics	Economic History	Mathematics
Second Year	4:45 to 6:45	Statistics		Commercial Geography		
	7:30 to 9:30	Ethics	Psychology			Mathematics

In the two years' business training, the student is required to pursue a course of investigation under the direction of the teachers of the College of Commerce. Special schedules will be prepared with a view to directing the student's observation of business activities so as to make it effective as an essential part of his preparation for the work of the College of Commerce.

Candidates for a Diploma.—Persons are admitted as candidates for a diploma upon giving satisfactory evidence that their scholarship and business experience are adequate. They are required to submit to the Dean a detailed description of their educational and business training and to supplement this with such additional preparation as in the judgment of the committee may be desirable. Application blanks will be supplied upon request.

Special Students.—The classes of the College of Commerce are open to those who wish instruction along special lines only, provided they are of suitable age and business experience. Those

desiring to enroll as special students are required to satisfy the Dean that they are able to carry on the work desired.

Any student who, after entering, becomes a candidate for a degree or for a diploma, will receive credit for all courses satisfactorily completed, but before becoming a candidate for a degree or for a diploma, he must satisfy the entrance requirements.

All students are amenable to the same regulations in matters of class work, examinations, discipline, etc.

Applications for admission should be addressed to the Dean of the College of Commerce, University of Cincinnati, Cincinnati, Ohio.

REGISTRATION

Registration in 1914 began on Thursday, September 17, and closed on Saturday, September 19. The office was open during the evening of each of these days from 7:30 to 9:30.

No person will be admitted to any course after the beginning of the semester, unless a good and sufficient excuse for not entering at the opening of the semester be presented to the Dean; and in no event will any person be permitted to enter the work of any semester after the close of the third week of that semester. In accordance with this regulation *no person was admitted to the work of the first semester of 1914-15 after October 10, 1914.*

The steps in registration are as follows:

- (1) Secure from the Dean and fill out a Course Card.
- (2) Obtain from the Registrar a registration blank; fill out the same and present to the Registrar and secure a Card of Matriculation Fees.
- (3) Pay the registration and library and the tuition fees to the Clerk of the Board and get a receipt therefor.
- (4) File the Course Card and in the case of new students the Cards of Admission in the box prepared for that purpose in the Registrar's office.

FEEES

Students taking work in the College of Commerce are charged a registration and library fee of \$5.00 per year. The tuition for a full year's work of five courses is \$50.00. Those taking less than a full year's work are charged \$6.00 per recitation hour per year. Thus the tuition for one two-hour course is \$12.00 a year.

PLAN OF INSTRUCTION

The course of study is planned to combine and co-ordinate theory and practice. Though differing in the details of organization, the basic principle is the same as that of the Co-operative Engineering Course.

Though not as yet fully developed, the course will require three full years of work for its completion. This work will consist of two parts carried on simultaneously: the first composed of courses at the University; the second, of practice in one or more fields of business.

College Courses.—During the first year, the student will give his attention to a group of fundamental subjects, a general knowledge of which is important in all kinds of commercial activity. These are:

Marketing,
Industrial Management,
Principles of Accounting,
Elementary Accounting Laboratory,
Banking and Credit,
Commercial Contracts.

The second year's work will consist, in part, of additional fundamental subjects and, in part, of courses selected with reference to the special field for which the student desires to prepare. The required courses during this second year are:

Advertising.
Commercial Law.

In addition to these, the student will select, subject to the approval of the faculty, three two-hour year courses or their equivalent in half-year courses.

The subjects in the third year are elective, in order that the student may, if he so desires, confine his attention to a special field. At least five two-hour courses or their equivalent in half-year courses will be selected, subject to the approval of the faculty.

In the present stage of development of the College, the number of available electives is necessarily limited, but it is intended to increase these until opportunity for study is afforded in all the fields which properly belong in a College of Commerce.

Business Practice.—Throughout the three years, the student is expected to be in business and to carry on, under the supervision of the faculty of the College of Commerce, a carefully planned study of the business in which he is engaged. This will involve regular reports and conferences. Failure to meet successfully the practical demands

of business will debar the student from continuing as a candidate for a degree.

Except as required in the regular schedule of studies, no student will be allowed to take more than ten hours of class work a week, of which not more than six hours, i. e., three two-hour courses or their equivalent, may be taken from 7:30 to 9:30.

GRADUATION

Degree.—The degree of Bachelor of Commercial Science will be conferred upon the following conditions:

(1) The completion of the course of study as outlined, consisting of sixty-two *credit hours and of three years' successful business experience, including a systematic study of the business concerned.

(2) The preparation of a satisfactory thesis relating to the business in which the student has been engaged, with special reference to the application thereto of the subjects studied in the College. The paper must show that the writer has the ability not only to gather data, but also to correlate and apply the same in solving commercial problems.

Only such students as have satisfied the entrance requirements prescribed for candidates for a degree may receive the degree of Bachelor of Commercial Science.

Diploma.—A diploma in Commerce will be given to those who, having been duly approved as candidates therefor, complete sixty-two credit hours as described in the Plan of Instruction and three years' successful business practice.

Certificate.—A certificate will be awarded to special students upon the completion of a duly approved group of selected subjects.

CERTIFIED PUBLIC ACCOUNTANT

A special course has been arranged for those who desire to obtain the Certified Public Accountant certificate.

EVENING ACADEMIC COURSES

The University of Cincinnati offers also evening academic courses, which are open to students in the College of Commerce. For detailed information concerning these courses, address the Supervisor of Evening Courses.

* For definition of credit hour, see p. 264. Two hours of laboratory work in the College of Commerce are considered equivalent to one recitation hour.

SCHEDULE OF COURSES

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
5:00 to 7:00		*Marketing Corporation Finance	*Industrial Management	Adv. Accounting Laboratory 4	*Accounting Laboratory 2
7:30 to 9:30	Investments †Advertising	Credits and Collections †Commercial Law 2	*Commercial Law 1 Auditing	Commercial Law 3 Adv. Accounting 3 *Banking Problems of Traffic Manager	*Accounting 1 Traffic Management

* Required of regular first year students.

† Required of regular second year students.

COURSES OF INSTRUCTION

* Required of regular first year students.

† Required of regular second year students.

ADMINISTRATION AND ACCOUNTANCY

A. Administration

*1. *Industrial Management*.—This course considers the problems of the factory manager, the importance of the physical factors like location, transportation, plant layout and structure, the significance of legal restrictions, and the like. The second part of the work will be devoted to factory organization and management. W., 5:00-7:00.

[2. *Business Administration*.] The problems of the executives, their relations to the production and administration department, sales division, accounting department. The different types of organization and their influence on office management. The operations of the Purchasing, Sales, Credit, Shipping, and Stores Departments. Lectures and problems.

Omitted in 1914-15.

B. Accountancy

*1. *Principles of Accounting*.—This course is the foundation of all work in accounting. The student is made familiar with the accounting of the various types of business organizations, individual, partnership, and corporation. He is also shown how to construct and analyze the Income and Expense Statement and Balance Sheet and is familiarized with the accounts of ordinary mercantile and industrial concerns. Lectures and problems, F., 7:30-9:30.

*2. *Elementary Accounting Laboratory*.—The student is shown how to design accounting books and forms with the object of making the greatest possible savings in bookkeeping and clerical work. He is familiarized with various mechanical devices for saving time and labor and is shown how to employ them in accounting practice. He is also shown how to prepare copy for the printer and blank book maker. F., 5:00-7:00.

3. *Advanced Accounting*.—This is a problem course in which is considered the handling of capital, revenue, good-will, treatment of bad debts, suspense, maintenance and depreciation reserves and sinking funds, contingent funds, secret reserves, and the like. It will further consider dissolution of partnership, organization of corpora-

tions and holding companies, realization, liquidation, insolvency, and special topics like executor accounts, insurance accounts, etc. Lectures and problems, Th., 7:30-9:30.

4. *Advanced Accounting Laboratory*.—This course takes up the subject of designing and installing accounting systems for different kinds of mercantile, manufacturing, and financial enterprises. As one of the exercises the student is required to work out a complete cost system for a factory from given original data. He is also shown how to draw up instructions to bookkeepers and others who must operate the accounting systems installed. Th., 5:00-7:00.

5. *Auditing*.—Discussion of the duties and responsibilities of an auditor; the kinds of audits that can be made and the value of each; the auditor's report, what it should contain; his certificate, its value; the preparation of audit reports. Lectures and problems, W., 7:30-9:30.

[6. *Public Service, Institutional, and Governmental Accounting*.] The topics considered under Public Service Corporations will be their relations to the body politic, the consumer and the public at large, and the accounting problems involved as a result of these conditions. In institutional accounting the questions considered will be the different classes in institutions, their method of government, of support, of operation, and their relations to the body politic. In governmental accounting will be taken up the subjects of revenue raising and budget making, the present methods of conducting governmental accounts, their defects, and methods of correction and improvement. Lectures and problems. F., 5:00-7:00.

Omitted in 1914-15.

COMMERCE

*1. *Marketing*.—A clear understanding of the nature of value and exchange is essential to the student of marketing problems. The first part of this course, therefore, will be devoted to the consideration of the theory of value and price determination.

The principal work in the course will be a study of the distributive methods of a number of industries such as cotton, sugar, wheat, wool, and tobacco. The marketing methods in these industries are contrasted.

During the second semester, a study is made of particular problems in marketing, such as chain stores, jobbing, trade-marks, price maintenance, and advertising. T., 5:00-7:00.

†2. *Advertising in Modern Merchandising.*—This course will outline the theory of advertising and apply it to the business of today. It will include: the scope of advertising; its place in modern commerce; what psychology has contributed to advertising; forms and media of advertising; the part played by population and its distribution; copy and layout; advertising to men; advertising to women; building an advertising campaign and interlocking it with the sales campaign; advertising as a business. M., 7:30—9:30.

[3. *Barometrics of Business.*] A study of the phenomena that are commonly regarded as signs of the trend of business activity, and of the various plans of combining them with a view to forecasting business conditions. Among the most important of the subjects to be considered are commodity prices, bank clearings, loans and discounts, crop and metal statistics, foreign trade, gold movements and money rates, investment conditions, railroad conditions, and business failures. Special attention will be given to crises and depressions. Th., 5:00-7:00.

Omitted in 1914-15.

[4. *Foreign Trade.*] The work in this course is divided between European Trade and Latin American trade. As an introduction, a study is made of the theory of international exchange.

Attention is paid to such general problems as transportation, credits and collections, banking and relations with commission houses and agents. The commercial methods of the textile, shoe, flour, and similar industries, are studied in detail.

The trade conditions of South America are analyzed in a similar manner. The economic resources of the country are studied as a basis for a consideration of the trade possibilities. Specific problems, such as the beef trade of the Argentine, and the coffee trade of Brazil, are discussed. W., 5:00-7:00.

Omitted in 1914-15.

5. *Credits and Collections.*—Credit is the foundation of modern exchanges. The significance of the credit system to the organization of the present day commercial world is the starting point of the work of the course.

The following subjects are then studied: credit instruments, the organization of the credit department, the sources of credit information, the analysis of credit information, collection methods, associations of credit men and legal problems involved, such as bankruptcy and insolvency. T., 7:30-9:30.

Recitations and lectures by Credit Men.

6. *Traffic Management.*—The course is designed along thoroughly practical lines, the object being to fit the students for the actual work of handling the traffic in any line of business.

After a brief history of railroads, early rates, practices, etc., the student takes up the study of the "Act to Regulate Commerce", bills of lading and other documents of transportation, and the "Conference Rulings of the Interstate Commerce Commission."

Besides a thorough training in the most important features of transportation law, interstate and intrastate, the student is required to master the rules and uses of classifications and tariffs, a large file of which is maintained for the purpose.

The work of making out bills of lading, routing and rating shipments from classification and tariff, auditing freight bills, filing and handling claims, reconsignments, tracers, switching and demurrage problems, etc., is carried on in the class room just as it would be done in a large business enterprise. F., 7:30-9:30.

7. *Problems of the Traffic Manager.*—This course is designed to equip the student for the handling of the higher traffic problems.

It deals with the causes that led to the passage of the Federal Act to Regulate Commerce, its subsequent amendments and the reasons therefor, and a comprehensive study of the provisions of the act itself.

A thorough analysis is made of the conditions of the bill of lading, and of the interpretation placed upon the same by the various decisions of the courts. The Conference Rulings of The Interstate Commerce Commission and many of the most important of the Commission's decisions are given careful consideration.

It treats of the various systems and theories of rate making, and goes thoroughly into the many factors entering into the making of classifications and freight rates and what the courts, State commissions, and Interstate Commerce Commission have ruled regarding such matters.

This course is open to those who have completed the course in Traffic Management and to others whose experience affords sufficient preparation therefor. Th., 7:30-9:30.

COMMERCIAL LAW

* 1. *Commercial Contracts.*—This course begins with a brief analysis of law and a description of the place of contract in jurisprudence. It then takes up the essential elements in the formation of contracts; offer and acceptance; form and consideration; contracts that must be in writing under the statute of frauds; the capacity of infants, cor-

porations, and others to contract; the reality of consent as affected by mistake, fraud, undue influence, and duress; and illegality because in violation of the statutes or of the common law, or contrary to public policy, or fraudulent. There follows a consideration of the operation of contracts; their interpretation and construction; and the various modes of discharge of contracts, by agreement, by performance including payment and tender, by impossibility of performance, by operation of law, and by breach. The course concludes with a discussion of breach of contract, damages, and specific performance.

This course should precede all other courses in commercial law. W., 7:30-9:30.

† 2. *Law of Commercial and Banking Paper.*—The following is the outline of this course:

(a) Negotiable instruments payable in money. This will include: The general rules governing all negotiable instruments treated under the following heads: form and interpretation; consideration, negotiation; rights of holder; liabilities of parties; presentation for payment; notice of dishonor; discharge of negotiable instruments. Drafts (bills of exchange), treated under the following heads: form and interpretation; acceptance; presentation for acceptance; protest; acceptance for honor; payment for honor; bills in a set. Promissory notes, bonds, checks and certificates of deposit treated under the following heads: form and interpretation; general provisions.

(b) Negotiable instruments payable in securities. There will be considered: warehouse receipts, bills of lading and certificates of stock, the issue of, rights and obligations under, negotiation and transfer of.

(c) Non-negotiable credit contracts. Book accounts, guaranty, and suretyship. T., 7:30-9:30.

3. *Laws of Partnership and of Business Corporations.*—The first half of the term will be given to the law of partnership, and the second half to the law of business corporations. The outline of the course is as follows:

(a) Partnership; what constitutes a partnership; classification and definition of partnership; contract of partnership; firm as entity; firm name and good will; capital of firm; partnership property; rights and liabilities of partners among themselves; rights and liabilities of partners as to third persons; actions; dissolution; joint stock companies; limited partnership.

(b) Business corporations; definitions and legal status; formation and organization; charter, code of regulations, and by-laws; directors and officers; capital stock and bonds; stockholders; legal aspect of corporate accounts; dissolution; consolidation; reorganization. Th., 7:30-9:30.

FINANCE

* 1. *Banking.*—The functions and methods of modern banks. There will be included a description of the organization and various departments of banks; national and state banks; savings banks and trust companies; discounts and deposits; the various forms of bank paper, drafts, certificates of deposit, letters of credit, and others; and foreign exchange. The leading banking systems will be compared and the problems of modern banking will be considered. Th., 7:30-9:30.

2. *Investments.*—A study of the fundamental principles underlying the correct investment of funds: distribution of risk and selection in accordance with requirements, involving a consideration of safety of principal and interest; convertibility; stability of market price; regularity of income; prospect of appreciation in value; convenience and freedom from care, etc.

The various kinds of investments will be described and their distinguishing characteristics compared: bonds, municipal, railroad, public service, corporation, irrigation, timber, and others; stocks, railroad, large and small corporation; listed and unlisted securities; real estate mortgages and real estate; savings bank deposits; and life insurance. Railroad and corporation reports will be analyzed from the investor's standpoint.

The course will include also consideration of the functions of the dealers in investment securities; the underwriting houses and the stock brokers; the stock market, the mechanism of the stock exchange, speculation; the money market; and panics and crises in their relation to investments. M., 7:30-9:30.

3. *Corporation Finance.*—Methods of financing a corporation; forms of securities employed; their issue and sale; watered stock; amortization; the relation of shareholders, creditors, and the general public to corporation finance; the nature and purpose of state regulation. T., 5:00-7:00.

German, French, Spanish

Facilities will be provided for those desiring to secure a commercial knowledge of German, French, or Spanish.

SCHOOL OF HOUSEHOLD ARTS

OFFICERS OF ADMINISTRATION AND INSTRUCTION

CHARLES WILLIAM DABNEY, Ph.D., LL. D., President of the University.
EMILIE WATTS McVEA, A. M., Dean of Women.
ANN GILCHRIST STRONG, B. S., . . . Professor of Household Arts.
ELEANOR TOAZ, B. S., . . . Assistant Professor of Domestic Arts.
MARY YOUNG ALLISON, B. S., . . . Instructor in Household Arts.
ASSISTANTS: Elizabeth Shelow, A. B., Sarah Kinsey, and
Marion Hall.

GENERAL STATEMENT

The School of Household Arts was established in 1908 under the auspices of the Cincinnati Kindergarten Association; on July 1, 1914, it became a part of the University of Cincinnati. The School aims to give scientific instruction in the fundamental principles and practices of activities growing out of private and institutional house-keeping, with a view to increasing the efficiency of those desiring to enter a vocation or engage in a business dependent upon a knowledge of such subjects as dietetics and food economics, textiles and clothing. The courses offered are fundamental to teaching, administration, and the business practice of household arts and sciences.

ADMISSION

Candidates for the B. S. degree or the diploma in the School of Household Arts must be at least sixteen years of age and have completed satisfactorily an amount of preparatory study represented by sixteen units, a unit being the quantity of work represented by a full year's study, of five periods per week, of one of the subjects listed in the Liberal Arts announcement (pages 103-149).

Certificates from accredited high schools will be accepted, as in the College of Liberal Arts, but the said sixteen units must include two units (and may include four) in Household Arts, as taught in the Cincinnati high schools.

For admission to the degree course in the School of Household Arts, sixty credits in the College of Liberal Arts of the University of Cincinnati (two years' work) or their equivalent will be required.

At the beginning of the Junior year, students registered in other colleges of the University may enroll in the School of Household Arts upon electing a prescribed program.

Special Students.—Persons at least twenty years of age and qualified to do University work may be admitted as special students to lectures and laboratory courses in the School of Household Arts. They will be required to furnish documentary evidence to the Director of School Affiliation and to the professor in charge of this School of their ability to carry on successfully the course which they desire to enter. Before any special student may become a candidate for a degree he must satisfy the entrance requirements. All special students are amenable to the same general regulations as apply to regular students in matters of examination, probation, discipline, etc.

GENERAL REGULATIONS

Special students are amenable to the same regulations in regard to class work, examinations, and discipline as regular students.

Candidates for courses in household arts who have not had this subject in the high school, will be given an opportunity to make up the entrance requirements in external classes. (See p. 279.)

A thesis is required of all candidates for the B. S degree in household arts. The subject and treatment must be approved by the Professor of Household Arts.

Applications for admission to the School of Household Arts should be addressed to the Professor of Household Arts, University of Cincinnati, Cincinnati, Ohio.

PLAN OF INSTRUCTION

CANDIDATES FOR THE B. S. DEGREE

The following courses* are prescribed for candidates for the B. S. degree in the School of Household Arts:

English	6 credits
History	6 "
Science	10 "
Psychology	6 "
	—
Total	28 "

In addition to the above, students must elect courses in the College of Liberal Arts or the College of Commerce** to the amount

* For description of these courses, see announcement of the College of Liberal Arts.

** For description of courses in the College of Commerce, see announcement of the College of Commerce.

of 32 credits. They are recommended to choose from the following: English, Language, Economics, Social Science, Psychology, Philosophy, Physics, Chemistry, Mathematics, Accounting, Commercial Law, Administration.

General Requirements in the School of Household Arts

All students in the School of Household Arts, candidates for a degree or a diploma, are required to cover at least 30 credits in household art subjects, including:

- Foods and Nutrition 1, 2a, 2b.
- Textiles 8a, 8b, 9.
- Household Economics 6.

Candidates for a degree must elect other subjects completing the total requirements for 124 credits. Candidates for a diploma must elect subjects completing the total requirements for 72 credits, including 8 credits in Science, chosen with the advice of the Professor of Household Arts.

The following courses are prescribed for all candidates for the State Certificate, who are preparing to become teachers of household arts:

Elements of Psychology.....	6	credits
History and Principles of Education.....	6	"
Primary Methods.....	2	"
General Methods.....	4	"
Organization and Course of Study (H. A.).....	8	"
Observation and Practice Teaching (H. A.).....	4	"
	—	
Total	30	"

N. B.—The College of Medicine and the School of Nursing and Health* of the Cincinnati Hospital offer courses in physiology, bacteriology, applied chemistry, and home nursing which are open to students of the School of Household Arts. The New Cincinnati General Hospital, with its thoroughly equipped kitchens, laundry, and workrooms, and beautifully appointed dormitories and lecture rooms, may be utilized for co-operative work, and will afford opportunity for practice in institutional housekeeping and dietetics. To prepare for such vocations students may elect special courses.

* For bulletin and full information about the course for the training of nurses, address the Director of the School of Nursing and Health, Cincinnati General Hospital.

COURSES OF INSTRUCTION

EXTERNAL COURSES

The following are prerequisite courses counting for college entrance, but uncredited in the University.

Elements of Cookery.—For students who have not had domestic science in the high school. Recitations and laboratory work.

Elements of Sewing.—For students who have not had domestic art in the high school. Recitations and laboratory work.

UNDERGRADUATE COURSES

Foods and Nutrition

1. Food Production and Manufacture.—Lectures, readings, and demonstrations, with excursions to manufacturing establishments and reports on processes inspected. The lectures of this course describe the processes involved in converting staple foods from the raw state into the finished product in marketable form, and consider the composition and cost of food materials. Questions of preservation, adulteration, and substitution are considered. Throughout the year. M., 1:00-2:00. Professor Strong.

2. Experimental Cookery.—This course deals with the application of heat to food materials. Recipes will be studied and compared for the cost of materials, palatability, digestibility, and nutritive composition. This course is open only to regular students in the School of Household Arts. Throughout the year. M., 2:00-5:00; Th., 8:30-11:30. Miss Kinsey.

Prerequisite: Two credits in high school domestic science or the equivalent.

3. Dietetics.—For students who expect to become dietitians or to teach. This course aims to present the fundamental elements of human nutrition and to teach their application under varying physiological, economic, and social conditions. The problems in connection with the requirements of the nurses, the convalescents, and the patients on special diets, will be actually solved in the diet kitchen and general kitchens of the hospital. Lectures, recitations, laboratory, and co-ordinate work. Throughout the year. W., 1:00-2:00; laboratory, W., F., 2:00-5:00.

Professor Strong, Miss Shelow.

Prerequisite: Courses 1, 2.

4. Lunch Room and Tea Room Management.—Designed to give practice in the planning and serving of luncheons to large groups. The problem of cost considered with reference to luncheons in the

university, factory, or school, where minimum prices are required. Lectures and co-ordinate work in institutional lunch rooms. Throughout the year. T., 3:00-4:00; laboratory, T., Th., 8:30-3:00.

Mrs. Allison.

Household Economics

5. Management.—Organization and control of institutional, family, and personal life. The budget system is considered and the items of the budget discussed with reference to the standard of living. Opportunity will be given to study and practice in such institutions as hospital dormitories, lunch rooms, or institutional homes, and the equipment and management of all of the departments of these institutions will be considered. Recitations, excursions, and co-ordinate work. Throughout the year. M., 2:00-4:00.

Professor Strong.

6. The Family.—The influences which have most powerfully contributed to present ideals of home and family life, and to present institutions, constitute the subject matter of the course. Lectures and collateral readings. Throughout the year. F., 9:30-10:30.

Professor Strong.

Shelter

7. Household Design.—Study of the household of primitive and ancient peoples; the mediaeval and renaissance periods; modern homes; principles of design applied to the house, its decoration and furnishings. Lectures, discussions, and field work. M., W., 11:30-12:30.

Assistant Professor Toaz.

Textiles

8a. Cotton and Linen.—To be studied from the consumer's point of view; the production of raw material; processes of manufacture and the economic study of development; weaving; designing and finishing; analysis of fabrics. Lectures, discussions, field work. *First semester.* T., 8:30-9:30; F., 9:30-10:30.

Assistant Professor Toaz.

8b. Wool and Silk.—Woolens, worsteds, silks, and pile fabrics studied from the consumer's point of view; the production of raw material, processes of manufacture; designing and finishing, analysis of fabrics. Lectures, discussions, field work. *Second semester.* T., 8:30-9:30; F., 2:00-3:00.

Assistant Professor Toaz.

9. Laboratory.—Use of materials in the solution of problems covering the principles of the construction, alteration and repair of

garments; shopping and the purchase of materials. Throughout the year. T., 9:30-12:30; F., 2:00-5:00.

Assistant Professor Toaz and Miss Hall.

10a. Costume design.—Study of the history of costume; principles of line, color, and design as applied to present day clothing; appropriateness of material to style and style to the individual. Lectures, discussions, field work. *First semester*. M., 1:00-2:00.

Assistant Professor Toaz.

10b. Clothing Economy.—Principles and processes governing the care of clothing and household fabrics; comparative study of hand work and the use of machinery; methods of handling different kinds of fabrics; use of chemicals for cleaning purposes; study of the chemical properties of fabrics. Lectures, discussions, field work. *Second semester*. M., 1:00-2:00.

Assistant Professor Toaz.

11. Laboratory. Clothing Economy.—Application of principles and processes discussed during the lecture period with coordinate work. Throughout the year. M., 2:00-5:00; Th., 8:30-11:30.

Assistant Professor Toaz and Miss Hall.

Household Arts Education

1. Organization and Administration.—This course deals with the application of educational standards to industrial and household arts subjects as taught in elementary and secondary schools. Throughout the year. M., 8:30-9:30; S., 9:30-10:30.

Professor Strong, Assistant Professor Toaz.

2. Theory and Practice of Teaching Household Arts.—This course considers the special methods of teaching foods, clothing, and shelter. Lectures, observations, and practice teaching, with required readings. Two hours of class work and two credit hours of practice teaching and observation per semester. Open to Seniors and graduates. Throughout the year. W., F., 8:30-9:30.

Professor Strong, Assistant Professor Toaz.

Zoology

Zoology 60b. Elementary Zoology.—A lecture and laboratory course. The lectures deal with the practical side of animal morphology, physiology, and adaptation. In the laboratory, certain selected forms of importance in the household are studied. Lecture, M., F., 8:30-9:30; laboratory, W., 8:30-11:30.

Miss Box and Dr. Braun.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

1914-1915

GRADUATE SCHOOL

The D. A. R. Fellowship in American History for 1914-15 was awarded to Miriam B. Urbansky.

The Hanna Fellowship in Physics for 1914-15 was awarded to Edward Joseph Lorenz. (Reappointment.)

University scholarships for 1914-15 were awarded to the following students in the Graduate School:

William H. Dresch (Philosophy)
 Samuel M. Gup (Social Science)
 Harold Elwood Inskeep (English)
 Jacob I. Meyer (Philosophy)

McMICKEN COLLEGE OF LIBERAL ARTS

PHI BETA KAPPA

The following students were elected to membership in the Phi Beta Kappa Honorary Fraternity:

Oscar Slack Barrett	Madeline Keiser
Bessie Bolan	Martha Loeb
Hyman Bernard Cantor	Walter McIntire
Simon Cohen	Louis Mischkind
Solomon Freehof	Edna O'Brien
Estelle Hunt	Etta O'Hara
Grace Jones	Oscar See

Lillian Stiess

SCHOLARSHIPS

The Comegys Scholarship of fifty dollars was awarded to Laura Blank.

The five McMicken Honorary Scholarships were awarded to the following Seniors:

Miriam Urbansky	Ralph Belsinger
Clara Ballentine	Katherine Beschorman
	Mary Morgan

The twelve Thoms Honorary Scholarships were awarded to the following six Juniors:

Elsa Ewald	Ethel Holzberg
Claire Henle	Nesha Isaacs
Teresa Rosenthal	Florence Straus

And to the following six Sophomores:

Meyer Salkover	Salmen Siebler
Marianne Goettsch	Edward Geohegan
Paul Bauer	Helen Cord

The Julius Fleischmann Scholarships in the University, offered for the year 1914-15, to the members of the graduating classes in the accredited schools of the University outside of Cincinnati, were awarded as follows:

Esleie Asbury, Turner Station, Ky.
 Helen Bowen, Sidney, O.
 William J. Butt, Elkhart, Kan.
 Annabel Buxton, Lockland, O.
 Matthew T. Donahue, Ludlow, Ky.
 Eli B. Friedman, New York City.
 Edna Gastreich, Dayton, Ky.
 Paul Mayne, Mt. Healthy, O.
 Vivian Millar, Norwood, O.
 Le Roy C. Petty, Ft. Thomas, Ky.
 Hubert Richards, Dayton, Ky.
 Charles K. Riddle, Lawrenceburg, Ind.
 Isabel Thomas, Covington, Ky.
 Marie Thorpe, Norwood, O.

The Union Bethel Scholarships in Social Science, offered for the year 1914-15, to four advanced students in the Department of Political and Social Science, were awarded as follows:

Justus H. Hetsch	Clifford C. Gregg
George E. Hartmann	Mary Ellen Rieman

PRIZES

The first Jones Prize of forty dollars for the best English oration was awarded to Oscar Slack Barrett.

The second Jones Prize of twenty dollars for the second best English oration was awarded to Samuel Arthur Gup.

The Henry Hochstetter Prize in Chemistry, of the value of forty dollars, for the best graduating thesis in Chemistry, was awarded to Robert Findley Reed.

The Edward Miles Brown Prize for Excellence in English, of the value of fifty dollars, was awarded to Estelle Augusta Hunt.

The Robert Patterson McKibbin Memorial Prize, a gold medal

of the value of twenty-five dollars, was awarded to Oscar Slack Barrett.

A scholarship in the Law School for 1914-15 was awarded to Burton Robinson.

COLLEGE OF MEDICINE
(OHIO-MIAMI MEDICAL COLLEGE)

The successful competitors in 1913-14 for places as resident physicians in hospitals were as follows:

Cincinnati Hospital

Thomas Henshaw Kelly	Merrick Fiefield McCarthy
Paul Ramsey Hawley	William A. Foertmeyer
Helena Teresa Ratterman	John Vincent McGowan
Frank Marion Coppock, Jr.	Paul Morton Stewart

Jewish Hospital

Frank Goldenberg	Douglas Alexander Johnston
Murat Halstead Scott	Haviland Carr

German Deaconess Hospital

Robert W. Hart

Mary Thompson Hospital, Chicago, Ill.

Mabel E. Gardner

HOLDERS OF FELLOWSHIPS SINCE 1900

FELLOWSHIPS BY COURTESY:

Eliab Washburn Coy.....	1906-07
Frederick Alwin King.....	1906-07
Gordon Woods Thayer.....	1908-09
Nathan Tovio Isaacs.....	1910-11
Elliott Smith.....	1910-11
T. Warrington Gosling.....	1912-13, 1913-14
Sebastian J. Mauchly.....	1913-14
Elizabeth Baldwin Demarest.....	1914-15

D. A. R. FELLOWSHIP IN AMERICAN HISTORY:

George Washington Johnson.....	1900-01
Mabel Sara Carpenter.....	1901-02
Alice McGuffey Morrill.....	1902-03, 1903-04
Isaac J. Cox.....	1904-05
Frank P. Goodwin.....	1905-06

Helen L. Stein.....	1906-07
Marie Paula Dickoré.....	1907-08
Henrietta Marie Mackzum.....	1909-10
Lesley Henshaw.....	1910-11
Elizabeth Thorndyke.....	1911-12
Reginald C. McGrane.....	1912-13
Margaret Beach Plimpton.....	1913-14
Miriam B. Urbansky.....	1914-15

ALLIANCE FRANÇAISE SCHOLARSHIP IN FRENCH :

Alice Wilson.....	1905-06
Louis Selbert.....	1908-09
Carrie May Perin.....	1909-10

COLONIAL DAMES FELLOWSHIP IN OHIO VALLEY HISTORY :

Theodore T. Belote.....	1906-07
Earl Francis Colborn.....	1907-08
Edgar Chew Sweeney.....	1908-09
Paul Philip Rover.....	1909-10
H. Dora Stecker.....	1910-11, 1911-12

HANNA FELLOWSHIP IN PHYSICS :

Robert E. Clyde Gowdy.....	1906-07, 1907-08, 1908-09
Edward G. Rieman.....	1909-10, 1910-11
Sebastian J. Mauchly.....	1911-12, 1912-13
Edward Joseph Lorenz.....	1913-14, 1914-15

TEACHING FELLOWSHIP IN CHEMISTRY :

Harry Shipley Fry.....	1901-02
Geoffrey Arthur Gray.....	1902-03
Ralph Ballard Dimmick.....	1906-07

TEACHING FELLOWSHIP IN ECONOMICS :

Eugene Ewald Agger.....	1901-02
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TEACHING FELLOWSHIP IN BIOLOGY :

William O. Pauli.....	1902-03
Mabel Spellmire.....	1903-04
Joseph Hughes Shaw.....	1904-05
Stanley Rossiter Benedict.....	1905-06
Leon D. Peaslee.....	1907-08, 1908-09
Louis W. Sauer.....	1907-08, 1908-09
Vernon Lantis.....	1909-10, 1910-11

TEACHING FELLOWSHIP IN PHILOSOPHY:

Abraham Cronbach.....1902-03

TEACHING FELLOWSHIP IN ENGLISH:

Arthur James Kinsella.....1903-04

Elizabeth Merrill.....1904-05

TEACHING FELLOWSHIP IN MODERN LANGUAGES:

Elsie Metz.....1903-04

TEACHING FELLOWSHIP IN PHYSICS:

Harry L. Wieman and Earl Farnau.....1903-04

Herbert M. Hughes.....1904-05

FELLOWSHIP IN PHYSICS:

William Bell Cartmel.....1905-06

DEGREES CONFERRED IN JUNE, 1914

THE GRADUATE SCHOOL

Doctor of Philosophy

BRAUN, EMMA LUCY.....	2702 May St.
OESPER, RALPH EDWARD.....	2559 Fairview Ave.

Master of Arts

ALLGAIER, JENNIE.....	2921 Werk Rd., Westwood
CROUCH, STEPHEN DALLAS.....	2514 Hackberry St.
CUMMINS, RALPH.....	3453 Cornell Pl.
EGARTNER, ZACHAEUS TOM.....	1914 Harrison Ave.
FICKEN, RICHARD OSCAR.....	Moore's Hill, Ind.
FOSTER, JOSEPH BUCK.....	Mt. Washington
GIBSON, MARTHA JANE.....	3222 Harrison Ave.
GLEASON, FRED A.....	2005 Delaware Ave., Norwood, O.
GOLDSMITH, ADELE.....	3148 Harvey Ave.
HANCE, ROBERT THEODORE.....	723 Freeman Ave.
HELLER, JAMES GUTHEIM.....	315 Hearne Ave.
HIGHTON, AUBREY HENRY.....	604 Greenup St., Covington, Ky.
KRIM, ISIDORE.....	369 Howell Ave.
LEVI, ISABELLE JULIET.....	886 E. Rockdale Ave.
LUDWICH, HERMANN MARTIN.....	257 Gilman St.
MAYERBERG, SAMUEL SPIER.....	The Wilhelm, Avondale
NEUFFER, LEONORA.....	Lockland, O.
* PORTER, CHRISTINE.....	Reading Rd. near Shillito St.
ROSIN, AMY.....	727 E. Ridgeway Ave.
SARASOHN, ISRAEL JOSHUA.....	369 Howell Ave.
SNEED, MAYCE CANNON.....	827 Maple Ave., Newport, Ky.
STANLEY, HELEN ABIGAIL.....	3576 Zumstein Ave.
STEVENSON, PAUL R.....	3228 Wold Ave.
VICKERS, HELEN.....	Montgomery, Ala.
VON STEIN, ALICE ELVIRA.....	The Tevanagh
WERNER, LOUIS FREDERICK.....	914 Race St.

McMICKEN COLLEGE OF LIBERAL ARTS

Bachelor of Arts

ABRAMS, SAMUEL JOSHUA.....	New York City, and 515 Ridgeway Ave.
ACKERSON, ESTELLE.....	307 Grove Ave., Wyoming, O.
BARRETT, OSCAR SLACK.....	2303 Grandview Ave.
BOLAN, ELIZABETH MARGARET.....	22 E. Eighth St., Covington, Ky.
BRUMLEVE, CAMILLE.....	123 Hosea Ave.
CANTOR, HYMAN BERNARD.....	Buffalo, N. Y., and 1639 Clayton St.
CLARK, HAZEL JUNE.....	3243 Epworth Ave., Westwood
COHEN, SIMON.....	Baltimore, Md., and 3589 Wilson Ave.
COWELL, SARAH JANE.....	3015 Woodburn Ave.
CUMMINS, MARY DOROTHY.....	3453 Cornell Pl.
DABNEY, KATHERINE BRENT.....	The Romaine
D'AMOUR, MARTHA PAULA.....	The Elstun

* Mrs. William Graf.

D'ARCY, FRANCES ELIZABETH.....	454 E. Fifth St.
DEAN, ADELAIDE.....	826 Liberty St.
DONES, ELIZABETH JANE.....	5915 Sierra St., Madisonville
ELHOFF, EDNA AMANDA.....	3251 Vine St.
EPPINGER, JEANETTE.....	2242 Vine St.
FAY, HELEN SARAH.....	325 Reilly Ave., Wyoming, O.
FORTHMAN, WILLIAM.....	3033 Percy Ave.
FREEHOF, SOLOMON BENNETT.....	Washington, D. C., and S. E. Cor. Highland Ave. and McMillan St.
GILBERT, GRACE M.....	328 Albany Ave.
GOODHART, SADIE ISABEL.....	506 Hale Ave.
GRODSKY, DAVID HYMAN.....	207 Forest Ave.
GUP, SAMUEL MARCUS.....	Mobile, Ala., and 252 Albany Ave.
HAND, CHAUNCEY HARRIS.....	2558 Eden Ave.
HOFFMANN, JULIUS JOSEPH.....	3245 Bishop St.
HUNT, EMILY LOUISE.....	Maxwell Ave., Vernonville
HUNT, ESTELLE AUGUSTA.....	3344 Whitfield Ave.
INSKEEP, HAROLD ELWOOD.....	1328 Scott St., Covington, Ky.
JACOBS, FREDERICK RUDOLPH.....	1266 Iliff Ave.
JENKINS, RUTH LE MARIAN.....	839 Washington Ave., Newport, Ky.
JONES, ARTHUR DAVID.....	Cleves, O., and 3447 Jefferson Ave.
JONES, GRACE ELIZABETH.....	2215 Cameron Ave., Norwood, O.
JOSLIN, FLORENCE.....	514 Camden Ave.
KAUTZ, MARY KATHRYN.....	1209 Walnut St.
KEISER, MADELINE HENRIETTA.....	245 McCormick Pl.
KREHBIEL, MARIE.....	328 McGregor Ave.
LE CLERE, JOHN BURK.....	2256 Beechmont Ave., Mt. Washington
LINNARD, ELIZABETH CHARLOTTE.....	2550 N. Ingleside Pl.
LIPPERT, OTTO CARL FERDINAND.....	1601 Freeman Ave.
LOEB, MARTHA.....	829 Rockdale Ave.
LOUIS, IRENE LUCILE.....	420 Elizabeth St.
LUDWIG, LOWELL HOLBART.....	1011 Scott St., Covington, Ky.
MCINTIRE, WALTER ALAN.....	2318 Williams Ave., Norwood, O.
MCKEE, FLORENCE LOUISE.....	2201 Nelson Ave.
MIHALOVITCH, AMY FLETCHER.....	Kasota and Delaware Aves.
MILLER, GRACE EVA.....	Highland and Beech Aves.
MISCHKIND, LOUIS ARTHUR.....	Brooklyn, N. Y., and 369 Howell Ave.
MONTGOMERY, CHARLOTTE FRANCES.....	2325 Maryland Ave.
NEAVE, ARTHUR STUART.....	461 Considine Ave.
O'BRIEN, EDNA.....	2721 Woodburn Ave.
O'HARA, ETTA MARIE.....	3047 Hackberry St.
ORTH, HELEN.....	1925 Crown Ave., Norwood, O.
PAGE, MARY KATHERINE.....	1344 Locust St.
PHILLIPS, ANNETTA.....	Bodman Ave. and Young St.
PHILLIPS, KATHERINE.....	2525 Gilbert Ave.
RABENSTEIN, RUTH MARGHERITA.....	3429 Boudinot Ave.
REED, ELOISE.....	844 Oak St.
ROBINSON, BURTON EMMAL.....	3119 Imperial Ave.
ROSEN, JEROME.....	312 Straight St.
SEAMAN, RUTH GORDON.....	2312 Harper Ave., Norwood, O.
SEE, OSCAR FRANKLIN.....	Blue Ash, O.
SHERWOOD, EVELYN DALLAS.....	Kenton, Ky.
STEPHENS, ALICE VIRGINIA.....	2238 Wilson Ave.
STIESS, LILLIAN ESTHER.....	2327 Burnet Ave.
STRUKE, NORMA LOUISE.....	3334 Jefferson Ave.
SUER, WERNER JOHN.....	2352 Harper Ave., Norwood, O.

TARSHISH, JACOB.....	3158 Harvey Ave.
TEDTMANN, MARTHA FLORENCE.....	414 Betts St.
THIESING, CATHERINE MARIE.....	3019 Bathgate St.
VAN TYNE, ELIZABETH LUCY.....	212 Chelsea Pl., Delhi
VOORSANGER, ELKAN.....	260 Jefferson Ave., Grand Rapids, Mich.
WHALLON, MARY ROBERTA.....	1532 Chase Ave.
WILLEY, RUTH MAGDALEN.....	3453 Whitfield, Ave.
WISSEL, CLARA ANNA.....	Sta. K, Mt. Airy, O.
WOLFROM, GERTRUDE MARIE.....	201 Maine Ave., Elmwood Pl., O.
WRIGHT, NEIL.....	The Delmoor
WUNDER, CLINTON.....	3117 Glendora Ave.

THE COLLEGE FOR TEACHERS

Bachelor of Arts in Education

COOKE, BESS VIRGINIA.....	Wellston Pl.
DAVIS, MARGUERITE.....	235 Albion Pl.
EGER, HELEN.....	1814 Fairfax Ave.
FOOTE, HELEN ALLEE.....	1773 Humboldt Ave.
SCHEUER, IRMA.....	1522 Blair Ave.

Teacher's Diploma

IN ELEMENTARY EDUCATION

ACKERSON, ESTELLE.....	307 Grove Ave., Wyoming, O.
BRUMLEVE, CAMILLE.....	123 Hosea Ave.
CLARK, HAZEL JUNE.....	3243 Epworth Ave., Westwood
CUMMINS, MARY DOROTHY.....	3453 Cornell Pl.
D'AMOUR, MARTHA PAULA.....	The Elstun
D'ARCY, FRANCES ELIZABETH.....	454 E. Fifth St.
DEAN, ADELAIDE.....	826 Liberty St.
DONES, ELIZABETH JANE.....	5915 Sierra St., Madisonville
ELHOFF, EDNA AMANDA.....	3251 Vine St.
EPPINGER, JEANETTE.....	2242 Vine St.
FAY, HELEN SARAH.....	325 Reilly Ave., Wyoming, O.
FORTHMAN, WILLIAM.....	3033 Percy Ave.
GILBERT, GRACE M.....	328 Albany Ave.
GOODHART, SADIE ISABEL.....	506 Hale Ave.
HEISEL, EMMA ELIZABETH.....	300 Melish Ave.
JENKINS, RUTH LE MARIAN.....	839 Washington Ave., Newport, Ky.
JONES, ARTHUR DAVID.....	Cleves, O., and 3447 Jefferson Ave.
JONES, GRACE ELIZABETH.....	2215 Cameron Ave., Norwood, O.
KAUTZ, MARY KATHRYN.....	1209 Walnut St.
KEISER, MADELINE HENRIETTA.....	245 McCormick Pl.
KELLY, NINA.....	1320 Burdett Ave.
LINNARD, ELIZABETH CHARLOTTE.....	2550 N. Ingleside Pl.
LONDON, HENRIETTE.....	3579 Bogart Ave.
LOUIS, IRENE LUCILE.....	420 Elizabeth St.
McKEE, FLORENCE LOUISE.....	2201 Nelson Ave.
MONTGOMERY, CHARLOTTE FRANCES.....	2325 Maryland Ave.
O'HARA, ETTA MARIE.....	3047 Hackberry St.
ORTH, HELEN.....	1925 Crown Ave., Norwood, O.
PHILLIPS, ANNETTA.....	Bodman Ave. and Young St.
PHILLIPS, KATHERINE.....	2525 Gilbert Ave.

PLIMPTON, MARGARET B.....	731 Grand Ave., Price Hill
RABENSTEIN, RUTH MARGHERITA.....	3429 Boudinot Ave.
SEAMAN, RUTH GORDON.....	2312 Harper Ave., Norwood, O.
SIMON, MARY EMMA.....	457 Considine Ave.
STIESS, LILLIAN ESTHER.....	2327 Burnet Ave.
STRUKE, NORMA LOUISE.....	3334 Jefferson Ave.
TEDTMANN, MARTHA FLORENCE.....	414 Betts St.
VAN TYNE, ELIZABETH LUCY.....	212 Chelsea Pl., Delhi
WISSEL, CLARA ANNA.....	Sta. K, Mt. Airy, O.
WOLFROM, GERTRUDE MARIE.....	201 Maine Ave., Elmwood Pl., O.

IN ART

HINDMAN, PENELOPE R.....	940 Morris St.
NICKLES, MARTHA E.....	1406 John St.
RAUCH, MILDRED R.....	1924 State Ave.
SCHRADER, LOUISE E.....	2215 Ohio Ave.

COLLEGE OF ENGINEERING

Bachelor of Chemical Engineering

ANDREW, JAMES PETER.....	3600 Shaw Ave.
BLOOM, CHARLES LOUIS.....	1038 Wesley Ave.
GERSTLE, JOHN B.....	20 The Crescent
MARKS, HENRY ALBERT.....	113 Garfield Pl.
SALKOVER, BENEDICT B.....	256 Ehrman Ave.
SIVE, BENJAMIN ELLIOTT.....	1722 Fairfax Ave.

Bachelor of Electrical Engineering

OEHLER, WILLIS ALWARD.....	935 Elberon Ave.
RAITT, CHARLES C.....	1875 Fairfax Ave.
WARRINGTON, CHARLES MITCHELL.....	3018 Woodside Ave.

Bachelor of Mechanical Engineering

GRAEF, AUGUST PHILIP.....	2911 Webster Ave., Hyde Park
MONAGHAN, WALTER I.....	1908 Kinney Ave.

Chemical Engineer

REED, ROBERT FINDLEY.....	844 Oak St.
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Civil Engineer

DARTNALL, THOMAS WILLIAM.....	Lockland, O.
ENGDAHL, FREDERICK WILLIAM.....	2558 Eden Ave.
HARDING, EDWARD CRITTENDEN.....	Milford, O.
KLEIN, CHESTER THOMAS.....	2841 Melrose Ave.
LANGE, CHARLES HENRY LOUIS.....	116 Parker St.
TILDEN, CHAUNCEY MORGAN.....	2558 Eden Ave.
WESTENHOFF, ALPHONSE MUELLER.....	2621 Fenton Ave.
WIANT, PAUL PRINCE.....	238 McCormick Pl.

Electrical Engineer

BISHOP, JAMES STANLEY.....	2345 Kemper Lane
PERRY, STANLEY.....	Dayton Y. M. C. A., Dayton, O.
SHERIFF, JOHN WATERS.....	2558 Eden Av.
STEWART, JOHN HAROLD.....	2558 Eden Ave.
STRAIT, CLAY MORTIMER.....	213 Calhoun St.

Mechanical Engineer

CHALKLEY, CURTIS RATHBONE.....	1712 Scott St., Covington, Ky.
HURXTHAL, ALPHONSE.....	Care of The Lunkenheimer Co., Boston, Mass.
MITCHELL, MIRON ALLEN.....	213 Worth Ave.
PLUEDDEMANN, EDWARD WESTLEY.....	2564 Euclid Ave.
RACE, RICHARD MANN.....	2319 Stratford Ave.
SHARKEY, WILLIAM EDWARD.....	Middletown, Ohio

COLLEGE OF MEDICINE

Doctor of Medicine

CARR, HAVILAND.....	Jewish Hospital
COPPOCK, JR., FRANK MARION.....	Cincinnati Hospital
FOERTMEYER, WILLIAM A.....	Cincinnati Hospital
GARDNER, MABEL E.....	Mary Thompson Hospital, Chicago, Ill.
GOLDENBERG, FRANK.....	Jewish Hospital
HART, ROBERT W.....	German Deaconess Hospital
HAWLEY, PAUL RAMSEY.....	Cincinnati Hospital
JOHNSTON, DOUGLAS ALEXANDER.....	Jewish Hospital
KELLY, THOMAS HENSHAW.....	Cincinnati Hospital
MCCARTHY, MERRICK FIEFIELD.....	Cincinnati Hospital
MCGOWAN, JOHN VINCENT.....	Cincinnati Hospital
RATTERMAN, HELEN TERESA.....	Cincinnati Hospital
SCOTT, MURAT HALSTEAD.....	Jewish Hospital
STEWART, PAUL MORTON.....	Cincinnati Hospital

SUMMARY OF GRADUATES, JUNE, 1914

Graduate School.....	28
McMicken College of Liberal Arts.....	78
College for Teachers.....	49
College of Engineering.....	31
College of Medicine.....	14
Total	200
Twice Counted (taking two degrees).....	35
Net total.....	165

REGISTRATION OF STUDENTS, 1914-15

THE GRADUATE SCHOOL

Abbreviations

Any one of the following abbreviations placed beside a student's name indicates that he is taking work in the College designated as well as in the College in which he is listed:

C	College of Commerce
ELA	Evening Courses in the College of Liberal Arts
HA	School of Household Arts
LA	Liberal Arts
LA—D&E	Evening and Day Courses in the College of Liberal Arts
MC	College of Medicine
TC	College for Teachers

Fellow by Courtesy

DEMAREST, ELIZABETH BALDWIN (*Latin*).....The Maplewood, Clifton
A. B., Mt. Holyoke, 1905; Ph. D., Radcliffe College, 1913

The D. A. R. Fellow in American History

URBANSKY, MIRIAM.....431 Forest Ave.

The Hanna Fellow in Physics

LORENZ, EDWARD J. (*Physics*).....633 W. McMicken Ave.
A. B., University of Cincinnati, 1911; A. M., Ibid, 1912

University Scholars

DRESCH, WILLIAM HAUCK (*Philosophy*).....300 McClelland Ave.
A. B., Ohio Northern University, 1909; B. D., Garrett Bible Institute, 1911

GUP, SAMUEL M. (*Social Science*).....252 Albany Ave.
A. B., University of Cincinnati, 1914

INSKEEP, HAROLD ELWOOD (*English*) [TC].....1328 Scott St., Covington, Ky.
A. B., University of Cincinnati, 1914

MEYER, JACOB I. (*Philosophy*).....435 Ridgeway Ave.
A. B., University of Cincinnati, 1913

Graduate Students

ABRAMS, SAMUEL JOSHUA (*Philosophy*).....3354 Burnet Ave.
A. B., University of Cincinnati, 1914

ALLGAIER, MARGUERITE S. (*Mathematics*).....2921 Werk Rd.
A. B., University of Cincinnati, 1910

AREY, ESSIE VIOLA (*English*).....2635 Halstead St.
A. B., University of Cincinnati, 1912

AULICK, EDWIN CHESTERFIELD (*Latin*) [TC].....12 E. Seventh St.
A. B., University of Kentucky, 1894

BAEHR, BERTHA MARIE (*Education*) [TC].....3868 Oakley Ave.
A. B., University of Cincinnati, 1913

BECKER, MARIE (*Mathematics*).....8831 Cass Ave.
A. B., University of Cincinnati, 1913

BENEDICT, MRS. AGATHA HOPE (*Romance Languages*).....857 Hutchins Ave.
B. L., University of Cincinnati, 1895

BLINN, MARY LOUISE (*History*).....Glendale, O.
A. B., Vassar College, 1904

- BLOCH, EMILY MARTHA (*Greek*).....212 Northern Ave.
A. B., University of Cincinnati, 1887
- BOWIE, LILLIAN (*English*).....254 Elm Ave., Wyoming, O.
A. B., University of Michigan, 1906
- BUEHLER, EDWIN CHARLES (*German*) [ELA].....922 Ludlow Ave.
A. B., University of Cincinnati, 1913
- CANTOR, HYMAN BERNARD (*Philosophy*).....1639 Clayton St.
A. B., University of Cincinnati, 1914
- CLEMEN, CHARLOTTE C. (*German*).....212 Calhoun St.
A. B., University of Cincinnati, 1904
- COCKERILL, MARY ALMEDA (*English*) [TC].....20 N. Tenth St., Hamilton, O.
B. L., Ohio Wesleyan University, 1907
- COLLINS, LYDIA N. (*Greek*).....3122 Durrell Ave.
A. B., University of Cincinnati, 1910
- CONDIT, ARTHUR THOMAS (*Education*) [TC].....35 E. McMillan St.
A. B., Wabash College, 1905; A. M., University of Cincinnati, 1909
- CONNER, MAY S. (*English*).....3477 Montgomery Ave.
Ph. B., Ohio University, 1902
- COOMBE, MARY E. (*English*).....16 The Verona
A. B., Wellesley College, 1907
- CORCORAN, EFFIE (*Education*) [TC].....1925 Williams Ave., Norwood, O.
A. B., University of Cincinnati, 1909
- DAVIDSON, CHARLES LOWELL (*Education*) [TC].....3 Leroy Court
A. B., Yale University, 1907
- DAY, ALBERT E. (*Philosophy*).....3450 Burch Ave.
A. B., Taylor University, 1904
- DEUTSCH, EDITH R. (*Education*) [TC].....3600 Wilson Ave.
A. B., University of Cincinnati, 1912
- DICKINSON, ADRA (*Education*) [TC].....2551 Erie Ave.
A. B., University of Cincinnati, 1907
- DIGGS, MARY IONE (*Romance Languages*).....1700 E. McMillan St.
B. L., Ohio Wesleyan University, 1913
- EGARTNER, ZACHAEUS THOMAS (*Philosophy*) [TC].....1914 Harrison Ave.
New College, Edinburgh; A. M., University of Cincinnati, 1914
- EGER, EMMA LOUISE (*English*).....1814 Fairfax Ave.
A. B., University of Cincinnati, 1906
- ELLIOTT, ADALINE HALLOCK (*German*).....20 Ash St., Ludlow, Ky.
A. B., Miami University, 1908
- ESSLINGER, EDWIN WALTER (*German*).....2331 Wheeler St.
B. S., University of Michigan, 1907; A. M., John Hopkins University, 1912
- FERRIS, AMY (*English*).....Edgecliffe Rd.
A. B., University of Cincinnati, 1908; A. M., Ibid, 1912
- FINDLEY, MARGARET ANNE (*History*).....2115 Sinton Ave.
A. B., University of Cincinnati, 1899; A. M., Ibid, 1911
- FINK, CLARA CORDELIA (*Botany*).....247 Ruffner St., Lockland, O.
A. B., Miami University, 1910
- FLESSA, HERBERT LUTHER (*Education*) [TC].....531½ W. McMillan St.
A. B., University of Cincinnati, 1912
- FOSTER, SAMUEL ERNEST (*English*).....Lane Seminary
A. B., Cedarville College, 1913
- GASTON, FANNIE R. (*Physics*).....3441 Observatory Ave.
A. B., University of Cincinnati, 1909
- GEIGERMAN, HORTENSE (*History*) [TC].....522 Hickman Ave.
A. B., University of Cincinnati, 1909
- GIBSON, MARTHA JANE (*English*).....3222 Harrison St., Pleasant Ridge
A. B., University of Cincinnati, 1912; A. M., Ibid, 1914

- GILLILAND, FRANCES KATHERINE (*Chemistry*).....25 Garfield Pl.
B. S., Columbia University, 1914
- GODSHAW, ESTHER (*History*) [TC].....3442 Reading Rd.
Ph. B., University of Chicago, 1909
- GOODALL, WINIFRED (*English*).....2906 Vernon Pl.
A. B., Bryn Mawr, 1914
- GOODHART, SADIE ISABEL (*Education*) [TC].....506 Hale Ave.
A. B., University of Cincinnati, 1914
- GRODSKY, DAVID HYMAN (*Philosophy*).....207 Forest Ave.
A. B., University of Cincinnati, 1914
- GUELKER, HERBERT (*Education*) [TC].....1015 Academy Ave.
A. B., University of Cincinnati, 1912
- HEIZER, MARY ELIZABETH (*History*).....2016 Hudson Ave., Norwood, O.
A. B., University of Cincinnati, 1913
- HENSHAW, LESLEY (*Education*) [TC].....1928 Bigelow St.
A. B., University of Cincinnati, 1910
- HEUSCH, LILIE (*Greek*).....The Lombardy
A. B., University of Cincinnati, 1911
- HILLHOUSE, MRS. ALMA KOCH (*Greek*).....1542 St. Leger Pl.
B. L., University of Cincinnati, 1898
- HOECK, LOUIS GEORGE (*English*).....2822 Highland Ave.
Glasgow University, and New Church Theological Seminary, Cambridge, Mass., 1894
- HOFFHEIMER, EDITH SPRINGER (*English*).....10 The Madrid
A. B., University of Cincinnati, 1910
- HOMBURG, EMIL (*Chemistry*).....104 W. Clifton Ave.
A. B., University of Cincinnati, 1902; A. M., Ibid, 1909
- HOWELL, SARA JEAN (*History*).....2611 Ashland Ave.
A. B., University of Cincinnati, 1900
- HUNT, ESTELLE AUGUSTA (*English*).....3344 Whitfield Ave.
A. B., University of Cincinnati, 1914
- IGLAUER, MRS. CLARA SENIOR (*English*).....841 Windham Ave.
A. B., Smith College, 1907
- ISAACS, RAPHAEL (*Anatomy*) [MC].....3552 Bogart Ave.
A. B., University of Cincinnati, 1911; A. M., Ibid, 1912
- ISAACS, SCHACHNE (*Psychology*).....3552 Bogart Ave.
A. B., University of Cincinnati, 1910; A. M., Ibid, 1912
- JACOBS, FRED RUDOLPH (*German*).....1266 Iliff Ave.
A. B., University of Cincinnati, 1914
- JOHNSON, VIVIAN ELMA (*English*).....1007 Rittenhouse St.
A. B., Howard University, 1912; Graduate Student, Columbia
- JOSLIN, FLORENCE E. (*English*) [HA].....514 Camden Ave.
A. B., University of Cincinnati, 1914
- KELLY, NINA (*Education*) [TC].....2401 Grandview Ave.
A. B., University of Cincinnati, 1913
- KIEL, ANNA (*German*).....2400 Montana Ave.
B. S., New York University, 1912
- KINDLE, JOSEPH HENRY (*Mathematics*) [ELA].....2706 Eden Ave.
A. B., Ohio State University, 1905; A. M., Ibid, 1907
- KING, GORMAN B. (*Education*) [TC].....Lane Seminary
B. S., Arkansas Cumberland University
- KLEINSCHMIDT, EMMA (*Greek*).....Rapid Run Rd.
A. B., University of Cincinnati, 1913
- KOEHLER, KATHERINE LOUISE (*Education*) [TC].....3623 Stettinius Ave.
A. B., University of Cincinnati, 1907

- KOHNKY, EMMA (*Philosophy*)..... Crown St. and Essex Pl.
A. B., *University of Cincinnati*, 1909; A. M., *Ibid*, 1911
- KREHBIEL, MARIE (*English*) [HA]..... 328 McGregor Ave.
A. B., *University of Cincinnati*, 1914
- LAUER, CAROLYN A. (*English*)..... 544 Hale Ave.
A. B., *Smith College*, 1899
- LEE, CHARLES MARSTON (*Education*) [TC]..... 7 Park Pl.
A. B., *Miami University*, 1910
- LINDENLAUB, ELLA (*Education*) [TC]..... Woodside and St. Clair Aves.
A. B., *University of Cincinnati*, 1913
- LOEB, MARTHA (*Education*)..... 829 Rockdale Ave.
A. B., *University of Cincinnati*, 1914
- LOGAN, HELEN (*English*) [TC]..... 3492 Cheviot Ave.
A. B., *Wellesley College*, 1913
- LONG, CHARLOTTE MAE (*Philosophy*)..... 2403 Upland Pl.
A. B., *University of Cincinnati*, 1913
- LONG, MAXWELL B. (*Greek*)..... 3551 Michigan Ave.
A. B., *Kenyon College*, 1905; A. M., *Ibid*, 1909
- LORENZ, ELEANOR M. (*Mathematics*)..... E. North Bend Rd.
A. B., *University of Cincinnati*, 1913
- LOTTER, FREDERICK D. (*Geology*)..... 2425 McMicken Ave.
A. B., *University of Cincinnati*, 1910
- LUDWICH, MARTIN H. (*German*)..... 257 Gilman St.
A. B., *Königsberg Gymnasium*, 1899; A. M., *University of Cincinnati*, 1913
- MCCULLOUGH, ETHEL (*Political Science*).... 2725 Cypress Ave., Pleasant Ridge
A. B., *Vassar College*, 1912
- McKEE, FLORENCE LOUISE (*English*) [HA]..... 2201 Nelson Ave.
A. B., *University of Cincinnati*, 1914
- MACMILLAN, DAVID WALLACE (*Philosophy*)..... 140 W. McMillan St.
A. B., *University of Iowa*, 1893
- MARCKWORTH, OLIVIA MARIE (*Education*)..... Ramona Ave., Westwood
A. B., *University of Cincinnati*, 1913
- MAYERBERG, SAMUEL SPIER (*Social Science*)..... The Wilhelm Flats
A. B., *University of Cincinnati*, 1912
- MITTENDORF, GRACE RUTH (*English*)..... 124 Hosea Ave.
A. B., *University of Cincinnati*, 1907; A. M., *Ibid*, 1909
- NEARE, LUCIA (*Political Science*)..... 944 Lenox Pl.
A. B., *Vassar College*, 1914
- NEUFFER, LEONORA (*Chemistry*)..... Lockland, O.
A. B., *University of Cincinnati*, 1913
- NIPPERT, ELEANORE C. (*German*)..... 3 The Laurel
A. B., *University of Cincinnati*, 1903
- NIPPERT, MRS. LINDA (*English*)..... 4202 Hamilton Ave.
A. B., *University of Cincinnati*, 1905
- O'BRIEN, EDNA (*Education*)..... 2721 Woodburn Ave.
A. B., *University of Cincinnati*, 1914
- PARKER, MRS. HARRIET W. (*Philosophy*)..... 2 Glen Armand Ave.
B. L., *Bucknell University*, 1894; A. M., *University of Cincinnati*, 1910
- PARKER, MARGUERITE (*Education*)..... 4375 Hamilton Ave.
A. B., *Ohio State University*, 1914
- PATTISON, CLARENCE ETHELBERG (*Physics*) [TC]..... 4712 Peabody Ave.
A. B., *Miami University*, 1907
- PERKINS, MARY LOUISE (*Romance Languages*)..... 3459 Observatory Ave.
A. B., *University of Cincinnati*, 1909
- RAITT, ANNA HALL (*Biology*)..... 1875 Fairfax Ave.
A. B., *University of Cincinnati*, 1911; A. M., *Ibid*, 1912

- RANSHAW, VIRGINIA TRAVIS (*English*).....1030 Madison Ave., Covington, Ky.
A. B., *University of Cincinnati*, 1913
- RENNER, MRS. O. J. (*Philosophy*).....University Court
A. B., *University of Cincinnati*, 1910; A. M., *Ibid*, 1912
- RHINOW, ARTHUR B. (*Romance Languages*).....1104 Dayton St.
A. M., *University of Cincinnati*, 1905
- RICKEL, GILBERT JOHN (*Mathematics*).....2185 Harrison Ave.
A. B., *University of Cincinnati*, 1913
- RIKER, S. CLARK (*Political Science*).....1916 Bigelow St.
A. B., *Mount Union College*, 1906; A. M., *Ibid*, 1909
- ROSEN, JEROME (*Political Science*).....312 Straight St.
A. B., *University of Cincinnati*, 1914
- ROSIN, AMY (*Romance Languages*).....727 E. Ridgeway Ave.
A. B., *University of Cincinnati*, 1904
- ROUNDS, CHARLES RUFUS (*Education*) [TC].....747 Wells St.
B. S., *Ohio University*, 1913
- RUTTER, MARY LOUISE (*English*).....815 Hutchins Ave.
A. B., *University of Cincinnati*, 1912
- SAMMET, LYDIA MARGARET (*Romance Languages*).....3412 Harvey Ave.
A. B., *University of Cincinnati*, 1909
- SANDERS, ETHEL (*English*).....2918 Montana Ave.
A. B., *University of Cincinnati*, 1907; A. M., *Ibid*, 1913
- SANDERS, RUTH C. (*English*).....2918 Montana Ave.
A. B., *University of Cincinnati*, 1912
- SCHNEIDER, ERNA LILLIAN (*Education*) [TC]. .6264 Robinson Rd., Pleasant Ridge
A. B., *University of Cincinnati*, 1913
- SCHNITZER, FRIDA FRANZISKA (*German*).....3003 Cleinview Ave.
Höheres Lehrerin Seminar, Stuttgart
- SCHOFF, AMY L. (*English*).....847 Oak St.
B. L., *University of Cincinnati*, 1890; A. M., *Ibid*, 1911
- SEARS, ISABEL (*Education*) [TC].....Glendale, O.
A. B., *University of Cincinnati*, 1905
- SEARS, RUBY (*English*).....Glendale, O.
A. B., *University of Cincinnati*, 1905; A. M., *Ibid*, 1906
- SEASONGOOD, MRS. AGNES (*Economics*).....3711 Washington Ave.
A. B., *Smith College*, 1911
- SEAT, MRS. ELIZABETH FERGUSAN (*English*)..... The Oakwood, College Hill
A. B., *Mary Sharp College*, 1882
- SHAFFER, LUCY K. (*German*).....2260 Park Ave.
A. B., *Smith College*, 1908
- SHARKEY, LUCILLE GRIESMER (*English*).....Hamilton, O.
A. B., *Ohio State University*, 1910
- SKIRBALL, GRACE GERTRUDE (*Political Science*).....Terrace Park, O.
A. B., *Western Reserve*, 1913
- SILVER, MAXWELL (*Philosophy*).....1646 Clayton St.
A. B., *University of Cincinnati*, 1914
- SIMRALL, JOSEPHINE P. (*Psychology*).....4 Hedgerow Lane
A. B., *Wellesley College*, 1893
- SINNETT, LOTTIE MARY (*Philosophy*).....1027 Wesley Ave.
Ph. B., *Denison University*, 1914
- SMITH, EDWARD S. (*Mathematics*).....3826 Forest Ave., Norwood, O.
M. S., *University of Virginia*, 1912
- SMITH, MRS. VIOLA PFAFF (*Greek*).....3414 Whitfield Ave.
A. B., *University of Cincinnati*, 1908
- STANLEY, HELEN ABIGAIL (*Latin*).....8576 Zumstein Ave.
A. B., *University of Cincinnati*, 1913

STEINAU, IRENE A. (<i>Romance Languages</i>).....	3445	Mooney Ave.
A. B., <i>University of Cincinnati</i> , 1909		
STEPHENS, ALICE VIRGINIA (<i>Education</i>).....	2238	Wilson Ave.
A. B., <i>University of Cincinnati</i> , 1914		
STEWART, FANNIE RESOR (<i>English</i>).....	2348	Auburn Ave.
A. B., <i>Smith College</i> , 1903		
STEWART, MARJORIE (<i>English</i>).....	18	The Roslyn
A. B., <i>University of Cincinnati</i> , 1913		
SUTOR, JULIA LOUISE (<i>Education</i>) [TC].....		Ruffner St., Lockland, O.
A. B., <i>University of Cincinnati</i> , 1901		
TILFORD, WILLIAM HARMAN (<i>Philosophy</i>).....	144	Oak St., Ludlow, Ky.
A. B., <i>Maryville College</i> , 1914		
VAN HART, CLARA M. (<i>Education</i>) [TC].....	2469	Paris St.
A. B., <i>University of Cincinnati</i> , 1909		
VAN WINKLE, EDWIN C. (<i>Education</i>) [TC].....	5552	Montgomery Rd.
B. S. in <i>Education</i> , <i>Ohio University</i> , 1913		
WAGNER, STELLA M. (<i>English</i>) [TC].....		Ninth and Linn Sts.
A. B., <i>University of Cincinnati</i> , 1906		
WALKER, ALFRED M. (<i>Education</i>) [TC].....	577	Considine Ave.
A. B., <i>University of Cincinnati</i> , 1900		
WALLS, CALLIE K. (<i>Mathematics</i>).....	3214	W. Eighth St., Price Hill
B. S., <i>Ohio University</i> , 1912		
WANGER, MARION (<i>Mathematics</i>).....	23	King Bldg., Woodburn Ave.
A. B., <i>Vassar College</i> , 1914		
WARD, BERTHA EVANS (<i>English</i>).....	337	Ludlow Ave.
A. B., <i>University of Chicago</i> , 1912		
WEAVER, EDWARD S. (<i>Special</i>) [ELA].....	3911	Spencer Ave., Norwood, O.
A. B., <i>Findley College</i> , 1900		
WIEDEMER, LOTTIE (<i>Education</i>) [TC].....	4821	Linden St., Norwood, O.
A. B., <i>University of Cincinnati</i> , 1913		
WURTZ, LOUISE B. (<i>Greek</i>).....	3025	Beekman St.
A. B., <i>University of Cincinnati</i> , 1904		

McMICKEN COLLEGE OF LIBERAL ARTS

Seniors

BALLENTINE, CLARA L. [TC].....	4722	Ward St.
BARDES, EUGENIA CATHERINE [TC].....	128	W. McMillan St.
BAUER, BESSIE MAY [TC].....	6025	Main Ave., Pleasant Ridge
BELSINGER, RALPH EDWARD [TC].....	804	Grand Ave., Price Hill
BESCHORMAN, KATHERINE MARIE [TC].....	6546	Montgomery Rd.
BETTMAN, LOUISE [TC].....	3739	Reading Rd.
BLANK, LAURA.....	1048	Scott St., Covington, Ky.
BRIDGE, AGNES HILL.....	1325	Yarmouth Ave., Bond Hill
BROWN, KARLINE MEYERFIELD.....	510	Hale Ave.
BURGOYNE, MARGARET.....	19	The Roanoke
CALDWELL, GENEVIEVE [TC].....	828	Beecher St.
CARD, LORNA DOONE.....		Silverton, O.
CELLARIUS, MARY ELIZABETH [TC].....		Forest and Hudson Aves., Norwood, O.
CLAASSEN, ELLA ANNA [TC].....	2723	Scioto St.
COOPER, LULU ESTES.....	2409	Grandview Ave.
CORNUELLE, HERBERT CUMMING.....	6400	Desmond St.
CORNUELLE, RALPH DUDLEY.....	6400	Desmond St.
CROCKETT, HELEN LAEL.....	2626	Melrose Ave.
DEARNESS, DONALD FREDERICK [ELA].....	2654	Harrison Ave.

DEVOU, MARGARET LOUISE.....	Grandview Ave., Pleasant Ridge
DIECKMANN, ALMA SOPHIE [TC].....	2243 Spring Grove Ave.
DIERINGER, STELLA MARIE [TC].....	3901 Dickson Ave.
DOWNER, JOHN [TC].....	3722 Woodland Ave., Hyde Park
DRUCKER, FANNIE NATHALIE.....	3460 Knott Ave.
FARRAR, DOROTHY DAVIES [TC].....	4205 Thirty-fourth St., Oakley
FILLMORE, ANNIE LOUISE.....	2254 Park Ave., Norwood, O.
FISCHBACH, VERONICA M.....	1604 Sycamore St.
FOOTE, CATHERINE CORNELIA [TC].....	1773 Humboldt Ave.
FORTHMAN, ROBERT [TC&ELA].....	3033 Percy Ave.
FRIEDMAN, BENJAMIN.....	1354 Burnet Ave.
GEIGER, RUTH MARIE [TC].....	1330 Bremen St.
GEOHEGAN, KENNETH PRICE.....	820 Mt. Hope Rd.
GERLING, MATILDA [TC].....	3008 Woodburn Ave.
GETZENDANNER, JESSIE TUMY [TC].....	4540 Erie Ave.
GIBSON, ROBERTA MOORE.....	2407 Ashland Ave.
GOLDENSTEIN, RAPHAEL P. [TC].....	Portland, Ore., and 3309 Morrison Ave.
GRACE, LORETTA ANGELA.....	1912 Colerain Ave.
HALBEN, MATILDA VON DER [TC].....	3145 Bishop St.
HAYS, LENORE FLORA.....	307 Albany Ave.
HOLTZBERG, ABRAHAM GREGORY.....	Brooklyn, N. Y., and 369 Howell Ave.
HOWLAND, HARRIET ELISE [TC].....	2365 Kemper Lane
JOSEPH, RUTH BLOCH.....	353 Hearne Ave.
KEIM, HELEN ELIZABETH [HA].....	3526 Bevis Ave.
KRUCKER, ELSIE LOUISE.....	1432 E. McMillan St.
LALLY, ELLA MAY [TC].....	4706 Central Ave., Madisonville
LANGENBEIN, NORMA MIRIAM [TC].....	1627 Sycamore St.
LAZARON, BERTHA.....	2482 Paris St.
LYON, NORMAN MORAIS.....	627 Rockdale Ave.
MOLONY, IPHIGENE HELEN.....	The Abbotsford, McMillan St.
MORGAN, MRS. MARY ELIZABETH [TC].....	The Roanoke
MURDOCK, RUTH GERTRUDE.....	3414 Osage Ave., Price Hill
MUSEKAMP, FREDA ELIZABETH [TC].....	3919 Harrison Ave.
MYERS, AGNES PAULINE [TC].....	3326 Fairfield Ave.
NEWELL, ALICE ELIZABETH.....	501 E. Third St.
NOCKA, RUTH MAGDALENE.....	4810 Wesley Ave., Norwood, O.
OTTEN, FREDA [TC].....	3016 Scioto St.
PAHREN, NORMA B. [TC].....	382 Terrace Ave.
PHILLIPS, PAUL.....	1424 E. McMillan St.
POCIEY, JOSEPHINE VIOLET [TC].....	1722 Hewitt Ave.
RICHMOND, HARRY RAYMOND.....	The Wilhelm Flats
ROLLE, CLIFFORD JAY.....	3803 Glenway Ave.
SCHROEDER, ESTHER LYDIA [TC].....	425 Ridgeway Ave.
SCHULTZ, GLADYS LOUISE [TC].....	1053 Richwood Ave.
SCOVILL, DOROTHEA HAVEN.....	Troy, N. Y., and 52 Albany Ave.
SHERIKE, ALICE LOUISE [TC].....	430 E. Liberty St.
SNYDER, JOHN WESLEY [TC].....	1321 E. Third St.
STEWART, MARY ISABELLA [TC].....	7 Park Pl.
STICKNEY, GERTRUDE CLARE [TC].....	7029 Longview Ave., Carthage
TAYLOR, HELEN CATHERINE.....	3130 Harvey Ave.
TAYLOR, IONA MAY WATHEN.....	807 Lincoln Ave.
TAYLOR, JEAN KIMBALL.....	Glendale, O.
TOOTHMAN, MADOLENE MARGUERITE.....	4602 Central Ave., Madisonville
TRACY, MARGARET ANTHONY [ELA&TC].....	532 Howell Ave.
URBANSKY, MIRIAM BELLE.....	431 Forest Ave.
VOLKERT, ESTHER FLORENCE [TC].....	3502 Stacey Ave.

WACHTEL, IRMA [HA].....	3463 Harvey Ave.
WALDMAN, BESSIE [TC].....	5835 Hamilton Ave., College Hill
WEISS, MAX.....	Homestead, Pa., and 857 Rockdale Ave.
WILFERT, ELSIE [TC].....	358 Bryant Ave.
WILKINSON, RUTH STAFFORD.....	1055 Richwood Ave.
WILLIAMS, SOPHIA MAURICE [TC].....	St. Louis, Mo., and 934 Locust St.
WINSTON, MATTIE [TC].....	1124 St. Gregory St.
WITHAM, MARIE ALIS [TC].....	601 Stanley Ave., Tusculum
WOODSON, NEOLA ESTELLA [TC].....	2722 Ashland Ave.
WUEST, ALMA MARIE [TC].....	158 W. McMillan St.

Juniors

ACOMB, MARGARET JANET.....	6103 Liberty St., Pleasant Ridge
ANDERSON, DOROTHY.....	4749 Winton Pl.
APPEL, JEANNETTE [TC].....	4511 Homer Ave., Madisonville
BAEHR, LEONARD KASPER.....	3868 Oakley Ave.
BARASCH, NATHAN E.....	Bayonne, N. J., and 369 Howell Ave.
BENSON, PAULINE ELIZABETH [TC].....	3028 Hackberry St.
BERGMEIER, EDWIN HERMAN.....	2415 W. Clifton Ave.
BETTMAN, ARTHUR MORRIS.....	3739 Reading Rd.
BIDDLE, VIRGINIA TEMPLE [ELA].....	2549 Fairview Ave.
BLEIER, CORALIE.....	3460 Knott Ave.
BRAAM, FLORENCE TANNETTE LOUISE.....	5805 Glenview Ave., College Hill
BRAND, LESTER WILLIAM.....	14 W. Charlton St.
BRILL, WALTER HENRY.....	3930 Huston Ave., Norwood, O.
BROOKS, GERTRUDE WILDER [TC].....	1455 Aster Pl., College Hill
BROWN, HELEN EDMUNDS.....	2215 Washington Ave., Norwood, O.
BROWN, VIDA CHAPMAN [TC].....	3257 Fredonia Ave., Avondale
CAIE, THOMAS JOPLIN [ELA].....	435 Riddle Rd.
CLINE, ALFREDA BUCHANAN.....	3752 Isabelle Ave.
COOK, JEROME H.....	The Wilhelm
COOKSTON, HELEN.....	245 Avalon Ave., Hartwell
COOPER, LOIS BELLE.....	2409 Grandview Ave.
CRAMER, HELEN AVENUE.....	1564 Glen Parker Ave.
CURTIN, ANGELA MARIE.....	2411 Ashland Ave.
DANIELS, VERNA CAROLYN.....	120 Calhoun St.
DAVIS, JOHANNA SOMMERFIELD.....	347 Forest Ave.
DAVIS, JOHN FRANCIS.....	Cambridge, O., and 137 Lyon St.
EWALD, ELSA LOUISE [TC].....	2612 Fenton Ave.
FAY, GENEVIEVE.....	325 Reilly Ave., Wyoming, O.
FELS, CORA INGERBAR [TC].....	502 Riddle Rd.
FELTER, DORAH HELEN.....	1728 Chase Ave.
FINKELSTEIN, JOSEPH.....	Dayton, O., and 3500 Burnet Ave.
FRANCIS, FLORA L. [TC].....	122 Parker Ave.
FRANKLIN, JOHN HERCOURT.....	2006 Clarion Ave.
GIBBONS, MARTHA BELLE.....	North Bend Rd., College Hill
GIBSON, AILEEN MAE.....	409 Fourth Ave., Dayton, Ky.
GRANT, BERTHA LOOMIS.....	3618 Woodford Rd., Kennedy Heights
GUHMANN, RUTH BARBARA [TC].....	240 Hosea Ave.
HAMMLER, JULIA [HA].....	McKinley Ave.
HARRIS, HELEN PRISCILLA.....	248 Ehrman Ave.
HARVEY, FRANK HARRIS.....	2050 Symmes St.
HENLE, CLAIRE.....	827 Oak St.
HOFFMANN, CLARA EVA [TC].....	2908 Urwiler Ave., Westwood
HOLZBERG, ETHEL FRANCES.....	260 Ehrman Ave.
HOPPE, HENRY HERMAN.....	1820 Dexter Ave.

HOSEA, NOEL.....	3457 Oxford Terrace, Clifton
ISAACS, NESHA.....	3552 Bogart Ave.
ISAACS, STANLEY MORRIS [ELA].....	3562 Eden Ave.
JOHNSTON, RUTH JEANETTE.....	1719 Hewitt Ave.
JOSEPH, DAVID BERMAN.....	3010 Melrose Ave.
KAMM, LEONA CARRIE.....	8354 Anthony Wayne Ave., Hartwell
KAPLAN, SAMUEL SHAMMAI.....	Greenport, L. I., and 3156 Harvey Ave.
KELLER, RUTH HASKELL [TC].....	4700 Chickering Ave.
KEMPER, ELIZABETH SHIRLEY.....	2401 Ashland Ave.
KENNEDY, JENNIE KILLAM [TC].....	4223 Williamson Pl.
KINSEY, SARAH L. [ELA&HA].....	3847 Floral Ave., Norwood, O.
KOCH, HERBERT FRANK.....	325 Hearne Ave.
KOHLER, HENRY C.....	706 W. Eighth St.
KREIMER, ALBERT GEORGE.....	2901 Erie Ave.
KROUSE, KATHERINE KAICHEN [TC].....	274 Helen St.
LA MAY, ETHEL ROBERTA.....	5310 Ravenna St., Madisonville
LEVI, RUTH MILDRED [TC].....	812 Mann Pl.
LINDSLEY, FLORENCE ELMORE.....	4546 Edgewood Ave., Winton Pl.
LYLE, ALICE FRANKLIN.....	203 Woolper Ave.
LYTLE, LAWRENCE ROY.....	2064 Eastern Ave.
MCDONOUGH, ETHEL HELEN [TC].....	Claypoole Ave., Price Hill
MCGREGOR, ANNA LAURA [TC].....	3525 Shaw Ave., Hyde Park
MCNUTT, HELEN GRACE.....	5654 Glenview Ave., College Hill
MACHT, WOLFE.....	Newburgh, N. Y., and 3130 Eden Ave.
MARTIN, ANNA CARLINE.....	1627 Pullan Ave.
MARTIN, EDNA EUGENIE [TC].....	820 Beecher Ave.
MENDELSON, SAMUEL FELIX.....	Newark, N. J., and 435 Ridgeway Ave.
MERZ, EDNA MARGARET.....	3436 Cheviot Ave.
MOORE, FRANCES ALINE.....	912 Lexington Ave.
MOORE, FRANK MURDEN.....	103 W. McMillan St.
MOORMANN, THOMAS AQUIN.....	McMillan and Moormann Aves.
MUDGE, MARY ROSALIE.....	19 E. Eighth St., Covington, Ky.
NADEL, ERNESTINE [TC].....	833 Wade St.
OSKAMP, ELIZABETH.....	Loveland, O.
OTT, REUBEN ERVIN FREDERICK.....	820 York St.
PAUL, ELVIRA MARCELLA [TC].....	2364 Victor St.
PERIN, RHODA PEARL.....	3631 Morris Pl.
PFLEGER, MARGARET CLAIRE.....	3523 Clifton Ave.
PHILLIPS, ROYAL ASHER.....	226 First Ave., Carthage
PLUCKEBAUM, DOROTHY ELISABETH.....	850 W. Fifth St.
PORTER, NINA.....	3450 Zumstein Ave.
POWELL, CARROLL ARTHUR.....	271 Kearney Ave.
REECE, JOHN ANDREWS.....	2318 Ashland Ave.
RENNER, MARTHA MILLER.....	The Terraces, University Court
RICHARDS, HAROLD FREDERIC.....	413 Fifth Ave., Dayton, Ky.
RICHARDSON, OLIVE MAY [TC].....	564 Delta Ave.
RIEMAN, MARY ELLEN [TC].....	501 E. Third St.
RIESENBERG, ALPHONSE GERARD.....	1029 Columbia St., Newport, Ky.
RIFFE, LAURA CASSEDY.....	Eighteenth St. and Madison Ave., Covington, Ky.
ROBINSON, EDWARD STEVENS.....	15 The Crescent, Avondale
ROSENTHAL, TERESE MATILDA.....	990 Dana Ave.
RUBEL, VERE LINA.....	920 Burton Ave.
RULISON, JEANETTE ELIZABETH.....	6006 Prentice St., Madisonville
RYAN, RUTH [TC].....	2939 Montana Ave.
RYPINS, FREDERICK ISRAEL.....	Omaha, Neb., and 369 Howell Ave.
SANDERS, ADELAIDE WILHELMINE [TC].....	1630 Sutter Ave., N. Fairmount
SAUNDERS, ADLAI CARLISLE.....	Georgetown, O., and 359 Ludlow Ave.

SCHEUERMANN, ALFRED ARTHUR.....	2931 Jefferson Ave.
SEGEL, ALEXANDER.....	3600 Wilson Ave.
SHAFFER, SUSAN LEWIS.....	2260 Park Ave.
SHIGLEY, CELESTINE LIDA [TC].....	843 Ridgeway Ave.
SIBBALD, LUCILLE FAY.....	1818 Fairfax Ave.
SMITH, DOROTHY GERTRUDE.....	2111 Fulton Ave.
SNABLEY, VICTORINE MARY [ELA&TC].....	630 Neave St.
SPENCER, GRETA.....	167 Twain Ave., Sayler Park
STERN, BERNARD JOSEPH.....	Chicago, Ill., and 3590 Eden Ave.
STAPLEFORD, HELEN LOUISE.....	2640 Beekman St.
STIFEL, CATHARINE MARIE.....	3927 Colerain Ave.
STRAUS, FLORENCE LEAHNORE.....	3259 Fredonia Ave.
SWINEFORD, HELEN AGNES.....	147 Elm St., Ludlow, Ky.
TAYLOR, CELLA.....	Dayton, Ky.
TOMS, ALICE ELIZABETH [TC].....	223 Calhoun St.
TURNER, DARWIN ROMANES.....	1074 Liberty St.
VAUPEL, JEAN CLARA.....	6024 Lantana Ave.
WAGER, IRENE.....	3312 Columbia Ave.
WEATHERBY, LORENE EMMA.....	1643 Vandalia St.
WEBER, MARIE ROSALIE.....	3110 Gilbert Ave.
WESSEL, HARVEY EDWARD.....	New York City, and 315 Hearne Ave.
WESTHEIMER, CHARLOTTE.....	3557 Rosedale Pl.
WILHELMY, ODIN [C].....	3345 Woodburn Ave.
WILSON, MRS. ELSIE LEININGER.....	3342 Spokane Ave.
WISE, SOLOMON.....	756 S. Crescent Ave.
WRIGHT, PEARL MAE [ELA].....	2528 Chatham St.

Sophomores

ALLEE, ALICE BRAGDON.....	1016 Chapel St.
APPEL, ELSIE.....	4509 Homer Ave.
BANCROFT, JUNE SEIFRIED.....	Glencoe Hotel
BARRETT, MRS. HELEN WICHGAR.....	41 Verona Flats
BAUER, PAUL JACOB.....	3605 Dawson Ave.
BERESFORD, CURTIS RENSHAW.....	854 Lincoln Ave.
BOGEN, JESSIE.....	565 Howell Ave.
BOSS, RALPH LANGDON.....	2444 Gilbert Ave.
BRAUNWART, HELEN LOUISE.....	228 Shillito St.
BREUER, DOROTHY.....	2140 Williams Ave., Norwood, O.
BROWN, ELAINE CARUTH.....	3257 Fredonia Ave., Avondale
BUCKMAN, ALICE.....	524 Prospect Pl.
BUCKNER, SOPHIE HARRISON.....	808 Ludlow Ave.
BUENTE, SIBYL.....	4253 Hamilton Ave.
BULLERDICK, ELLEN MARTHA.....	4323 Hamilton Ave.
BURGOYNE, HELEN HENDERSON.....	19 The Roanoke
BUSCHING, HOWARD ELLSWORTH.....	504 Walnut St., Elmwood Pl., O.
BUTTENWIESER, PAUL PHILIP.....	211 Northern Ave.
CALE, HOWARD LAMONT.....	Dublin, Ind., and 15 E. Seventh St.
CALE, WILLARD GEORGE [ELA].....	Dublin, Ind., and 15 E. Seventh St.
CARMICHAEL, RALPH ALLISON.....	Loveland, O.
CASE, HENRIETTE SEWELL.....	2618 May St.
CHAMBERS, ENOLIA IRENE.....	3182 McHenry Ave.
COSBEY, JESSIE.....	500 Delta Ave.
DONNELLY, JOSEPH LAWRENCE.....	Fort Thomas, Ky.
ELBERG, ETTA LOUISE.....	510 Walnut St., Elmwood Pl., O.
EMERSON, SARADELLE.....	College Hill
EVANS, SARA MILDRED [TC].....	4009 Floral Ave., Norwood, O.
FAIRCHILD, ALLEENE.....	Glen Ridge, N. J., and University Court

FARAN, JR., JAMES JOHN.....	2920 Observatory Rd.
FELDMAN, ABRAHAM JEBIEL.....	New York City, and 3132 Durrell Ave.
FELS, IDA JEANETTE.....	502 Riddle Rd.
FERRY, DOROTHY WITHERBY.....	5 The Belmont, College Hill
FINEBERG, SOLOMON.....	Pittsburg, Pa., and 3240 Burnet Ave.
FISHER, CLINTON GEORGE.....	2384 Rohs St.
FLAGLER, MARJORY CURTIS.....	7373 Lower River Rd.
FRANK, FELICIA.....	8 The Seville
FRIEDERICH, JR., CHARLES.....	4510 Home Ave.
GARTELMAN, CLIFFORD ADAM.....	529 York St.
GEENBERG, HENRY.....	3 Leroy Court
GEYER, EMMA DOROTHY [TC].....	2972 Werk Rd.
GOETTSCH, MARIANNE.....	145 University Ave.
GOETZ, ROBERT ALFRED.....	151 W. McMillan St.
GOLDSMITH, ETHEL FANNY.....	250 Hearne Ave.
GORDON, JOHN WHITLOCK.....	Fern Bank
GREGG, CLIFFORD CILLEY.....	565 Terrace Ave.
GREGG, JR., ELLIS BAILEY.....	565 Terrace Ave.
GREGORY, ALEXANDER.....	301 Calhoun St.
GREGSON, ANITA HULL.....	3622 Zumstein Ave.
GREGSON, MARIE KERFOOT.....	3622 Zumstein Ave.
GROMME, EMMA DOROTHY.....	1832 Brewster Ave.
GROSSMAN, RALPH.....	845 Lexington Ave.
GUCKENBERGER, THELMA.....	3469 Brookline Ave.
HARTMANN, GEORGE EDGAR.....	3398 Hillside Ave.
HAUCK, EMILIE MARGARET.....	935 Dayton St.
HAYS, SARA HANAUER [TC].....	3551 Alaska Ave.
HEARD, KATHERINE MONG.....	3637 Edwards Rd.
HEGER, EVELYN ELIZABETH.....	Towne Ave., Bond Hill
HERBERT, MARY KENNEDY.....	Glencoe Hotel
HETSCH, JUSTUS KARL.....	626 York St., Newport, Ky.
HEYL, HELEN MARCELLA.....	2402 Upland Pl.
HILLER, GRACE REDMOND.....	2455 Madison Rd.
HOLZBERG, JULIUS.....	260 Ehrman Ave.
HOSKINS, LLOYD LEGGETT.....	Middlefield, O., and 215 Bodman Ave.
HUNT, MARGARET CHARLOTTE.....	5405 Wetzel Ave., Madisonville
IDESON, ELEANOR GERTRUDE.....	2156 Cameron Ave., Norwood, O.
INNES, MYRA ETHEL.....	4513 Mellwood Ave., Winton Pl.
ISRAEL, EDWARD L.....	3589 Wilson Ave.
JOHNSON, FREDERICK AUGUSTUS.....	861 Beecher St.
JONES, DOROTHY CARTWRIGHT.....	12 Bella Vista Pl.
JONES, MARGARETTA ABIGAIL.....	4349 Erie Ave., Madisonville
KASSON, LEE BROOKS.....	Fort Thomas, Ky.
KATKER, WILLIAM CORTMUN [ELA].....	3229 Glendora Ave.
KELLER, ADELINE LOUISE.....	218 Stetson Ave.
KOEHLER, WILLIAM AUGUSTUS.....	2456 W. McMicken Ave.
KOTZIN, GODFREY [ELA].....	243 Hearne Ave.
KRUEGER, JUSTINE.....	917 Garfield Ave., Price Hill
KRUSE, EDITH LAURA.....	Seventy-fifth and Main Sts., Carthage
KUNSCHIK, EMMA AUGUSTA.....	3206 Madison Rd.
LAMBERT, MARGARET LOUISE.....	223 W. Twenty-first St., Covington, Ky.
LANDMAN, SOLOMON.....	3455 Whitfield Ave.
LILLARD, DAVIS.....	6229 Savannah Ave., College Hill
LINTON, ELEANOR.....	Wilmington, O., and 8231 Woodbine Ave.
LUSBY, HELEN ALISON.....	943 E. Third St.
LYLE, DONALD JOHNSON.....	203 Woolper Ave.
McCARTHY, ALICE MARIE.....	1937 Clarion Ave.

McGOWAN, CAROLYN LEHMAN.....	9 Haydock Apartments
McINTIRE, LAURA MILDRED.....	2318 Williams Ave., Norwood, O.
McKINLEY, RUTH ELIZABETH.....	5727 Davey Ave., College Hill
MADDUX, HOWARD STANLEY.....	421 Delta Ave.
MARCUS, JACOB.....	Wheeling, W. Va., and 521 Ridgeway Ave.
MARK, JEROME.....	Baltimore, Md., and 1009 Chapel St.
MENDELSON, JOE.....	350 Rockdale Ave.
MICHAEL, LILLIAN.....	1521 Hapsburg Ave.
MONTGOMERY, HARRIETTE LETCHER.....	207 Woolper Ave.
MORRIS, GERTRUDE ELLEN.....	Loveland, O.
MOTZ, JOHN LOUIS.....	337 Albany Ave.
MURRAY, WILLA LILLIAN.....	6246 Aspen Ave.
NEVITT, EDYTH LEANNAH.....	1027 Wesley Ave.
NOONAN, CHARLES STEWART.....	332 W. Rockdale Ave.
O'HARA, LAURA M.....	3047 Hackberry St.
OSBORN, JOSEPHINE.....	3439 Whitfield Ave.
OTTO, CARL EVERTT.....	1 Highway Ave., W. Covington, Ky.
PAYNE, HAROLD.....	Reading Rd. and Paddock Ave.
PEASLEE, PATRICIA DOROTHY.....	3218 Warsaw Ave.
PERKINS, HILDEGARDE.....	3549 Observatory Pl.
PFIRRMANN, BERTHA E.....	2507 Auburn Ave.
PHARES, LAVILLA.....	3719 Terrace Pl.
PICHEL, SWEET MARIE.....	233 Goodman Ave.
POLLITT, BASIL HUBBARD.....	2242 Frances Lane
RENNER, CAROLYN NORRIS.....	The Terraces, University Court
RICHARDS, POLLIE ANN.....	Erie and La Crosse Aves.
RICHARDSON, BAYLE MANSER.....	86 W. McMillan St.
RIDDLE, CLARA BELLE.....	103 Parkway Ave., Hartwell
RIKER, ALBERT JOYCE.....	Oakland, Md., and 1916 Bigelow St.
ROSENTHAL, EVELYN.....	991 Marion Ave.
ROSS, FRANCES MOYER.....	Moyer Pl., Linwood
ROST, NORMA BEATRICE.....	514 E. Fourth St.
ROYER, LUCILE MARIE [ELA].....	744 Mt. Hope Rd.
RUNCK, FRANCES ROBERTA.....	928 Locust St.
SALKOVER, MEYER BERNARD.....	1720 Dexter Ave.
SAURER, LUCILE FRANCES.....	2842 May St.
SCHAEFER, ALVINE BERTHA.....	504 Main Ave., Elmwood Pl., O.
SCHOENWANDT, HELEN BERTHA.....	2723 Woodburn Ave.
SCHRODER, PAULINE.....	438 Rockdale Ave.
SCHWALLIE, EVA MARIE.....	2218 Cameron Ave., Norwood, O.
SCHWARTZ, LILLIAN MILLER.....	3997 Beechwood Ave.
SHIELDS, MARY.....	4338 Floral Ave., Norwood, O.
STAATS, CHESTER CLYDE.....	2333 Wheeler St.
STEINAU, STELLA.....	3445 Mooney Ave.
STEVENS, DOROTHY SCOVIL.....	3527 Edwards Rd.
STRAUS, ROBERT LEE.....	Maysville, Ky., and College Hill
SUDBRINK, ELSIE WILHELMINA.....	1374 Avon Pl.
TANGEMAN, HELEN.....	2815 Burnet Ave.
TAYLOR, DOROTHEA COCKAYNE.....	3826 Spencer Ave., Norwood, O.
TAYLOR, IRENE MARSHALL.....	Pleasant Ridge
TAYLOR, MARCUS BUELL.....	807 Lincoln Ave.
THIEL, WALDA MARGUERITE [ELA].....	172 Bosley St.
THRASHER, CORINNE.....	Senator Pl.
TIERNEY, MARGUERITE ESTHER.....	233 Burns Ave., Wyoming, O.
TRACY, CAROLINE BARRETT.....	532 Howell Ave.
TRISLER, MRS. ANNA H.....	1525 Gilpin Ave.
TURNER, JACK.....	1639 Clayton St.

VAN FLEET, ELMER HOOVER.....	740 Hand Ave., Winton Pl.
VOSS, LEROY CHARLES.....	3443 Burch Ave.
WASERWITZ, PHILIP FOGEL.....	San Francisco, Cal., and 369 Howell Ave.
WATKINS, ANNA MAE.....	63 E. Ninth St., Covington, Ky.
WEBER, ELSIE MARGARET.....	208 Baxter Ave.
WESTERLAND, AGNES.....	307 W. Fourth St.
WHEELER, ALFRED GUY.....	2391 Warsaw Ave.
WILDER, EUGENIA ELIZABETH.....	3267 Broadwell Ave.
WILSON, GEORGE HENRY.....	Winchester, O., and Newton, O.
WILSON, MARY LOUISE.....	287 McGregor Ave.
WOODMANSEE, MYRTLE VERNA.....	260 Twain Ave., Saylor Park
WRIGHT, HELEN LOUISE.....	2452 Highland Ave.
WULFEKOETTER, GERTRUDE MARIAN LOUISE.....	College Hill
WYDMAN, DOROTHY GARRARD.....	1330 Grace Ave., Hyde Park
ZIMMERMAN, FRANCES CAMERON.....	Glendale, O.

Freshmen

ACKERSON, CLARA MONROE.....	307 Grove Ave., Wyoming, O.
ADAMS, APPELLONA.....	2318 Quebec Ave.
ADAMS, EDITH MAE.....	2616 Kemper Lane
AHLERS, CLIFFORD HENRY.....	146 W. McMillan St.
ALEXANDER, FANNY BURNETTE.....	3520 Shaw Ave.
ANDERSON, WESLEY.....	231 E. Sixth St., Newport, Ky.
ANDRIDGE, GERTRUDE MELIUS.....	1317 Grace Ave.
ARNOLD, HELEN ELIZABETH.....	3432 Columbia Ave.
ASBURY, ESLIE.....	Turner Station, Ky., and 2539 Stratford Ave.
BADGLEY, ARTHUR.....	1717 Martha St.
BARBER, HERVEY HUBBARD.....	66 E. Fifteenth St., Covington, Ky.
BASKIN, HELENE ANNA.....	Springfield, O., and 3144 Harvey Ave.
BEAHR, CATHERINE MARTHA.....	3343 Woodburn Ave.
BECHT, HELEN MILLER.....	445 Wood Ave.
BELTON, J. DRAYER.....	1812 Madison Ave., Covington, Ky.
BENTHAM, HAROLD.....	2114 Fulton Ave.
BERKOWITZ, HENRY JOSEPH.....	Philadelphia, Pa., and 207 Hearne Ave.
BERTING, RUTH ANNA.....	1028 Straight St.
BINGEL, ELEANORA.....	1602 Sycamore St.
BIRNEY, MARGUERITE SARAH.....	Mt. Healthy, O.
BLACK, ALICE WARWICK.....	3368 Morrison Ave.
BLAIR, GERTRUDE MCKEE.....	2570 Euclid Ave.
BLANK, SHELDON HAAS.....	Mt. Carmen, Ill., and 1009 Chapel St.
BOGEN, EMIL.....	565 Howell Ave.
BOWEN, HELEN.....	4526 Lucerne Ave., Madisonville
BOWMAN, DOROTHY MAY.....	2324 Ashland Ave.
BRADFORD, RUTH ELIZABETH.....	4719 Winona Terrace, Madisonville
BRAHAM, JEANETTE CAROLYN.....	217 Mitchell Ave.
BRAUNLIN, ROBERT FREDERICK.....	Portsmouth, O., and 233 Emming St.
BRETT, JAMES ARTHUR.....	Lafayette Circle
BRETTLE, ALICE MARION.....	911 Marion Ave.
BRINKMANN, HILDEGARDE.....	Winding Way and Lenox Pl.
BROOK, HARRY CHAOKIN.....	518 Betts St.
BROWN, DOROTHY WOLF.....	510 Hale Ave.
BROWN, LEWIS P.....	Portland, Ore., and 3240 Burnett Ave.
BROWN, MARY LOUISE.....	Zanesville, O., and Parkside Flats
BRUEGGEMAN, HARRIET SWEENEY.....	214 Dorchester Ave.
BURCK, HENRY EUGENE.....	46 Mt. Pleasant Ave., Ft. Thomas, Ky.
BUTT, WILLIAM JOSEPH.....	Elkhart, Kan., and 2005 Madison Rd.
BUTTERFIELD, PHILA VAN WORMER.....	5946 Belmont Ave., College Hill

BUXTON, ANNABEL.....	715 Worthington Ave., Lockland, O.
BYERS, FRANK RAWLEY.....	Terre Haute, Ind., and 2948 Colerain Ave.
CALDWELL, ROBERT ROSS.....	828 Beecher St.
CALDWELL, TIRZAH.....	410 W. Eighth St.
CARMICHAEL, BEATRICE G.....	Holly Lane, Walnut Hills
CAVANAUGH, MARIE KATHLEEN.....	Cavanaugh Ave., Westwood
CELLARIUS, ANNA KINDER.....	Hudson and Forest Aves., Norwood, O.
CLANCEY, WILLIAM POWER.....	4 The Navarre
COHEN, PHILIP ALFRED.....	3557 Reading Rd.
CORDELL, MILDRED.....	3056 Mentor St.
CORRE, MARY PRICE.....	4 Hedgerow Lane
CRAWFORD, ELIZABETH DYMOND.....	701 S. Crescent Ave.
CRISCI, RAPHAEL.....	701 Delta Ave.
CROAKE, WILLIAM THOMAS.....	1055 Baymiller St.
CROMLEY, WILLIAM WALLACE.....	Palestine, O., and 2437 Clifton Ave.
CROWE, EUNICE MARIE.....	757 Purcell Ave., Price Hill
CULBERTSON, CHARLENE.....	1849 Clarion Ave.
DALE, JOHN THERRIEN.....	2256 Park Ave.
DAVIS, EDITH SUTHERLAND.....	1911 Mentor Ave., Norwood, O.
DEPRAD, PHERRELL ANDERSON.....	828 Clark St.
DICKERSON, ELLA AMANDA.....	2815 Brewster Ave.
DIETERLE, GERTRUDE FREDERICKA.....	210 Hosea Ave.
DIETZ, FRED JOHN.....	1729 Kinney Ave.
DOHRMANN, LOUISE.....	2625 Ashland Ave.
DONAHUE, MATTHEW THOMAS.....	30 Butler St., Ludlow, Ky.
DOSTER, GENEVIEVE EDDY.....	2433 Ohio Ave.
DUDLEY, GRACE ELIZABETH.....	2218 Burnet Ave.
ECKEL, LOUISE.....	3925 Regent Ave., Norwood, O.
ECKSTEIN, ARTHUR.....	3412 Bishop St.
ELLIS, MARY LONGMOOR.....	418 Wallace Ave., Covington, Ky.
ELSINGER, MADGE.....	332 Hearne Ave.
ENGLANDER, FRIEDA.....	1361 Burdett Ave.
ERMAN, BEATRICE.....	211 Forest Ave.
ESSEL, ALICE.....	221 Magnolia St.
EVANS, ELIZABETH MADISON.....	702 Gholson Ave.
FABER, HELEN.....	3021 Daytona Ave., Westwood
FINCH, LILLIAN BELLE.....	823 Hathaway St.
FLANAGAN, GRACE IRENE.....	3212 Mozart Ave., Westwood
FOERTMEYER, SAMUEL CHARLES.....	410 Fairfield Ave., Bellevue, Ky.
FRANK, EDNA HORTENSE.....	Middletown, O., and 319 Moore St.
FRIEDMAN, ELI BAERLO.....	Paris, Ky., and 18 N. Warwick
GASTREICH, EDNA LOUISE.....	Third and McKinney Sts., Dayton, Ky.
GEISLER, MARGARET JULIA.....	463 Riddle Rd.
GIBBS, CLINTON.....	2817 Preston St.
GOETTSCH, ELVIRA.....	145 W. University Ave.
GROSS, WILLIAM.....	3434 Golden Ave.
GROTHAUS, ETHEL LOUISE.....	2801 Highland Ave.
GUCKENBERGER, EDWIN AUGUST.....	2560 Observatory Rd.
HAAS, ADRIAN MARCUS.....	3570 Washington Ave.
HAAS, ALBERT TARRY [ELA].....	1409 Mansfield St.
HACHEN, DAVID S.....	845 Oak St.
HAGEMeyer, ELIZABETH CHRISTINE.....	4418 Floral Ave., Norwood, O.
HAHN, LORETTA MARIE.....	1394 Myrtle Ave.
HAILE, RALPH VIRDEN.....	811 Lexington Ave.
HARDING, FLORENCE.....	Lincoln and Stanton Aves.
HARRIS, HELEN MAUREY.....	3547 Michigan Ave., Hyde Park
HARRIS, LUCILE.....	348 Northern Ave.

HARRIS, SAMUEL JOY.....	Oakland, Cal., and 521 Ridgeway Ave.
HART, HUMES WHITTLESEY.....	52 Albany Ave.
HARTSELL, RUTH MARGUERITE.....	2475 Erie Ave.
HASEMEIER, MARGARET ANNA.....	3580 Epworth Ave., Westwood
HATFIELD, RUTH AMELIA.....	400 Wallace Ave., Covington, Ky.
HAUPT, ILSE ERIKA.....	160 E. McMicken Ave.
HAYNES, ELEANOR DUNCAN.....	7223 Lower River Rd.
HEILBRUN, MARGERY SERVILLIA.....	3628 Washington Ave.
HEINSHEIMER, ANNA CLAIRE.....	6 The Castile, Burnet Ave.
HENLE, GRACE.....	827 Oak St.
HENNEKE, ETHEL.....	523 Lowell Ave.
HERANCOURT, HELEN.....	921 Foraker Ave.
HERIER, JOHN JACOB.....	R. R. No. 8, Westwood
HERMAN, CARL N.....	857 Rockdale Ave.
HEXTER, BETTY MIRIAM.....	2430 Ohio Ave.
HEXTER, LEO SOLOMON.....	2430 Ohio Ave.
HILBERG, STELLA KATHRYN.....	846 Dayton St.
HILL, EUGENE MANNING.....	Milford, O.
HIRSH, CHARLES LOUIS.....	533 Ridgeway Ave.
HOBSON, WINTON LEE.....	6012 Clason St., Madisonville
HOECK, GEORGE WORCESTER.....	2822 Highland Ave.
HOHMAN, LOUIS MATHIAS [ELA].....	1221 W. Seventh St.
HOLDT, PERCY CHARLES.....	Sta. L, Route 3
HOOK, SARAH ELIZABETH.....	2123 Sinton Ave.
HORMAN, WESLEY LEON.....	4714 Glenshade Ave.
HOULISTON, GEORGE BAILLIE.....	411 E. Fourth St., Newport, Ky.
HOWARD, EDITH MARIE WASHINGTON.....	4327 Dunbar Pl.
HUDSON, EVANGELINE.....	2591 Observatory Rd.
HUGHES, THOMAS J.....	2242 Francis Lane
HULICK, MAY PERIN.....	324 Beech Ave., Wyoming, O.
HUTNER, SADIE.....	Kokomo, Ind., and 346 Forest Ave.
INSKEEP, MAHLON J.....	1328 Scott St., Covington, Ky.
IOLA, HYMAN.....	Rochester, N. Y., and 3240 Burnet Ave.
ISAACS, ELCANON.....	3552 Bogart Ave.
JACKSON, MARY ETTA.....	2619 Observatory Rd.
JAFFE, LESTER AUER.....	1843 Hewitt Ave.
JOHNSON, DORIS.....	2875 Montana Ave., Westwood
JONES, JAMES GUY.....	2437 Clifton Ave.
JOYCE, HAZEL BEATRICE.....	3243 Boudinot Ave., Westwood
KAHLE, HELEN.....	1837 Brewster Ave.
KAPLAN, DORA E.....	3354 Burnet Ave.
KASSEL, SADIE.....	872 Rockdale Ave.
KLINY, ARTHUR SOMMERFIELD.....	Louisville, Ky., and 1213 Locust St.
KOCH, STUART JAY.....	3569 Bogart Ave.
KOENIG, BLANCHE.....	805 Greer Ave., Covington, Ky.
KOENIG, WILLIAM HABEKOTTE [ELA].....	2846 May St.
KRAEMER, RUBY CHRISTINE.....	3546 Michigan Ave.
LAKAMP, ELSA RUTH.....	3206 Hackberry St.
LANDE, FRANK.....	711 Laurel St.
LANDEN, MINNIE ISABEL.....	1222 Race St.
LANDIS, MARY BRADFORD.....	6 Crescent Pl.
LANG, HAZEL M.....	1712 Vine St.
LAYTON, HAROLD SHARP.....	Franklin, Pa., and L. B. Harrison Hotel
LEVITCH, JENNIE HAZEL.....	711 E. McMillan St.
LIFSCHITZ, MORRIS.....	78 Pike St., Covington, Ky.
LOCKWOOD, KENNETH LEROY.....	626 W. Fourth St.
LOEHMANN, MARGY.....	512 Ludlow Ave.

LOTSPEICH, IDA SEVIER.....	416 Resor Ave.
LUCHS, ALVIN SCHAUFARBER.....	Bellaire, O., and 1307 Locust St.
LUEDERS, ANNA.....	1827 Josephine St.
MCDEVITT, LESTER WILLIAM.....	275 McCormick Pl.
MCDOWELL, MARY CHARLOTTE.....	3475 Woodburn Ave.
MCGREGOR, MINERVA MARY.....	3525 Shaw Ave.
MCKIBBEN, NINA.....	1411 Main St.
MACNAUGHTON, MARJORIE EDITH.....	3524 Montgomery Rd.
McNUTT, LAURA BELLE.....	5654 Glenview Ave.
MACK, JOSEPH B.....	1 Lane Seminary
MANNING, BESSIE.....	Hawkins Ave., Westwood
MARKGRAF, WILLIAM.....	4515 Smith Rd., Norwood, O.
MAYER, ROBERT LIVINGSTON [C].....	3419 Harvey Ave.
MAYNE, PAUL.....	R. R. 13, Mt. Healthy, O.
MEISS, BERTRAND LAWRENCE [C].....	960 Lenox Pl.
MEYER, JOHN ARTHUR.....	6933 Independence St., Saylor Park
MEYER, MYRON.....	New Orleans, La., and 435 Ridgeway Ave.
MILLAR, VIVIEN.....	2229 Hudson Ave., Norwood, O.
MILLER, DORA.....	418 Wade St.
MINDA, ALBERT GREENBERG.....	Kansas City, Mo., and 509 Hickman St.
MOFFETT, KATHERINE DAISY.....	Kenton, Ky.
MOLINDER, SAMUEL GARVIN.....	805 Central Ave., Newport, Ky.
MOSSMYER, ALENE CHRISTINE.....	4909 Eastern Ave., Linwood
MUSICK, MATTIE PINE.....	221 W. Ninth St.
NAGEL, HENRY [ELA].....	2932 Montana Ave.
NEU, KATHERINE.....	2113 Colerain Ave.
NEVILLE, CARL HENRY.....	Lima, O., and 4717 Stewart Pl.
NOE, EDNA LOUISE.....	4700 Chickering Ave.
NORRIS, THOMAS CUTHBERTSON.....	2415 Auburn Ave.
OESTERLEIN, ANNA JOSEPHINE.....	862 Beecher Ave.
OSBORN, ARTHUR.....	3562 Burch Ave.
OTTING, EDITH AGNES.....	806 Park Ave., Newport, Ky.
OUTCALT, DUDLEY MILLER.....	2630 Stanton Ave.
PAPPENHEIMER, PAUL A. [C].....	2322 Upland Pl.
PAYNE, CLYDE CLARKSON.....	Fairmount, Ind., and 2312 Sauer Ave.
PEASE, JAMES LEWIS.....	841 E. Ridgeway Ave.
PETERS, WALTER FREDERIC.....	943 Sunset Ave., Price Hill
PETTY, LeROY CLINTON.....	170 Grand Ave., Ft. Thomas, Ky.
PFAFF, FRIEDA LOUISE.....	2713 W. Sixth St.
PHILLIPS, GENEVIEVE.....	1424 E. McMillan St.
PHILLIPS, MARGARET ESTHER.....	2404 Highland Ave.
PICHEL, JAMES FAULKNER.....	233 Goodman St.
PLUEDDEMAN, HUGO REINHART.....	California, O.
POCHAT, JEANETTE.....	4228 Floral Ave., Norwood, O.
POLL, CHARLOTTE WILHELMINA.....	8 The Romaine
POUND, MABEL LEWELLYN.....	22 E. Eighth St.
PRESLER, LOUISE CAROLYN.....	3649 Archer St.
QUACKENBUSH, ARTHUR LEIGH.....	3026 Woodside Ave.
RAILSBACH, RUTH ELIZABETH.....	745 Wayne St.
RAMSEY, ALTA FERN.....	3617 Bevis Ave.
RAY, VICTOR.....	3584 Mooney Ave., Hyde Park
REHM, SYLVIA ELIZABETH.....	2201 Burnet Ave.
REICHERT, IRVING FREDERICK.....	New York City, and 2354 Burnet Ave.
REMELIN, EUGENIA LEA.....	10 The Haydock
RHEINSTROM, MARION ROSE.....	771 Greenwood Ave.
RICHARDS, HUBERT SHAW.....	413 Fifth Ave., Dayton, Ky.
RIDDLE, CHARLES KENNETH.....	Lawrenceburg, Ind.

ROBERTS, ARTHUR ELMER.....	1805 Fairfax Ave.
ROBERTS, BRADLEY.....	2345 Upland Pl.
ROBERTSON, ANNE ELIZABETH.....	2 North Marzella, Covington, Ky.
ROGERS, WILLIAM RAYMOND.....	308 E. Second St., Newport, Ky.
ROMAINE, MIRIAM.....	415 Stanley Ave.
ROSENTHAL, MARGARET SARA.....	990 Dana Ave.
ROUSH, RAYMOND EARLE.....	R. R. No. 1, Manchester, O.
RUSSELL, FAY DELLA.....	No. 5 Melrose Bldg.
SABBERT, FLORA MARIE.....	2204 Burnet Ave.
SALESKY, JOSEPH ELIAS.....	New York City, and 3240 Burnet Ave.
SAMMET, HELEN JULIA.....	201 Northern Ave.
SANDERS, IRA EUGENE.....	Kansas City, Mo., and 233 Hearne Ave.
SAURER, ESTHER.....	2842 May St.
SAXE, JOSEPH.....	714 Hopkins St.
SCHATZMAN, CLIFFE.....	4441 Ashland Ave., Norwood, O.
SCHLOTMAN, HENRIETTA.....	The Anthony, Lane Seminary
SCHMIDT, HENRY EDWARD [ELA].....	3427 Cornell Pl.
SCHONING, HERBERT CARL [ELA]....	Sacramento, Cal., and 272 McCormick Pl.
SCHRECK, LEO.....	R. F. D. No. 1, California
SEAMAN, HELEN JEANNETTE.....	2312 Harper Ave., Norwood, O.
SEIFRIED, ADELINE MANSFIELD.....	3251 Beresford Ave.
SEIFRIED, GRACE MANSFIELD.....	3251 Beresford Ave.
SEITER, JEANETTE ERRETT.....	2201 Highland Ave.
SELBY, HAZEL SWINBURNE.....	7239 Lower River Rd.
SIMON, META LAURA.....	457 Considine Ave., Price Hill
SINNING, OLGA ANNA.....	5931 Ridge Ave., Pleasant Ridge
SMITH, DOLLE LUCILLE.....	Amelia, O., and No. 5 Farrel Court
SMITH, MRS. GEORGINE BEATRICE.....	1111 Myrtle Ave.
SPEARS, J. RANKIN.....	661 Gholson Ave.
STAHEL, EMMA MATILDA.....	26 E. Robbins St., Covington, Ky.
STALL, BERNARD GEORGE.....	3621 Michigan Ave.
STAMM, IRMA CORINNE.....	178 Woolper Ave.
STEEVES, LUCINDA ANNIE.....	274 McGregor Ave.
STEGEMEYER, EMILIE LOUISE.....	4014 Holbrook Ave.
STEWART, HAROLD CLARK.....	1852 Columbia Ave.
STEWART, MARY.....	2434 Maplewood Ave.
STRAUB, EDNA C.....	Wetzel Ave., Madisonville
STRAUSS, HERBERT CERF.....	Du Casse Hotel, Hale Ave.
STRINGFIELD, DOROTHY DIMPLE.....	3421 Brookline Ave.
STRINGFIELD, MARY EMNOR.....	3421 Brookline Ave.
STURWOLD, MARIE ANTOINETTE.....	1063 Overlook Ave., Price Hill
SUDHOFF, PAUL GEORGE.....	4339 Floral Ave., Norwood, O.
TAYLOR, ISABEL IRWIN.....	3826 Spencer Ave., Norwood, O.
TAYLOR, LEONA ELIZABETH.....	715 Purcell Ave., Price Hill
TAYLOR, MAX FREEMAN.....	807 Lincoln Ave.
TELLEFSEN, MARJORIE ADELINE.....	111 E. Auburn Ave.
THOMAS, ISABEL LOUISE.....	1546 Hohman St., Covington, Ky.
THORPE, MARIE MILBURN.....	2273 Jefferson Ave., S. Norwood, O.
TIETIG, DORIS.....	2402 Ohio Ave.
TODD, MARY MARGARET.....	4920 Stewart Pl., Madisonville
TOSSE, MARIE.....	3424 Boudinot Ave., Westwood
TRANTER, LUCY MARY.....	Ft. Mitchell, Covington, Ky.
TRAPP, MARIE ANTOINETTE.....	5809 Wayside Ave., Mt. Washington
TUCKER, GRACE IONE.....	1029 Wesley Ave.
UHLING, LILLIAN FRANCES.....	111 Hartwell Ave., Hartwell
VON SCHLICHTEN, CARL.....	2141 Clifton Ave.
WALDMAN, GERTRUDE.....	5835 Hamilton Ave.

WALKER, JOHN GRIEG.....	6005 Oakwood Ave., College Hill
WALTZ, MABEL ELLEN.....	3055 Daytona Ave., Westwood
WARNECKE, IDA MARTHA.....	125 Fourteenth St.
WARSHAWSKY, MORRIS.....	Omaha, Neb., and 3240 Burnet Ave.
WEINBERGER, LEO.....	867 Hutchins Ave.
WELLMAN, FRANK GEORGE.....	2963 W. Sixth St.
WILLIAMS, ELIZABETH LESLIE.....	2256 Francis Lane
WILLIAMS, JOHN EARL.....	2531 Ingleside Pl.
WOELLNER, ADELINE.....	725 Epworth Ave.
WOOD, ROBERT JOSEPH.....	3644 Zumstein Ave.
WULFF, DORIS.....	395 Terrace Ave.
YEAGER, ESTELLE CELESTE.....	4 Oakley Bank Bldg.
YOUNG, ZELMARIE SWING.....	505 E. Third St.
ZORN, ELIZABETH ROSINA.....	3318 Gamble Ave., Westwood
ZWICK, HOLLY.....	1104 E. McMillan St.

Irregular Students—Day

BERMAN, TRESSA C.....	861 Lexington Ave.
BIRCH, MRS. MABEL H.....	8159 Wayne Ave., Hartwell
BRIOL, PAUL AUGUSTUS.....	The Enquirer
CORWIN, HELEN ELIZABETH.....	2214 Adams Ave., Norwood, O.
DITTMANN, MRS. BARBARA T.....	Senator Pl.
DONNELLY, MARY LUELLE.....	Ft. Thomas, Ky.
ISSERMAN, FERDINAND.....	Newark, N. J., and 533 Ridgeway Ave.
KAHN, MARIE B.....	3975 Beechwood Ave., Rose Hill
KIEFER, MRS. KARL.....	920 Lexington Ave.
KOCH, IDA ELIZABETH.....	3047 Gilbert Ave.
KUHN, ALICE LILLY.....	3580 Washington Ave.
LEIBERT, JULIUS.....	Louisville, Ky., and 1009 Chapel St.
MAYER, CLAIRE.....	994 Dana Ave.
PICHEL, CHAUNCEY DEPEW.....	360 Northern Ave.
RAPHAEL, VICTOR LOVE.....	2617 Burgoyne Ave., Pleasant Ridge
ROETKEN, EMMA LOUISE [ELA&TC].....	71 E. Eleventh St., Covington, Ky.
SELLEW, GLADYS.....	717 Gholson Ave.
SERODINO, MADOLIN MARIE.....	2223 Cameron Ave., Norwood, O.
SHELOW, ELIZABETH STAFF [ELA].....	3741 Elsmere Ave., Norwood, O.
SILVERSTEIN, PEARL.....	1020 Lenox Pl.
STABLETON, JOHN BIGGAR.....	Manchester, O., and 926 Nassau Ave.
TOBIN, ELLEN LOUISE.....	Kennedy Heights
WAGONER, EDITH.....	The Roanoke, Clifton
WILLITS, WILLIAM H.....	Cardington, O., and Lane Seminary

*Irregular Students—Evening

ADE, GERTRUDE LOUISE.....	2360 Flora St.
AHLERS, JOHN FREDERICK.....	1307 California Ave.
ANDRIESSEN, EMMA.....	116 Parker St.
ARMSTRONG, MARY MORTON.....	8378 Burns Ave., Hartwell
AVEY, E. GERTRUDE.....	2717 Ashland Ave.
BAILEY, A. S.....	38 W. McMillan St.
BARR, INGLE WILLIAMS.....	1231 Grace Ave.
BIGLER, ELBERTA.....	222 Lyon St.
BLAND, FRANK WILLIAM.....	1319 Cryer Ave.
BLOOM, RALPH.....	3511 Burnet Ave.

* In addition, there are 131 students listed in other departments, who are taking work in the Evening Courses. These students are designated by the abbreviation *ELA*.

BOAKE, GEORGE GLOVER.....	7203 Van Kirk Ave., Carthage
BOSWELL, JESSIE P.....	The Somerset
BOSWELL, MARY LOUISE.....	The Somerset
BRUTTON, DULCE.....	23 The Ortiz Bldg.
BUEHL, SARAH WHEATON.....	16 The Navarre
BURKHEAD, MARY ALICE.....	2542 Park Ave.
CANTOR, ETHEL.....	18 Landon Court
COFFIN, WILLIAM MARMADUKE.....	427 McAlpin Ave.
COHN, JOSEPH RALPH.....	2613 Moorman Ave.
CORWIN, EDWARD KLEIN.....	Andover Hall
DAVIS, HARRIET CULLOM.....	925 Grand Ave., Price Hill
DEPUTY, RUTH GATCH.....	6213 Madison Rd.
DOURSON, MARY CATHERINE.....	145 W. University Ave.
ECKSTEIN, GUSTAV.....	3412 Bishop St.
EDWARDS, ALAMEDA MAE.....	315 W. Seventh St.
EDWARDS, MARIAN.....	Stanton Ave. and Locust St.
EGER, ALFRED.....	1814 Fairfax Ave.
ELY, NORA BESS.....	3328 Woodburn Ave.
EMBSHOFF, HILDA.....	802 Delhi Ave.
ERDHAUS, LORETTA JOSEPHINE.....	427 Clark St.
EVANS, MARY ETHEL.....	2336 Burnet Ave.
FELDMAN, MARCUS.....	1810 Fairfax Ave.
FELDMANN, MARY HELEN.....	1623 Greenup St., Covington, Ky.
FISCUS, B. E.....	3868 Isabella Ave.
FISHER, HARRY.....	533 Richmond St.
FLICK, CATHERINE.....	773 Summit Ave.
FRANKEN, BERTHA.....	717 Ninth St.
FRIETSCH, ELIZABETH SOPHIA.....	2390 Wheeler St.
GORDON, WILLA MAE.....	4703 Chestnut St., Madisonville
GOSLING, RUTH ELIZABETH.....	1510 Lingo St.
GRIZZEL, EDWIN IVAN.....	2806 Oakley Ave.
GRUENINGER, BERTHA.....	1704 Denham St.
GUERTIN, GRACE.....	1239 E. Third St.
HARPER, BERTA B.....	828 Maple Ave., Newport, Ky.
HARPER, GRACE M.....	828 Maple Ave., Newport, Ky.
HARPER, MABEL EDNA.....	26 W. 15th St.
HASENOHR, THEODORE CHRISTIAN.....	2329 Vine St.
HEISEL, E. R.....	308 Melish Ave.
HEISEL, EMMA ELIZABETH.....	308 Melish Ave.
HERMAN, EDNA.....	321 Overton St., Newport, Ky.
HILL, PATSIE WORTH.....	1129 Poplar St.
HOLDT, CLARA.....	421 Ludlow Ave.
HOLMES, DANA KING.....	321 Donahue St.
HOOKE, RUTH CATHERINE.....	1518 Vine St.
HULING, MAY CATHERINE.....	3026 Woodside Pl.
IMSANDE, ESTHER DOROTHY.....	235 Stetson Ave.
INGRAM, GLADYS I.....	337 Ludlow Ave.
JACKSON, VIVIAN.....	4263 Williamson Pl.
JENZ, CHARLES FREDERICK.....	4299 Colerain Ave.
KIEL, ANNA.....	2400 E. Montana Ave.
KLINE, CARL RICHARD.....	7 Estelle St.
KNAB, ESTHER LOUISE.....	4273 Williamson Pl.
KNOPF, RUTH ANNA.....	2816 Madison Rd.
LAZARUS, LOUIS.....	647 Forest Ave.
LE COUNT, VERA ADELIA.....	835 Armory Ave.
LE PERE, ELMER FRANK.....	1820 Duck Creek Ave.
LEWIS, ANNA BELLE.....	2102 Fulton Ave.

LITTLEJOHN, CHRISTINE.....	3070 Gilbert Ave.
LONDON, HENRIETTE.....	18 Calhoun St.
LONGLEY, JEWELL A.....	481 Riddle Rd.
LOTH, LEOPOLD ROSS.....	851 Rockdale Ave.
LUSBY, MARGARET CHRISTINA.....	943 E. Third St.
LYONS, HELEN LOUISE.....	609 Overton St., Newport, Ky.
MCCABE, MAY JULIA.....	3767 Mt. Vernon Ave.
MAJOEWSKY, ERNA MARGARET.....	2976 Gilbert Ave.
MARKLAND, HELEN MARY.....	1608 Baltimore Ave.
MARTIN, MARGARET.....	4235 Florida Ave.
MASSA, VICTOR SIMON.....	307½ Central Ave.
MAYHEW, GENEVIEVE GRACE.....	1901 State Ave.
MEININGER, FRED.....	1638 Pulte St.
MEININGER, WALTER.....	1638 Pulte St.
MINGES, MICHAEL.....	2795 Montana Ave.
MITCHELL, ROSABELLE GRAU.....	1431 Elm St.
MOLEUX, HELEN CAMILLE.....	6215 Erie Ave., Madisonville
MOLEUX, MARIE.....	6215 Erie Ave., Madisonville
MORRISON, EDITH.....	2631 Alms Pl.
MORROW, ISABELLA G.....	947 Chateau Ave., Price Hill
MUELLER, EDITH.....	2356 Ohio Ave.
MULLER, ESTHER.....	413 W. McMicken Ave.
MULLER, MILTON FRANK.....	413 W. McMicken Ave.
NAISH, SYLVIA MARIE.....	723 Hopkins St.
NICHOLSON, MALCOLM.....	Lane Seminary
NICHOLSON, SUSAN LOUISE.....	949 W. Ninth St.
NIPPERT, DR. EDWARD F.....	4202 Hamilton Ave.
OPPENHEIMER, BENTON.....	14 Landon Court
PARKER, GAIL.....	813 Maple Ave., Newport, Ky.
PETERSON, ROSE MARGARET.....	3114 Cinnamon St.
PLIMPTON, LOIS ELIZABETH.....	2342 Auburn Ave.
POOLEY, MARY HELEN.....	2027 Auburn Ave.
RASINSKY, NAOMI.....	3416 Larona Ave.
REHN, ROBERT BERT.....	1105 Delta Ave., Hyde Park
RENNER, MILLER W.....	2713 University Court
RIES, CLARA ELIZABETH.....	2073 Harrison Ave.
RITCHIE, ANDREW OSCAR.....	Cliff Pl., Price Hill
ROBERTS, EDWARD DODSON.....	248 Hosea Ave.
ROOT, FLORENCE EMMA.....	237 Stetson St.
SCHAAF, FLORENCE K.....	7 Bella Vista Pl.
SCHICK, ALFRED C.....	571 Grand Ave.
SCHICK, JOHN MATTHEW.....	3269 Montana Ave.
SCHMIDT, ALVIN EDWARD.....	3005 Scioto St.
SCHMITT, CHARLES JACOB.....	1940 Clarion Ave.
SCHWEIKERT, MABEL.....	725 York St., Newport, Ky.
SELBERT, MRS. FRIDA FOERSTER.....	395 Grand Ave., Price Hill
SHOOK, CHESTER RINEHART.....	Euclid Flats
SIEBENTHALER, HAROLD J.....	2359 McMicken Ave.
SILVERBLATT, NATHAN.....	761 W. Eighth St.
SILVERMAN, CELIA.....	537 Betts St.
SLUTSKY, DORA.....	3 Le Roy Court
SMITH, MELLIE MORRIS.....	2027 Auburn Ave.
STEINKAMP, EDYTHE.....	3045 Beckman St.
TAYLOR, EDWARD G.....	3526 Evanston Ave.
TOEPFERT, PAUL AUGUST.....	456 Dayton St.
TOPP, BERTHA MARIE.....	2606 Melrose Ave.
TRUITT, JOHN WILLIAM.....	419 Hopkins St.

URNER, DR. MARTIN HARLEY.....	4 W. Seventh St.
VOCKELL, WILLIAM H.....	4118 Thirty-third St., Oakley
WEIST, LILLIE VIOLA.....	225 McCormick Pl.
WELLS, EFFIE MAY.....	591 Howell Ave.
WILLIS, CLARA G.....	332 Lincoln Ave.
WILMS, ANTOINETTE DOROTHY.....	2232 Shadwell St.
WILSON, MARIE LOUISE.....	1520 Humboldt Ave.
WOODSON, WILBUR CYRENUS.....	2722 Ashland Ave.

Special Students—Day

BLOCH, MRS. BLANCHE F.....	3025 Fairfield Ave.
BRAHAM, HELEN SIBYLL.....	217 Mitchell Ave.
BRUNHOFF, ALMA.....	215 Forest Ave.
BRUNHOFF, SOPHIE W.....	215 Forest Ave.
BURCHENAL, ELLEN JACKSON.....	Glendale, O.
CAIRNS, MRS. CHARLOTTE MEREDITH.....	5673 Overlook Pl.
COHEN, FANNIE.....	1822 Hewitt Ave.
COPPOCK, DOROTHY F.....	1350 Locust Ave.
DAVIS, EDITH J.....	345 Forest Ave.
DRAKE, EDITH MARSH.....	Newtown, O.
DUNLAP, CECILIA MEYER.....	222 McCormick Pl.
EISENMAN, CHARLOTTE.....	251 Ehrman Ave.
ESSINGTON, HARRY MILES.....	Wells, Mich., and 3289 Observatory Ave.
FECHHEIMER, RUTH.....	250 Northern Ave.
FERGUSON, ALEXINA.....	39 The Verona
FORCHHEIMER, FRANCES E. [ELA].....	2428 Auburn Ave.
FREIBERG, DUFFIE WORKUM.....	3576 Alaska Ave.
FRIEDBICHLER, FRANCISCA.....	332 W. Rockdale Ave.
GOLDBERG, ETTA W.....	3491 Wilson Ave.
GORDON, ARTHUR WENTWORTH [ELA].....	St. Louis, Mo., and 2210 Ohio Ave.
HART, KATIE WHITTLESEY.....	52 Albany Ave.
HELDMAN, IRMA S.....	3848 Dakota Ave.
HENKEL, NEVILLE V.....	Erie and Mooney Aves.
HERZ, MRS. MAE.....	46 Haddon Hall
HILL, ESTHER ANNIS.....	Milford, O.
HOBERG, ETHEL.....	4326 Hamilton Ave.
HOECK, BERTHA M.....	2822 Highland Ave.
KLEIN, BEATRICE ROSE.....	705 Glenwood Ave.
KRAMER, ELMER CHARLES [ELA].....	3302 Monteith Ave.
LICHTENSTEIN, MORRIS.....	Zitovjan, Russia, and 2430 Ohio Ave.
LOEWENSTEIN, SAM STEWART.....	248 Albany Ave.
LOWMAN, EVELYN THERESA.....	715 S. Crescent Ave.
LURIE, DOROTHY CHARLOTTE.....	307 Northern Ave.
MARTIN, ROBERT SCOTT.....	Sidney, O.
MEAKIN, CHARLES JAMES.....	2522 Moorman Ave.
MESSHAM, MARY FLORENCE.....	Silverton, O.
MORRIS, DAVID JULIAN.....	Springfield, O., and 207 Hearne Ave.
MUHLHAUSER, ALMA H.....	106 Hosea Ave.
MUNZ, WILLIAM G.....	545 Camden Ave.
PARSON, FRANCES D.....	Port Huron, Mich., and 4021 Rose Hill
POELKING, GERTRUDE ESTELLE.....	2707 Alms Pl.
RILEY, HENRIETTA STAGAMAN.....	4256 Ashland Ave., Norwood, O.
ROBINSON, BERTHA VILLETTE.....	2417 Ingleside Pl.
ROESSLER, EMIL BRYAN.....	3459 Brookline Ave.
ROSENBERG, CORINNE.....	500 Hale Ave.
ROSENBERG, DAVID [ELA].....	500 Hale Ave.

SCHAEFER, LOUISE AUGUSTA.....	260 Ludlow Ave.
SHANNON, BERTHA HAYNE.....	315 Washington Ave., Newport, Ky.
SHIELDS, MRS. HELEN B.....	Hotel Alms
SOHNGEN, SCHULER.....	626 Vine St.
SPENCE, JAMES CARLETON.....	Milford, O.
TOEPFFER, HENRY.....	584 Dixmyth Ave.
WALSH, AMELIA ANN.....	Shaw Ave., Hyde Park
WEILER, MRS. JESSIE A.....	Hotel Alms
WILBY, ELEANOR STANWOOD.....	615 Oak St.
WINDISCH, MRS. CHARLES F.....	Clifton and Bryant Aves.
WINKLER, FLORENCE.....	3602 Washington Ave.
WIRTH, LILLIE GRAY.....	622 Prospect Ave.
WISE, HELEN REBA.....	3128 Fairfield Ave.
WOLFSTEIN, ADELE.....	3405 Burnet Ave.

Special Students—Evening

ACOMB, HELEN JANET.....	5642 Ridge Ave.
ACOMB, IRENE ALICE.....	5642 Ridge Ave.
ADDISON, GRIFFITH THOMAS.....	3136 Hackberry St.
AHLERS, HELEN.....	18 Calhoun St.
ALEXANDER, LUCILLE ETHEL.....	2873 Cormany Ave.
ALLEN, IRWIN D.....	608 Enright Ave.
ARNSPERGER, THEODORE.....	301 E. McMillan St.
ASKREN, NORMA STANLEY.....	1346 Broadway
BAER, SIGMUND.....	3465 Reading Rd.
BALCOM, DOROTHY MARY.....	4727 Edgewood Ave., Winton Pl.
BARR, CHARLES HUGH.....	3326 Glenway Ave.
BARTLETT, FRANCIS THORNTON.....	325 Broadway
BAST, JOHN E.....	1611 Waverly Ave.
BEIGEL, HERBERT ARTHUR.....	1623 Tremont St.
BELL, MARY JANE.....	119 Seventieth St., Carthage
BELL, TASSO E.....	990 Hatch St.
BEUTELL, KATHERINE LINCK.....	3710 Morris Pl.
BEVIN, RUTH ELIZABETH.....	224 Glenway Ave., Hartwell
BILLIAN, AUGUSTA.....	308 W. McMillan St.
BINDER, ARMIN.....	21 Twenty-first St., Newport, Ky.
BOGLI, CHARLES.....	316 Milton St.
BRAUN, GEORGE FREDERICK.....	2702 May St.
BRILL, ELMA.....	3930 Huston Ave., Norwood, O.
BROWN, EDNA P.....	3 Lane Seminary Grounds
BRYANT, EUGENIA.....	2112 Sinton Ave.
BUCHHOLZ, WALTER.....	2240 Loth St.
BURKE, LUTHER FRANCIS.....	519 Hopkins St.
BURNETT, ELLA MAY.....	6 Dexter Bldg.
BURNS, JOHN CHARLES.....	2810 Euclid Ave.
CALLAHAN, FLORENCE M.....	966 Hawthorne Ave.
CHENAL, EDWARD MARTIN.....	253 Southern Ave.
CLARKE, ROBERT HENRY.....	Lane Seminary
CLEMENT, FANNIE MARIE.....	1017 Poplar St.
CLEMENT, HENRY.....	2609 Hemlock St.
CORCORAN, EDWARD.....	708 W. 4th St.
CORWIN, HARRIET T.....	Andover Hall
COX, ISABEL.....	3246 Woodburn Ave.
DANZIGER, VALESKA.....	The Wilhelm Flats
DARR, THERESA BEATRICE.....	3977 Lowry Ave.
DARST, ALMA BLANCHE.....	2015 N. Main St.

DAVIS, BEULAH GLADYS.....	2358 Gilbert Ave.
DEARMOND, LULU.....	1306 Central Ave.
DECAMP, LAURENCE ELLINGTON.....	.259 Kearney Ave., Hartwell
DECKER, EDNA MARY.....	.830 Main St., Covington, Ky.
DEMAR, LUCY JANE.....	3483 Cornell Pl.
DEPUTY, CHARLES.....	.6213 Madison Rd.
DEUTSCH, NAOMI.....	.3600 Wilson Ave.
DIEDERICH, ALBERT ERNEST.....	.2931 Jefferson Ave.
DOERING, THEODORE PAUL.....	.2320 Madison Rd.
DOLCH, JONAS FLANDER.....	.3442 Golden Ave.
DRAKE, EDNA B.....	.3028 Woodside Pl.
DREYER, ARTHUR F.....	.2330 Clifton Ave.
DUMONT, MARGARET.....	.306 Center Hill Ave., Elmwood Pl., O.
EBBERT, MATTIE H.....	.717 Gholson Ave.
EBERLE, VIOLET.....	.3556 Wilson Ave.
EISENMAN, MORRIS LAZARES.....	.251 Ehrman Ave.
ELLIG, FRANK CLIFFORD.....	.118 E. Liberty St.
ELSCHE, ESTELLA.....	Thirteenth and Main Sts.
ELSTON, CHARLES HENRY.....	.2108 St. James Ave.
ERMERT, HETTIE C.....	.804 Overton St., Newport, Ky.
ERSKINE, ERNEST BETHUNE.....	Stansifer Flats, Ridgeway Ave.
LEFEBER, ALFRED.....	.17 Mercer St.
FECHHEIMER, ELSA.....	.3509 Burnet Ave.
FINDEISS, ROSE.....	.2303 Park Ave.
FITZPATRICK, KATHLEEN.....	.1047 Considine Ave.
FLAMM, HELEN C.....	.4812 Section Ave., Norwood, O.
FOREMAN, WALTER FRANK.....	.3725 Reading Rd.
FORTMUELLER, WILLIAM CHRISTIAN.....	.625 Delhi Ave.
FRAASA, CHARLES FREDERICK.....	Burwood Ave., S. Norwood, O.
FRANKLIN, BLUMA.....	The Wilhelm Flats
FRANZ, HENRY JOHN.....	.2626 Halstead St.
FRANZ, LAURA MATILDA.....	.917 Dayton St.
FREMDLING, EDITH.....	.813 Oak St.
FRIDMAN, JENNIE.....	.1501 Lincoln Ave.
FRIEDLEIN, HARRY E.....	.385 Howell Ave.
FRIETSCH, CARL.....	.2390 Wheeler St.
GEBHART, GUSTAV E.....	.2726 Scioto St.
GEHRLEIN, LAURA.....	.2511 Fairview Ave.
GEISENHOFER, KATHERINE LOUISE.....	.1615 Pullan Ave.
GEMBERG, HARRY.....	.834 Richmond St.
GINBERG, HARRIS.....	.9 LeRoy Court
GINTERMAN, ELIZABETH.....	.4 The Madrid
GODSHAW, STELLA.....	.6 Essex Flats
GOLDBURG, HENRY.....	.5 Landon Court
GRAD, HENRY.....	.203 Goethe St.
GRAF, ANDREW JOHN.....	.2636 Halstead St.
GRAU, MAUDE ESTELLA.....	.728 Park Ave., Newport, Ky.
GREEN, GEORGIA B.....	.3420 Stettinius Ave.
GRUENINGER, CLARA E.....	The Glenwood, College Hill
GUILFOYLE, ANNABELLE B.....	.4634 Spring Grove Ave.
HAMILTON, JOHN MCKEE.....	.2366 Stratford Ave.
HANAU, ALMA LOUISE.....	.607 Riddle Rd.
HAPPERSBERGER, HERBERT.....	.2319 Krouse Ave.
HARGITT, MARY BELL.....	.810 N. Crescent Ave.
HARGITT, ROBERT PALMER.....	.810 N. Crescent Ave.
HARRELL, WALTER DARIUS.....	.3077 Woodburn Ave.
HATTENDORFF, OTTO MARGRAF.....	.3707 Cass Ave.

HEEPKE, CHARLES G.	3732 High Point Ave.
HELMAN, MABEL ROCKWOOD	2527 Erie Ave.
HELMAN, RUTH LEONARD	2527 Erie Ave.
HERMAN, WILLIAM CEPHAS	3350 Carthage Ave.
HILBERG, JOHN	846 Dayton St.
HINNENKAMP, ALICE HELENA	1115 Sherman Ave.
HOEHN, RUTH JENNY	3113 Gloss Ave., Pleasant Ridge
HOGAN, JAMES CLIFFORD	3943 Spring Grove Ave.
HOPKINS, CLARK TEMPLETON	2521 Auburn Ave.
HOPPE, CHARLES	794 McPherson Ave.
HUDDLESTON, THOMAS WISE	3238 Woodburn Ave.
HUHEEY, FLORETTA KATE	1526 Garrard St., Covington, Ky.
HUTCHESON, MRS. ALICE PEARL	2113 Scott St., Covington, Ky.
INNES, MARION	Summit Ave. and Price Hill Rd.
ISAACS, MRS. ELLA DAVIS	3305 Burnet Ave.
ISAACS, S. MORRIS	3562 Eden Ave.
JOHANNIGMAN, JOHN GEORGE	481 Riddle Rd.
JONES, EDWARD SAFFORD	2521 Auburn Ave.
JONES, WILLIAM JOHN	2726 Ravine St.
JORDAN, ELSIE	1643 Knowlton St.
JORDAN, FLOYD	26 Garfield Pl.
JOYCE, BLANCHE MAY	215 Kinsey Ave.
KEATING, HONORA	1310 Broadway
KEMME, LOUIS JOSEPH	1819 Pleasant St.
KLEIN, JULIA ROSE	2372 Stratford Ave.
KNORR, ARLINE JEANETTE	2303 Ohio Ave.
KOCH, JACOB	29 E. McMicken Ave.
KRUCKEMEYER, DORA	518 Riddle Rd.
KUNKEL, FREDERICK EUGENE	489 Riddle Rd.
LAMMERS, FRED W.	221 Atkinson St.
LAMMERS, HARRY CHARLES	2327 Flora St.
LEININGER, ALICE CLARA	3744 Lueders Ave.
LEVINE, SARAH	577 W. Sixth St.
LOBITZ, EDNA DOROTHY	2559 Fairview Ave.
LONG, JOHN J.	370 Howell Ave.
LOUIS, EDITH ALICE	420 Elizabeth St.
LUCKER, FLORENCE EDNA	4331 Haight Ave.
MCCAFFERTY, FLORENCE	2723 Woodburn Ave.
MCCHRISTIE, MARY EDNA	3236 Burnet Ave.
MCCHRISTIE, MINOR EVERETT	3236 Burnet Ave.
McKie, STANLEY G.	3554 Evanston Ave.
MANDELL, ALMA ROSE	4634 Spring Grove Ave.
MARCUSON, AUGUSTA	868 Lexington Ave.
MARGOLIS, MAX K.	2315 Reading Rd.
MARKWARD, CHESTER LAUNDERS	2120 St. James Ave.
MARSHALL, QUEE CAROLINE	Siefke Flats, Linn St.
MARTIN, ANNA MARIE	4 Glencoe Pl.
MARX, ROBERT S.	867 Lexington Ave.
MATTHEWS, JOHN WILBER	2415 Auburn Ave.
MAXWELL, NATHANIEL HAMILTON	3469 Cornell Pl.
MESERTH, ALBERT	264 Klotter Ave.
MILLER, GEORGE WASHINGTON	2411 Moerlein Ave.
MITCHELL, NELL BERENICE	2329 Norwood Ave., Norwood, O.
MOELLERING, GERTRUDE PAULA	1522 Race St.
MOESTA, WALTER EUGENE	Adler and Harrison Aves.
MOFFETT, HUGO ATHERTON	2718 Wagner St.
MONCE, ULYSSES LINCOLN	3558 Monteith Ave.

MOORE, BYSAM EATON.....	820 W. Eighth St.
MORAN, VERNA.....	3484 Cornell Pl.
MORRISON, EMMA HENRIETTA.....	2543 Kincaid St.
MORRISON, RALPH E.....	3549 Burch Ave.
MUETHING, FRED F.....	Southern and Glenn Aves., Rosedale, Ky.
MUETHING, MARGARET EUGENE.....	Southern and Glenn Aves., Rosedale, Ky.
MUSSMAN, ELSIE.....	2033 Pine St., Covington, Ky.
NIEDERMEYER, AMELIA CLARA.....	920 Grand Ave., Price Hill
OESTERLEIN, ADOLPH.....	3501 Bevis Ave.
ONEIS, JOHN.....	1401 Walnut St.
ORTH, ALBERT JAY.....	Section Ave., Hartwell
PANDORF, ARTHUR ERNEST.....	243 Calhoun St.
PATTISON, EMILY M.....	4388 Hamilton Ave.
PAUL, WILLIAM CORNELIUS.....	2364 Victor St.
PEARY, BERTRUM.....	223 Gilman Ave.
PHELPS, BERNICE A.....	2214 Burnet Ave.
PHILLIPS, FRANCIS HARRIS.....	266 Bodman Ave.
PIDGEON, BERTHA MABEL.....	3120 Gloss Ave., Pleasant Ridge
PIESCHE, ELSIE CAROLINE.....	245 Earnshaw Ave.
POTT, ELMER CHARLES.....	1794 Knox St.
QUITMAN, HARRY.....	740 Delta Ave.
RABE, MINNIE ANNA.....	2703 Vine St.
REBMANN, RICHARD.....	2871 Colerain Ave.
REITZES, BERTHA.....	3139 Markbreit Ave.
RENNER, JOHN M.....	Clybourne Pl.
REUTHER, SINA.....	Johnston Pl., Madison Rd.
RIEHLE, ARTHUR P.....	2315 Victor St.
ROBERTS, MARY MAY.....	8 E. Eighth St.
ROBINSON, GUY H.....	3483 Cornell Pl.
ROGERS, ERNEST NORMAN COOKE.....	The Vernondale, Reading Rd.
ROSS, EDITH AMY.....	212 Ludlow Ave.
ROUDA, ALVIN HARRY.....	3354 Burnet Ave.
SADLER, GLADYS AMY.....	4 Crescent Pl.
SCANLON, EUGENE ANTHONY.....	632 June St.
SCHECHTER, MIRIAM.....	948 Richmond St.
SCHICK, WILLIAM J.....	571 Grand Ave.
SCHMIDT, JOHN G.....	4243 Floral Ave., Norwood, O.
SCHMITT, LILLIE HELEN.....	510 Riddle Rd.
SCHNEIDER, FREDERICK J.....	2114 Freeman Ave.
SCHNIEDERS, CLARENCE ANTHONY.....	923 Barr St.
SCHOLLE, MARY EDNA.....	3227 Jefferson Ave.
SCHROEDER, CARL F.....	122 W. St. Clair St.
SCHURR, FERDINAND LOUIS.....	2145 Queen City Ave.
SCHWARBERG, HAZEL MARGARET.....	643 Nelson Pl., Newport, Ky.
SECREST, FRANCES L.....	215 Gilman Ave.
SELLERS, HARRY.....	230 E. University Ave.
SHAFFER, MRS. ALICIA BAKEWELL.....	2260 Park Ave.
SHAW, KATHERINE WILSON.....	24 Highland Ave., Ft. Thomas, Ky.
SHAWEKER, DR. MAX.....	Cincinnati Hospital
SHEA, DANIEL LINDSEY.....	2757 Webster Ave., Oakley
SHEEHAN, THOMAS JAMES.....	Mt. Washington, O.
SHORTER, SELMARITA.....	706 Barr St.
SICKING, MAY.....	2343 Ohio Ave.
SIEMON, AUGUST ADOLPH.....	208 Broadway
SIMON, JULIUS JACOB.....	913 Mound St.
SISSON, EDWARD ALLAN.....	2551 Homestead Pl.
SMICKLER, SAMUEL.....	1326 Locust St.

SMITH, ANNA McNAUGHTON.....	1883 Madison Rd.
SMITH, MAGDALEN.....	2588 Ring Pl., Price Hill
SMITH, MARGARET ADAMS.....	1883 Madison Rd.
SOMMERS, FRED CONRAD.....	1344 Paxton Rd.
SPOHR, ARTHUR AUGUST.....	434 W. McMicken Ave.
STEIN, JOHN HARRY.....	717 Weingartner Pl., Newport, Ky.
STEMLER, EMIL W.....	3335 Bonaparte Ave.
STIX, CARL ISAAC.....	2215 Upland Pl.
STRONG, JAMES ALBERT.....	116 Sixty-ninth St., Carthage
SUNDERMANN, JUSTUS FRED.....	2503 Beekman St.
SWOPE, JOSIE.....	20 E. Eighth St.
TROY, LORETTA HELEN.....	620 Hawthorne Ave., Price Hill
VAN DUSEN, GORDON.....	924 Hawthorne Ave., Price Hill
UNDERHILL, GRACE ELIZABETH.....	2974 Paxton Rd.
VELLÈRE, SARAH.....	The Barclay
VIEHE, MRS. MARTHA ELIZABETH.....	4242 Hosea Ave.
WARING, FREDERICK HOLMAN.....	856 Lincoln Ave.
WEATHERBY, JUANITA ALBERTA.....	1643 Vandalia Ave.
WEBER, WILLIAM J.....	325 Broadway
WEITLER, RETTA.....	2669 Dennis St.
WERNER, CARL GUSTAV.....	525 Terrace Ave.
WHALEY, HARRY A.....	121 Malvern Pl.
WICKER, EDWIN ARTHUR.....	243 Hosea Ave.
WILSON, RAYMOND J.....	3904 Edwards Rd.
WINKLER, HARRISON.....	136 Mulberry St.
WUESTEFELD, RALPH ANTHONY.....	704 Wayne St.
WULFMAN, SELMA ELENORE.....	757 Delta Ave.
ZIMPELMANN, FRANCES KATHERINE.....	3207 Glendora Ave.

*Unclassified Students

TEACHERS IN SPECIAL COURSES

DAVIS, GEORGE H. [ELA].....	4627 Glenshade St.
GRONEWEG, ERNST [ELA].....	3362 Morrison Ave.
HAPPERSBERGER, PAULA [ELA].....	2319 Krouse Ave.
HUMMEL, STELLA M. [ELA].....	3421 Price Ave.
LOCKHART, REBA [ELA].....	Ft. Thomas, Ky.
REEMELIN, ISABELLE [ELA].....	3471 Cheviot Ave.
SCHIEL, LUELLE [ELA].....	540 Terrace Ave.
SCHIEL, LOUIS M.....	540 Terrace Ave.
SCHIELE, JULIA.....	306 Mulberry St.
STUNTZ, EDNA MARY [ELA].....	2981 Observatory Ave.
SWEENEY, KATE M.....	3042 McHenry Rd.
THOMAS, MRS. MARGARET K. [ELA].....	5 Garfield Pl.

* In addition, there are 51 students listed in the College for Teachers, who are also taking work in the teachers classes in Liberal Arts.

*COLLEGE FOR TEACHERS

Graduates

(Candidates for the Teacher's Diploma)

LOEB, MARTHA.....	829 Rockdale Ave.
MARCKWORTH, OLIVIA MARIE.....	Ramona Ave., Westwood
O'BRIEN, EDNA.....	2721 Woodburn Ave.
PARKER, MARGUERITE.....	4375 Hamilton Ave.
STEPHENS, ALICE VIRGINIA.....	2238 Nelson Ave.

Art Students

CLARK, MARGARET.....	2704 Cypress Ave., Pleasant Ridge
COOK, GRACE HELEN.....	2814 Melrose Ave.
FRANKE, EMMA DOROTHY.....	568 Mt. Hope Rd., Price Hill
HYDE, ROSALIND ROWE.....	814 Lincoln Ave.
KNAUBER, ALMA.....	3331 Arrow Ave.
KUENNING, NORMA DOROTHY.....	North Bend Rd., College Hill
STUART, ETHEL MAY.....	7384 Kirkwood Ave.
WAGNER, EDNA AMELIA.....	S. E. Cor. Ninth and Linn Sts.

Kindergartners

ABRAMS, TRACY GERTRUDE.....	Urbana O., and 2626 May St.
BRESTEL, GERTRUDE FLORENCE.....	1827 Baltimore Ave.
BUCKLEY, RUTH ELLEN.....	1617 Young St.
BUCKNER, LUCILLE.....	746 W. Eighth St.
CARSON, MILDRED ELVIRA.....	4770 Eastern Ave.
CLEMENT, FANNY MARIE.....	1017 Poplar St.
COCHRAN, ETHEL M.....	3828 Reading Rd.
DICKINSON, LILLIAN MARIE.....	Middletown, O., and 2626 May St.
DYER, ELEANOR JOCELYN.....	4524 Circle Ave.
EGLOFFSTEIN, SELMA C. VON [ELA].....	948 Grand Ave., Price Hill
HARRISON, WILLA LOUISE [ELA].....	4259 Fergus St., Northside
HEINS, CLARA IRENE.....	3592 Monteith Ave.
MEYERS, BESSIE BEULAH.....	Evansville, Ind., and 2626 May St.
MICHENER, ANNA PHEBE.....	Lebanon, O., and 6 Linton Ave.
MUSSMAN, ELSIE LILLIAN [ELA].....	2033 Pine St., Covington, Ky.
O'MEARA, MARGUERITE [ELA].....	526 Boal St.
PIERCE, CHARLOTTE [ELA].....	Dayton, O., and 2626 May St.
RIDD, ROSE ELLEN [ELA].....	834 York St., Newport, Ky.
SCHWARZ, LILLIAN CALHOUN.....	141 Springfield Pike, Wyoming, O.
SHELLEY, ELIZABETH GERTRUDE.....	239 Albion Pl.
WOLTER, ETHEL ANGELINE [ELA].....	933 York St.

Teachers

ADAMS, NELLIE CISSNA.....	3417 Stathem Ave.
ALLEN, MARY ELIZABETH.....	528 Scott St., Covington, Ky.
ARNOLD, JEANNETTE CRAIG [ELA].....	3504 Craig Ave.
BAIN, CATHERINE ELIZABETH.....	Madeira, O.

* In addition, there are 132 students taking work in the College for Teachers, who are listed in other departments as follows: Graduates, 31; Liberal Arts—Seniors, 44, Juniors, 25, Sophomores, 3; Household Arts, 29. Such students are designated by the abbreviation *TC*.

BALLIN, HANS.....	1949 Hewitt Ave.
BAUMAN, GEORGE [LA].....	34 W. Second St., Mt. Healthy
BAY, ROSA MARY.....	3758 Isabella Ave.
BECKER, LILLIE.....	416 Hawthorne Ave.
BELL, MAGGIE ELOISE.....	2637 Alms Pl.
BENNETT, ALF B.....	Sta. L, Cincinnati, O.
BENNETT, OMER HIBBEN.....	3822 Davis Ave., Sta. L
BIELER, FLORA [LA—D&E].....	240 E. University Ave., Mt. Auburn
BLACKBURN, CHARLES P.....	R. F. D. 5, Lockland, O., Box 61
BOGLE, ELIZABETH.....	220 Lyon St.
BOLENDER, EDWARD.....	Harrison, O.
BOTHWELL, JULIA STANLEY [LA].....	20 The Roslyn
BOYD, EMMA AUGUSTA [LA].....	2876 Montana Ave.
BRONWORTH, HARRY.....	950 Elberon Ave.
BURDGE, ALICE VIRGINIA [LA—D&E].....	1873 Kinney Ave.
BURNET, WHITTIER.....	1929 Maple Ave., Norwood, O.
CALLON, ALBERT [ELA].....	Milford, O.
CHALKER, LEONIDAS R.....	5715 Arnsby Pl., Madisonville
CHIDLAW, WILLIAM MATSON.....	Cleves, O.
CLAASEN, CLARA M. [LA].....	4025 Elsmere Ave.
CLEMONS, MRS. ANNA.....	Box 179, Milford, O.
CLEMONS, GLADYS.....	Milford, O.
CLEMONS, IRENE.....	Milford, O.
CLEPHANE, ULYSSES DAVID.....	1553 Dixmont Ave.
CLOUDE, HELEN LOUISE.....	2210 Kemper Lane
COLLINS, ANDREW CHARLES.....	1724 Scott St., Covington, Ky.
CORNWELL, MRS. IRENE [LA].....	18 The Poinciana
DALTON, MATTIE CECILIA.....	1018 Foraker Ave.
DAVIDSON, ANNA LOUISE.....	Hillsboro, O.
DAVIS, LUTHER M.....	4630 Castle Pl., Madisonville
DEARNESS, FREDERICK WILLIAM [LA].....	2654 Harrison Ave.
DETRAZ, JULIA.....	411 McGregor Ave.
DUNN, JESSE KESSNER [LA—D&E].....	3468 Cheviot Ave.
EDER, MAX [LA].....	Bond Hill
FEID, FLORENCE.....	2156 Staebler St.
FLEMING, NATHAN ANDREW.....	1303 Russell Ave., Covington, Ky.
FLINCHPAUGH, ANDERSON E. [LA].....	3030 Junietta Ave.
FOLEY, MARY AGNES [ELA].....	940 Elberon Ave., Price Hill
FORTHMAN, WILLIAM [ELA].....	3033 Percy Ave.
FRIASON, CAMILLE.....	1021 Foraker Ave.
FRY, GRACE ANNA [LA].....	23 The Roanoke
FULLER, LILLIAN ELIZABETH.....	701 W. Ninth St.
FUSON, HENRY HARVEY [ELA].....	1921 Denner St., Covington, Ky.
GANT, CHARLES FESTUS [ELA].....	6310 Lower River Rd., Sayler Park Sta.
GREEN, MAYME DUDLEY.....	826 Greenup St., Covington, Ky.
HADER, CLARA.....	Mt. Healthy, O., R. R. 16
HAEBERLE, HENRY JACOB [ELA].....	644 Rockdale Ave.
HAMMOND, GRACE LOUISE [ELA].....	2823 Park Ave.
HAUER, FRANK J. [ELA].....	3254 Montana Ave., Westwood
HECK, JEAN OLIVE [LA].....	3757 Darwin Ave.
HECKERMAN, RUTH [LA—D&E].....	642 Monroe St., Newport, Ky.
HERRLE, HENRY [LA].....	2314 Rohs Ave.
HERRLE, KARL [LA].....	3240 Bishop St.
HOFFMEIER, LOUISE SOPHIE [LA].....	4438 Brazee St., Oakley
HOLDT, META MINNA [LA—D&E].....	Sta. L, Route 3
HOPPING, BANNING.....	Cleves, O.

HOTTENDORF, ELIZABETH [LA—D&E].....	810 Richmond Ave.
HUSEMAN, LOUISE [LA].....	1357 Broadway
JOHNSON, CHARLES WILLIAM [LA—D&E]....	1934 Wayland Ave., Norwood, O.
JOHNSON, STELLA.....	124 Springfield Pike, Wyoming, O.
JOHNSTON, JOHN B.....	1719 Hewitt Ave.
JONES, ELIZABETH MOORE.....	414 Richmond Ave.
JONES, GRACE ESTEL.....	27 N. Joseph St., Mt. Healthy
JONES, WINIFRED [LA—D&E].....	922 Nassau St.
KELSCH, ALVINA.....	Sta. L, Baltimore Ave., N. Fairmount
KNOWLES, DONALD EMMANUEL.....	3661 Middleton Ave.
KOCH, HENRY EDWARD.....	3148 Jefferson Ave.
KOLBE, JULIA C. [LA].....	337 Milton St.
KOPP, CHARLES A. [ELA].....	110 Ivanhoe St., Saylor Park
KRUCKEMEYER, ERNA [LA—D&E].....	518 Riddle Rd.
KUHN, ELSIE MARGARET.....	Asbury, O.
KUNTSCHIK, EMILIE LAURA [LA—D&E].....	3206 Madison Pl.
LAMARRE, ADELE E. [LA].....	1436 Marlowe Ave.
LEPPER, EDNA KATHERINE.....	.624 Maple Ave., Newport, Ky.
LONG, JEANNETTE ELIZABETH.....	6 E. Cooke Ave., Elmwood Pl.
LUCAS, HAZEL JEAN.....	733 W. Court St.
LUSE, CORA EDITH.....	Mt. Healthy, O.
MCKENZIE, MINNIE ELIZABETH [LA].....	3274 Nash Ave., Mt. Lookout
MAJOEWSKY, RUDOLPH.....	2976 Gilbert Ave.
MANN, LOUISE [ELA].....	3540 Zumstein Ave., Hyde Park
MENDENHALL, EMMA.....	2611 Eden Ave.
MEYDER, MINNIE [LA—D&E].....	4235 Florida Ave.
MILLER, CARY.....	Felicity, O.
MINKS, FLOYD GROVER [LA—D&E].....	232 Calhoun St.
MOMBACH, BLANCHE ALTHOF.....	70 Albany Ave.
MORRELL, LESLIE PAUL [LA].....	2635 Alms Pl.
MUEHLBACH, PHILIP [LA].....	927 McPherson Ave.
MYERS, CALLIE.....	3200 Mozart Ave.
MYERS, JOHN J.....	3430 Craig Ave.
NAGEL, AMELIA J.....	Cherry Grove, O.
NAGEL, CHARLES F.....	R. D. No. 2, Newtown, O.
OSBORNE, PRICE.....	Terrace Park
OVERBECK, ANNA.....	Sta. F, Price Hill
PARHAM, HARTWELL [ELA].....	1237 Lincoln Ave.
PHILLIPS, VIRGINIA LYSLE [LA].....	705 York St., Newport, Ky.
POWERS, JAMES P.....	205 Emma St., Covington, Ky.
QUIRK, WILLIAM.....	2531 Moorman Ave.
RAMMELSBERG, VIOLA [LA—D&E].....	34 W. Thirteenth St., Newport, Ky.
REGENSTEIN, ANNA BELLE [LA—D&E].....	Ft. Thomas, Ky.
RESZKE, FELIX EUGENE [LA—D&E].....	1429 Vine St.
RICHARDS, DANIEL SMITH.....	1053 Wesley Ave.
RIESNER, ANNA [LA].....	2531 Ashland Ave.
RINGGOLD, EDNA L.....	427 Elizabeth St.
RUDOLPH, HARRISON H.....	2664 Harrison Ave.
RYBOLT, MABEL CRICKET [LA].....	4313 Wetzel Ave., Madisonville
SCHERRIEB, CARL ALBERT [LA—D&E].....	215 Calhoun St.
SCHEUING, MINNA J. [LA—D&E].....	1756 Hanfield St.
SCHICK, JOHN MATTHEW [ELA].....	3269 Montana Ave.
SCHLOTMAN, ROBERT C.....	3443 Pleasant View Ave.
SCHOENFELD, IDA LEONA [LA].....	Court and Vine Sts.
SCHROER, CATHERINE E. [LA—D&E].....	3022 Junietta Ave.
SIEFERT, ELLA.....	R. R. No. 3, Station L

SIMON, MARY EMMA.....	457 Considine Ave.
SIMPKINS, MAUDE.....	2280 Highland Ave., Norwood, O.
SLADE, MRS. GRACE SMITH.....	2912 Park Ave.
SORIN, MARIE C.....	2612 Eden Ave.
SPENCE, NANNIE [LA].....	18 Elm St., Ludlow, Ky.
SPENCER, MRS. CARRIE P.....	4241 Forest Ave., Norwood, O.
SPOONER, BEATRICE [LA].....	Glendale, O.
SPORING, EDWARD FRANKLIN [LA].....	Ft. Thomas, Ky.
STRAUTMANN, ALMA.....	4312 Liston Ave.
STUART, JOSEPHINE.....	1239 Chapel St.
TALBERT, MRS. MARGARET STOCKWELL [LA-D&E].....	337 Ludlow Ave.
TELKER, MINNA JOHANNA [LA-D&E].....	220 Fosdick St.
WALKE, ESTHER ALMA [LA-D&E].....	339 Calhoun St.
WALKER, CLARENCE RIDER.....	3856 Erie Ave.
WALTON, MARGARET DUNN [LA].....	3289 Werk Rd.
WARREN, LOUISE BEATRICE [LA-D&E].....	630 E. Third St., Newport, Ky.
WASHAM, HENRIETTA.....	733 W. Court St.
WEISS, ROSE CLARA [LA].....	271 W. McMillan St.
WELSCH, MABEL HAYES.....	227 Fosdick St.
WHEATLEY, ALMA B.....	Station K
WILLIAMS, KATHERINE MEREDITH [LA-D&E].....	4425 Station Ave., Winton Pl.
WOOD, GEORGE P. [ELA].....	Station L
YANCEY, ROBERT LEE.....	36 W. Tenth St., Covington, Ky.

COLLEGE OF ENGINEERING

Seniors

COOK, STANLEY G., B. CH. E.....	116 Huntington Pl.
FILLMORE, HERBERT WORTH, B. M. E.....	R. F. D. No. 1, Madisonville, O.
HIGGINS, CHESTER LYON, B. C. E.....	Bellevue, Mich., and 3120 Jefferson Ave.
LIPPERT, OTTO CARL FERDINAND, B. CH. E.....	1601 Freeman Ave.
MYERS, RAYMOND PENDERY, B. M. E.....	619 Burns Ave., Wyoming, O.
NIERMANN, THEODORE H., B. C. E.....	3552 Woodburn Ave.

Juniors

CHURCH, RAYMOND GILLESPIE, B. C. E.....	3627 Shaw Ave., Hyde Park
CRISSINGER, LLOYD CHARLES, B. C. E.....	76 Linden St., Ludlow, Ky.
JONES, DOUGLAS, B. CH. E.....	2320 Kemper Lane
LANGHAMMER, ANTHONY JOHN, B. M. E.....	713 Crescent Ave., Covington, Ky.
MAISH, ALBERT FREDERICK, B. C. E.....	1323 Laidlaw Ave., Bond Hill
WILLIAMS, BERKELEY, B. M. E.....	Middletown, Conn., and 272 McCormick Pl.

Sophomores

GERST, WILLIAM JOSEPH, B. E. E.....	658 McMicken Ave.
LUTZ, JOSEPH NIXON, B. M. E.....	128 Wilmuth Ave., Wyoming, O.
MITCHELL, ROBERT BAKER, B. E. E.....	6371 Rockway Ave.

Freshmen

CONE, PHILIP H., B. M. E.....	1 The Haydock Bldg.
FISHER, CHERRINGTON LEE, B. C. E.....	2595 Observatory Rd.
GEISLER, JULIUS CARL HERMANN, B. M. E.....	463 Riddle Rd.
HART, ROYAL CAMILLUS, B. C. E.....	223 Grove Ave., Wyoming, O.

JUSTICE, HOWARD KENNETH, B. C. E.	20 Shaler St., Covington, Ky.
KOEHLER, CHRISTOPHER L., B. M. E.	2538 Hackberry St.
McHUGH, ROBERT JAMES, B. M. E.	3444 Cornell Pl.
PENDLETON, WILLIAM LAMER, B. C. E.	1720 E. McMillan St.
PHILLIPS, CECIL ST. JOHN, B. M. E.	705 York St., Newport, Ky.
ROGATZKY, CARL HERMAN, B. CH. E.	2439 Auburn Ave.
ROTHROCK, ROBERT WILLIAM, B. M. E.	Washington C. H., O., and 3555 Lee Pl.
SEYMOUR, MILTON HART, B. M. E.	Oakfield, N. J., and 2415 Auburn Ave.
SOHN, HENRY, B. CH. E.	3303 Jefferson Ave.
TEBOW, LEE ROBERT, B. M. E.	908 Morris St.
TOPIE, ERNEST WARREN, B. M. E.	4711 Carthage Pike, St. Bernard, O.
WOOD, RAYMOND M., B. M. E.	Lawrenceburg, Ind.

Specials

COLLIGAN, ARTHUR PETER, B. C. E. [ELA]	2482 Paris St.
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Fifth Year Co-operative Students

ALEXANDER, LOWELL MELVILLE, E. E.	Sparta, Ill., and 3427 Middleton Ave.
AMES, JOHN HUBBARD, MET. E.	2204 Madison Ave., Norwood, O.
BINNS, H. STANLEY, M. E.	Herndon, Ky., and 2407 Kenton St.
BLACKFORD, RALPH E., M. E.	Middletown, O., and 844 Oak St.
BURNS, FRANCIS ORMSBY, M. E.	1804 Larch Ave., College Hill
CARPENTER, HAROLD D., M. E.	Bellevue, Mich., and 3427 Middleton Ave.
CHACE, CLYDE BURGESS, C. E.	3231 Bishop St.
DA CAMARA, JR., WILLIAM HARLEY, C. E.,	West Palm Beach, Fla., and 3231 Bishop St.
DOLLMAN, JOHN WILLET, M. E.	Cleves and Harrison Aves., Cheviot
FELTON, STEPHEN JACOB, MET. E.	Towanda, Pa., and 1553 Blair Ave.
HALSEY, GEORGE DAWSON, C. E.	DeLand, Fla., and 2336 Wheeler St.
HARTMANN, CARL, M. E.	3798 Liston Ave.
KIHN, WILLIAM JOHNSON, CH. E.	Hamilton, O., and 2048 Auburn Ave.
KOHLHEPP, NORMAN, CH. E.	Louisville, Ky., and 2210 Ohio Ave.
LEHNHOFF, RAYMOND G., E. E. [ELA]	475 Riddle Rd.
MONTGOMERY, THADDEUS JAMES, C. E.	2325 Maryland Ave.
OSTER, EUGENE ARTHUR, E. E.	1065 Wade St.
OTTE, JR., CHARLES WILLIAM, M. E.	2522 Hackberry St.
PERRY, ARLINGTON CLYDE, E. E.	Erie, Pa., and 707 E. McMillan St.
PYNE, ROLAND RALPH, C. E.	10 E. Front St., Newport, Ky.
SCHAEFERKLAUS, LOUIS HENRY AUGUST, C. E.	1384 Harrison Ave.
SPEAR, WALTER ARTHUR, E. E.	Evansville, Ind., and 2116 St. James Ave.
SWINNEY, STUART LA FORCE, M. E.	Ottumwa, Iowa, and 2048 Auburn Ave.
VINNEDGE, EARLE WALTER, M. E.	34 Walnut Ave., Wyoming, O.
WALLACE, BRUCE HINDS, C. E.	3576 St. Charles Pl., Hyde Park
WOOD, CHARLES ESTES, CH. E.	634 Glenway Ave., Wyoming, O.
WULFEKOETTER, BURT HENRY, C. E.	1317 Myrtle Ave.
YOCUM, GILBERT GASTON, E. E.	Steubenville, O., and 2300 Wheeler St.

Fourth Year Co-operative Students

BAER, BERNARD EDWARD, C. E.	315 Earnshaw Ave.
BLACK, AMBROSE CHARLES LUKE, M. E.	126 Main Ave., Elmwood Pl.
BURRHUS, HAROLD CLAUDE, C. E.	Riverdale, Md., and 3231 Bishop St.
CHERRINGTON, EDISON, B. E. E. [C]	2116 St. James Ave.
FISHBURN, CHARLES CYRUS, C. E.	108 Huntington Pl.
FRANKLIN, JACOB, C. E.	2702 Hackberry St.

FULLER, JOHN EMORY, M. E.	Senoia, Ga., and 2570 Euclid Ave.
GOOSMAN, HERBERT JOHN, M. E.	730 Froome Ave., Winton Pl.
GORDON, MYRON BOYD, M. E.	309 Ludlow Ave.
HAYES, WILLIAM LEONARD, CH. E.	Medford, Mass., and 314 Ludlow Ave.
HECHT, VERNON GEORGE, C. E. [ELA]	Mt. Healthy, O.
HOWARD, WILLIAM RAPPE, C. E.	Preston, Minn., and 3427 Middleton Ave.
HUBER, WILLIAM ROBERT, M. E.	Richmond, Ind., and 2048 Auburn Ave.
JOHNSTON, PAUL KENNEDY, E. E.	1719 Hewitt Ave.
KIEFER, ABE, CH. E.	447 Wood Ave.
KRUSE, RALPH HENRY, E. E.	Seventy-fifth and Main Sts., Carthage
LEE, MAYNARD DE WILTON, C. E.	Lima, N. Y., and 127 Calhoun St.
LEIGHTON, FRANK C., C. E.	Harrison Hotel, 540 W. Seventh St.
McKEE, CHARLES CLINTON, E. E.	Findlay, O., and 3059 Mathers St.
MESSINGER, HENRY CALVERT, M. E.	267 Calhoun St.
MIZNER, RALPH ADAM, C. E.	Wheatland, Pa., and 3427 Middleton Ave.
MOFFETT, JOHN HARRISON, CH. E.	Rushville, Ind., and 2718 Wagner St.
NEUFFER, GEORGE TOTTEN, C. E.	315 Patterson St., Lockland, O.
NORTON, FAY ARTHUR, E. E.	Piqua, O., and 3542 Trimble Ave.
OBERSCHMIDT, FRED HERMAN, E. E.	2515 Addison St.
O'LOUGHLIN, JOSEPH J., C. E.	127 Calhoun St.
PATTON, LABAN THEODORE, E. E.	Catlettsburg, Ky., and 2356 Auburn Ave.
PEPINSKY, BERNARD, C. E.	204 Hearne Ave.
PHELPS, STEPHEN B., CH. E.	Green Hill, Pa., and 707 E. McMillan St.
RETTICH, PAUL FREDERICK, CH. E.	205 Oak St.
RICKWOOD, ROWLAND LEE, M. E.	Evansville, Ind., 2437 Clifton Ave.
ROBINSON, WILLIAM, C. E.	3119 Imperial Ave.
RODGERS, THOMAS FRANKLIN, C. E.	2319 Stratford Ave.
RUSSO, PROSPER, C. E.	2512 Chatham St.
SCHNEIDER, BEN ROSS, C. E.	Summit Hill, Pa., and 621 Evanswood Pl.
SCHROTH, HERBERT HENRY, C. E.	2966 Henshaw Ave.
SEAMANDS, EARL ARNETT, C. E.	Tucson, Ariz., and 2427 Middleton Ave.
SHEPARD, MORTON BRADLEY, C. E.	Beloit, Wis., and 2437 Clifton Ave.
STENGER, EDWIN PETER, CH. E.	Harrison, O., and 2516 Ravine St.
STEWART, WILBUR ALBIO, E. E.	1852 Columbia Ave.
SYLVESTER, WILLIAM LAPP, C. E.	Buffalo, N. Y., and 2437 Clifton Ave.
THOMPSON, GUY, E. E.	Lebanon, O., and 2614 Stratford Ave.
VALERIO, GIACINTO, C. E.	907 Elberon Ave.
VOSS, RAYMOND FRANK, M. E.	3447 Whitfield Ave.

Third Year Co-operative Students

ALLEN, JR., WILLIAM NORRIS, E. E.	3548 Wabash Ave.
ALTER, LUCIEN WEAVER SCOTT, M. E.	3669 Reading Rd.
AUCH, RALPH HENRY, CH. E.	Chillicothe, O., and 2509 Auburn Ave.
AVERY, ALBERT ROLLINS, E. E.	Alexandria, S. D., and 2048 Auburn Ave.
BAKER, JAMES LEOPOLD, CH. E.	3510 Zinole Ave., Pleasant Ridge
BEHLE, HOWARD FRANKLIN, B. MET. E.	829 Betts St.
BIEHLE, JOHN FRED, E. E.	1510 Bremen St.
BOWER, RAYMOND BERNARD, M. E.	Marine City, Mich., and 4708 Eastern Ave.
BRYANT, LESLIE EDWIN, M. E.	LaPorte, Ind., and 2048 Auburn Ave.
BUCKTON, ROBERT TOMLINSON, M. E.	2313 Washington Ave., Norwood, O.
COWELL, WARNER TUTTLE, M. E.	Clyde, O., and 309 Ludlow Ave.
CRADDOCK, ALFRED JOHN, CH. E.	1038 Saratoga St., Newport, Ky.
DEQUASIE, LACEY GLENN, M. E.,	

Deepwater, W. Va., and 4224 Brownway Ave., Oakley

DOUGHERTY, SIDNEY SWAIN, M. E. Liberty, Ind., and 2048 Auburn Ave.

ELLIS, WILLIAM HARTSHORN, C. E.....	960	Burton Ave.
ELMORE, PAUL WILLIAMSON, E. E.....		Chattanooga, Tenn., and 32 Hollister St.
ERNST, HENRY SAMUEL, M. E.....		Tiffin, O., and 2509 Auburn Ave.
FELDMAN, EDMUND BURKE, C. E.....	3468	Burnet Ave.
FORDE, JR., CHARLES WILLIAM, CH. E.....		Milford, O.
FREY, LESLIE L., M. E.....	4922	Marion St., Norwood, O.
GENZMER, PAUL ERNEST RAYMOND, C. E..		Pittsfield, Mass., and 2509 Auburn Ave.
GEORGE, HERBERT, M. E.....		Fitchburg, Mass., and 32 Hollister St.
GIEBEL, ROBERT, M. E.....	526	Howell Ave.
GREEN, WILLIAM HARRISON, E. E.....	2231	Burnet Ave.
GRIMM, JR., JOHN EDWARD, E. E.....		Dayton, O., and 150 W. McMillan St.
GUEST, WARD EARL, M. E.....		Hoopeston, Ill., and 2667 Highland Ave.
HAMILTON, HERBERT NORTH, E. E.....	2366	Stratford Ave.
HARKNESS, EARL WILLIAM, C. E.....		East Lynn, Ill., and 2210 Ohio Ave.
HARRINGTON, EARL LAWRENCE, C. E....		Westfield, N. Y., and 2048 Auburn Ave.
HERLINGER, HAROLD VAN CLEVE, CH. E....	607	Lexington Ave., Newport, Ky.
HOLZ, ROBERT, CH. E.....	3574	Edwards Rd.
HORN, SILAS H., E. E.....		Richmond, Ind., and 208 Calhoun St.
HUNT, LAWRENCE EDWIN, C. E.....	5405	Central Ave., Madisonville
KINCH, JOHN TAYLOR, C. E.....		Clarksburg, W. Va., and 2341 Stratford Ave.
KRAPP, CLARENCE GEORGE, M. E.....	5646	Belmont Ave.
KUHLMAN, LEO GEORGE, E. E.....	819	Barr St.
LANDIS, GEORGE HERMAN, E. E.....		Tokyo, Japan, and 316 Dixmyth Ave.
LANGENHEIM, RALPH LOUIS, C. E.....	3543	Michigan Ave.
MONCE, EDWIN WALTON, C. E.....	3558	Monteith Ave.
MORRIS, JOSEPH GREEN, M. E.....		Evanston, Ill., and Avondale Ave.
MORRISON, ARTHUR JULIUS, C. E.....	3554	Beechmont Ave.
MORRISON, GARFIELD, C. E.....		Bethel, Conn., and 2048 Auburn Ave.
MOULD, ALEC FOWLER, C. E.....		Niagara Falls, N. Y., and 272 McCormick Pl.
NOE, OSCAR PERRINE, M. E.....	4730	Winton Pl.
PALMER, ROY, M. E.....	825	Chateau Ave.
PENDERY, HORACE FINDLAY, E. E.....	3611	Zumstein Ave.
PHARES, HUGH KINZEL, C. E.....	3719	Terrace Pl.
PORTER, HAROLD MITCHELL, CH. E.....		Avery Lane, Hyde Park
RECK, NELSON, M. E.....		Rockford, Ill., and 2326 E. Hill Ave.
RUSH, THOMAS WILLIAM, C. E.....		Niagara Falls, N. Y., and 2300 Wheeler St.
SCALLON, PAUL, CH. E.....	2824	Price Ave.
SCHNEIDER, ANTON WILHELM, M. E...		Summit Hill, Pa., and 621 Evanswood Pl.
SCHOETTLE, GEORGE PAUL, C. E.....	3941	Dickson Ave.
SEITZ, ARTHUR JOHN, CH. E.....	705	Delhi Ave.
SOLLER, WALTER, M. E.....		Talbott Ave.
TAYLOR, JAMES WILLIAM, M. E.....		Reedsville, Pa., and 350 Terrace Ave.
THOMPSON, WILLIAM PHIPPS, C. E.....	2233	Frances Lane
UTLEY, ROMEYN LATHROP, E. E...		Seneca Falls, N. Y., and The L. B. Harrison Hotel
WEBB, EDGAR MORRISON, M. E.....		Reedsville, Pa., and 526 Riddle Rd.
WEEKES, CLIFTON L'ORIGINAL, C. E.,		Long Island City, L. I., N. Y., and 2210 Ohio Ave.
WUENKER, RALPH FREDERICK, M. E.....	547	Ringgold St.

Second Year Co-operative Students

ALTAMER, HAROLD MILLER, M. E.....	1511	Groesbeck Rd., College Hill
ANDEREGG, RUPERT ANDREW, C. E.....		Long Lake, Minn., and 217 Calhoun St.
AUG, GEORGE CHRISTIAN, C. E.....	3740	Lueders Ave., Hyde Park
BACKHERMS, ALVIN BERNARD, C. E.....	1026	W. Liberty St.
BAGEL, WALTER THOMAS, CH. E.....	4237	Brookside Ave.

BARNARD, BYRON FRANKLIN, M. E.	Liberty, Ind., and 2521 Auburn Ave.
BAUDE, WALTER ANDREW, CH. E.	Louisville, Ky., and 2331 Wheeler St.
BAUER, EDWIN FRANCIS, C. E.	Indianapolis, Ind., and 217 Calhoun St.
BISHOP, RUSSELL PERNE, E. E.	Ft. Duchesne, Utah, and 309 Ludlow Ave.
BOTTS, EARL ALBERT, M. E.	514 E. Third St., Newport, Ky.
BRAUN, ERNST, C. E.	225 Northern Ave.
BROWN, DARWIN SCOTT, E. E.	228 Piedmont Ave.
BROWN, GEORGE CARLTON, E. E.	Williamsport, Pa., and 621 Evanswood Pl.
BRUMBACK, DAVID LA DOYT, C. E.	Van Wert, O., and 485 Riddle Rd.
BRUCK, ALBERT GEORGE, M. E.	Hamilton, O., and 4224 Brownway Ave., Oakley
BRITAIN, GLENN H., E. E.	El Douds, Kan., and 2711 Ashland Ave.
BUTTERFIELD, ASA VAN WORMER, M. E.	5946 Belmont Ave.
CARR, LUCIEN STEVENS, C. E.	3534 Stettinius Ave., Hyde Park
CHAPMAN, HENRY GORDON, C. E.	R. R. No. 1, Madisonville
CLARK, CARLTON COBB, E. E.	Koshkonong, Mo., and 2309 Wheeler St.
CURRY, CHAUNCEY JAMES, M. E.	Milford, O.
DAVIE, ROBERT, E. E.	Ozone Park, Long Island, N. Y., and 152 W. McMillan St.
DAVIS, MILFORD HARRISON, C. E.	Blackstone, Ill., and 2210 Ohio Ave.
DELL, GEORGE W., M. E.	1820 Race St.
DICER, CLYDE GILLFORD, E. E.	Griffith, Ind., and 2657 Dennis St.
DIKEMAN, HOWARD WILBUR, E. E.	Chickasha, Okla., and 2521 Auburn Ave.
DORAN, JOHN EDWARD, E. E.	1616 Larch Ave.
DORSEY, JOHN ROBERT, C. E.	Greentown, Ind., and 2667 Highland Ave.
EHLERS, WILLIAM DONALD, C. E. [ELA]	4208 Brookside Ave.
ELHOFF, ERWIN JOHN, E. E.	3251 Vine St.
ELY, LAWRENCE STERLING, E. E.	955 Nassau St.
FIALCO, HARRY, CH. E.	539 W. Eighth St.
FISHER, JOHN HOWARD, C. E.	6212 Erie Ave., Madisonville
FRIES, DANIEL GUSTAV, E. E.	1826 Garrard St., Covington, Ky.
FULLER, ROBERT BENJAMIN, C. E.	Senolia, Ga., and 2363 Stratford Ave.
GARVIN, HUGH, M. E.	Santiago, Chile, S. A., and 960 Burton Ave.
GEOHEGAN, EDMUND HARRISON, CH. E.	820 Mt. Hope Rd.
GERSTLE, JOSEPH PETER, M. E.	3558 Beechmont Ave.
GRISARD, JOHN KEEHLAR, E. E.	3870 Ivanhoe Ave., Norwood, O.
HALLER, HERBERT LUDWIG JACOB, CH. E. [ELA]	2213 Victor St.
HAND, CARL ANNEN, E. E.	Rockford, Ill., and 127 Calhoun St.
HENLEIN, HERBERT GEORGE, CH. E.	2941 Marshall Ave.
HODAPP, GEORGE HENRY, C. E.	7100 Carthage Ave.
HODTUM, JOSEPH BERNHARDT, E. E.	505 Milton St.
HOWLAND, HERMAN CHAMBERS, C. E.	2365 Kemper Lane
JAMES, DAVIS LAWLER, M. E.	810 Oak St.
JOHNSTON, ROSWELL ARMSTRONG, M. E.	1028 Considine Ave.
KAUFMAN, BENEDICT, CH. E.	721 Armory Ave.
KEMP, GEORGE LAWRENCE, M. E.	244 Kearney St., Hartwell
KIBLER, CARL M., CH. E.	Wheeler, Ill., and 218 Melish St.
KIHN, EDGAR JOSEPH, CH. E.	Hamilton, O., and 2048 Auburn Ave.
KINCAID, EARL BELMONT, CH. E.	Glenrose, O., and 2402 Fairview Ave.
KING, CLINTON BURTON, E. E.	1767 Chase Ave.
KROEGER, GUSTAV HENRY, M. E.	1837 Clarion Ave.
KUNKER, CHARLES EUGENE, C. E.	Morrow, O., and 3231 Bishop St.
KYSOR, KARL DANIEL, M. E.	Blytheville, Ark., and 2509 Auburn Ave.
LAIRD, GLOVER EUGENE, C. E.	Highland, O., and 3231 Bishop St.
LAIR, JACK REYNOLDS, E. E.	Dayton, O.
LANGHAM, SAM BRETTELE, E. E.	2521 Auburn Ave.
LEHRER, WILLIAM KEYSER, E. E.	Rushsylvania, O., and Glendale, O.
LINDSLEY, ALLEN MOORE, M. E.	4546 Edgewood Ave., Winton Pl.

LLOYD, JOHN C., M. E.....	Van Wert, O., and 309 Ludlow Ave.
LYNN, HARRY WILLIAM, M. E.....	Grand Rapids, Wis., and 2521 Auburn Ave.
MCCOMAS, DONALD RICHARD, E. E.....	2152 Alpine Pl.
MCCORMICK, HAROLD VOORHES, E. E.....	3110 Woodburn Ave.
MCDONALD, WILLIAM JOHN, CH. E.....	3257 Southside Ave.
MCNEILL, JOHN PEHRSON, C. E.....	5530 Covington Ave., Madisonville
MACKAY, ADAM MACDONALD, C. E.....	Buffalo, N. Y., and 2210 Ohio Ave.
MAHON, STEPHEN, C. E.....	3370 Morrison Ave.
MARKGRAF, CARL ALEXANDER, C. E.....	4050 Graham St.
MILLER, ABE JACK, CH. E.....	2 The Harvey Flats
MILLS, PELLHAM EUGENE, M. E.....	McCombs, Miss., and 272 McCormick Pl.
MONTGOMERY, JAMES WILLIAM, E. E.....	2214 Highland Ave.
MONRAD, OSCAR ANDREW, M. E.....	Rockfall, Conn., and 2415 Auburn Ave.
MORRIS, BURTON CLO, M. E.....	2557 Ingleside Ave.
MORSE, WELLSLAKE DEMAREST, C. E.....	Pasadena, Cal., and 621 Evanswood Pl.
MUENZENMEIER, ALBERT GEORGE, CH. E.....	Lebanon, O., and 2437 Clifton Ave.
MURPHY, DON CARLOS, C. E.....	Lincoln, Ill., and 2521 Auburn Ave.
MYERS, ROBERT WILLIAM, M. E.....	5024 Forest Ave., Norwood, O.
NELSON, ORIEL BENSON, C. E.....	5745 Whitney Ave., Madisonville
NEWBURY, RAYMOND WILMONT, C. E.....	Mystic, Conn., and 2336 Wheeler St.
NEWTON, HAROLD WILSON, M. E.....	Elmira, N. Y., and 2568 Euclid Ave.
NYCUM, HOMER CLARK, E. E.....	Keota, Iowa, and 127 Calhoun St.
OSTERBROCK, WILLIAM CARL, E. E.....	119 W. Fifteenth St.
OTTENJOHN, RALPH FETTA, M. E.....	3552 Mooney Ave.
PARSONS, TREMAINE, C. E.....	Lenox, Mass., and 2141 Clifton Ave.
PEASE, WILLIAM PAGE, E. E.....	Rutland, Vt., and 2331 Wheeler St.
PECK, FERDINAND WILLOUGHBY, CH. E.....	Detroit, Mich., and 350 Terrace Ave.
PETERMAN, WILLIAM ARTHUR, C. E.....	5725 Prentice St.
PINCKARD, FRANK ELLIS, E. E.....	Georgetown, O., and 723 Delta Ave.
PORTER, CHARLES HAROLD, C. E.....	2210 Ohio Ave.
PROCTOR, LELAND MANNING, CH. E.....	Everett, Wash., and 2048 Auburn Ave.
ROOT, EMORY NELSON, C. E. [ELA].....	Lenox, Mass., and 2437 Clifton Ave.
RUCKSTUHL, EDWIN WILLIAM, CH. E.....	3068 Wardell Ave.
SADLER, DUDLEY KARKALITZ, C. E.....	New Orleans, La., and 2210 Ohio Ave.
SCHAKEL, WALTER CHARLES, C. E.....	Indianapolis, Ind., and 150 W. McMillan St.
SCHNEIDER, ARTHUR HENRY, C. E.....	4283 Hamilton Ave.
SCHRODER, FREDERICK FRANK, C. E.....	526 York St.
SEGAL, HARRY, CH. E.....	643 Cutter St.
SHAW, MICHAEL GERALD, E. E.....	St. Claire, Mich., and 2509 Auburn Ave.
SMITH, JOHN EDWIN, E. E.....	Dayton, O., and 127 Calhoun St.
SORENSEN, JAMES CARLYLE, C. E.....	Omaha, Neb., and 2141 Clifton Ave.
SPILLS, JOHN HERMAN, C. E.....	3439 Zumstein Ave.
STENGER, BERNARD HENRY, CH. E.....	Harrison, O., and 2516 Ravine St.
STRATMOEN, ALBERT, CH. E.....	Boyd, Minn., and 2436 Clifton Ave.
SULLIVAN, JOHN THOMAS, C. E.....	1922 Greenup St., Covington, Ky.
SUMMER, TULLY H., C. E.....	Springfield, Ill., and 3427 Middleton Ave.
TALCOTT, HAROLD PLATT, C. E.....	Lanesboro, Mass., and 2437 Clifton Ave.
TAYLOR, HALL ACTON, CH. E.....	2667 Highland Ave., Wyoming, O.
THOMAS, SAM MORGAN, E. E.....	Catlettsburg, Ky., and 2657 Dennis St.
TODD, JR., FRED CHARLES, C. E.....	3920 Hazel Ave., Norwood, O.
TUCKER, HAROLD SCOTT, C. E.....	1612 Scott St., Covington, Ky.
TULL, LAWRENCE EMERSON, C. E.....	2517 Warsaw Ave., Price Hill
UIHLEIN, HENRY CALMER, M. E.....	2706 Cleinview Ave.
VENOSA, PHILLIP, C. E.....	860 Buena Vista Pl.
VOORHES, MARION I., C. E.....	Blue Ash, O.
WITICH, WILLIAM, C. E.....	523 McAlpine Ave.

WOODWARD, ALVAH G., E. E. Rockville, Conn., and 2363 Stratford Ave.
 WUEST, FRANK WAGNER, M. E. 3430 Cornell Pl.
 ZULL, CHARLES LOUIS, C. E. Portsmouth, O., and 2667 Highland Ave.

First Year Co-operative Students

AHLERS, JOSEPH ALPHONSE, C. E. 920 Enright Ave.
 ALLAN, JAMES EGELSTON, M. E. 3227 Daytona Ave.
 AMES, EDWARD BUTLER, M. E. 2204 Madison Ave., Norwood, O.
 ANDERSON, JOHN CLARK, E. E. Dayton, O., and 2304 Victor St.
 ANDERSON, RAYMOND DESMOND, E. E. . . . Greensburg, Ind., and 213 Calhoun St.
 ARNOLD, RALPH WILLIAM, M. E. 3432 Columbia Ave.
 ATKINSON, LISLE FERMATT, M. E. 4525 Circle Ave.
 BEER, WALTER FRANCIS, E. E. Fitchburg, Mass., and 2521 Auburn Ave.
 BETSCHER, CLARENCE GEORGE, E. E. 2729 Columbia Ave.
 BOAKE, CHALLEN FILLMORE, C. E. 7203 Van Kirke Ave.
 BOALT, EDWARD ARMSTRONG, M. E. 3439 Cheviot Ave.
 BOONE, WALLACE WILLIAM, CH. E. 2372 Park Ave.
 BJORN, ALBERT THEODORE, C. E. Fitchburg, Mass., and 42 E. McMillan St.
 BREITHAUP, ERVIN MILLARD, M. E. Dresden, O., and 2319 Stratford Ave.
 BREWER, FERNANDO LEE, C. E. Crowley, La., and 264 Calhoun St.
 BRIDGMAN, JOHN OLE, M. E. 2072 Lawrence Ave., Norwood, O.
 BRUBAKER, THOMAS CARLYLE, C. E. . . . W. Alexandria, O., and 2300 Wheeler St.
 BRUNN, LEONARD EKELEBERRY, M. E. . . . Delaware, O., and 2437 Clifton Ave.
 BUCK, ARTHUR HENRY, C. E. 3021 Vine St.
 BURGESS, FRANK A., E. E. Rockford, O., and 2210 Ohio Ave.
 BURNS, HARRY ROBERT, E. E. Franklin, O., and 3231 Bishop St.
 COLBORN, CHARLES EBEN, E. E. Scottdale, Pa., and 127 Calhoun St.
 COMPTON, ELMER LEE, E. E. Mason, O.
 CONN, RICHARD DAULTON, C. E. Dayton, O., and 144 McMillan St.
 COPELAN, ROBERT WILLIAM, E. E. 4314 Langland St.
 CORDES, PHILIP LANGEL, M. E. Seymour, Ind., and 2210 Ohio Ave.
 CRANMER, ORRIN DAY, M. E. Vester, Pa., and 309 Ludlow Ave.
 CRIMANS, PAUL LESTER, E. E. Indianapolis, Ind., and 309 Ludlow Ave.
 CRUTCHFIELD, JAMES TEVIS, CH. E. 21 Westmoreland Flats, Mason St.
 DAVIS, RALPH WILLIAM, E. E. 2218 Eastern Ave.
 DETRAZ, EDWARD WADSWORTH, M. E. 411 McGregor Ave.
 DE VINEY, ALBERT FARIS, E. E. Cutler, Ill., and 3747 Middleton Ave.
 DOHRMANN, HEER GEORGE, E. E. 14 E. 18th St., Covington, Ky.
 DRUFNER, VINCENT HENRY, C. E. Dayton, O., and 736 Hawthorne Ave.
 DUNN, ARTHUR JAMES, M. E. 107 66th St., Carthage
 DWYER, JOSEPH MILTON, E. E. Dover, Ky., and 2519 Auburn Ave.
 EDMONSTON, JOSEPH RICKETTS, CH. E. 2542 W. Sixth St.
 ELLERT, JOSEPH EMIL, CH. E. St. Bernard, O.
 EMBSHOFF, GEORGE FRED, E. E. 802 Delhi Ave.
 ERION, WRIGHT ASHBURN, M. E. Milford, O.
 EYLER, LAWRENCE G., E. E. Dayton, O., and 150 W. McMillan St.
 FARRELL, JAMES HAMER, E. E. Belleft, O., and 3547 Clifton Ave.
 FIELD, R. E., M. E. Kendallville, Ind., and 2210 Ohio Ave.
 FISHER, CARL CLIFTON, C. E. 2135 Freeman Ave.
 FITZGERALD, GERALD EDWARD, C. E. Fond du Lac, Wis., and 3231 Bishop Pl.
 FLATH, EARL HUGO, E. E. Carrmonte, Dayton, O., and 264 Calhoun St.
 FLECK, ABE HENRY, E. E. 603 Broadway
 FLOYD, MASEL W., E. E. Hastings, Okla., and 2519 Auburn Ave.
 FOLGER, HERBERT GLASCOE, E. E. 4110 Floral Ave., Norwood, O.
 FOX, ARTHUR FRANK, M. E. 2348 Kemper Lane
 FULFORD, THOMAS DE LANO, E. E. Sayne, Pa., and 2568 Euclid Ave.

GALLAGHER, HARRY, M. E.....	Dayton, O., and 264 Calhoun St.
GANG, OLIVER FREDERICK, M. E.....	Lischer Ave., Westwood
GARDNER, HERBERT ORVILLE, E. E.....	Curtis, Neb., and 340 Howell Ave.
GLASBY, HERBERT JOHN, M. E.....	309 Ludlow Ave.
GORANFLO, STANLEY LANEY, CH. E.....	245 Taylor Ave., Bellevue, Ky.
GRAEBE, HERMAN CHARLES, CH. E.....	4127 Fergus St.
GRAESER, CARL LOUIS, CH. E.....	2216 Burnet Ave.
GREEN, HERBERT ERWIN, M. E.....	Indianapolis, Ind., and 2521 Auburn Ave.
GREGG, CHARLES WILLIAM, C. E.....	Morrow, O.
GRIEB, DANIEL ARTHUR, CH. E.....	Indianapolis, Ind., and 150 McMillan St.
HABEKOTTE, GEORGE FREDERICK, E. E.....	3232 Beresford Ave.
HAEHNLE, WALTER FEID, CH. E.....	830 York St.
HAMILTON, WILLIAM WALTER, C. E.....	2429 Fairview Ave.
HAUPT, WALTER HANS, C. E.....	160 E. McMicken Ave.
HEITKAMP, WALTER AUGUST, M. E.....	1862 Tilden Ave., Norwood, O.
HENRY, DOUGLAS CARNEGIE, M. E.....	Lenox, Mass., and 2141 Clifton Ave.
HINES, BLANEY TIBBITS, C. E.....	West Palm Beach, Fla., and 3231 Bishop St.
HOFFMAN, FREDERICK DOLL, CH. E.....	1088 W. Liberty St.
HOGUE, EDMUND BURKE, E. E.....	Altoona, Pa., and 960 Burton Ave.
HOLBERG, LEO NORTON, M. E.....	Portland, Ore., and 127 Calhoun St.
HOWE, CHARLES WILSON, C. E.....	Hamilton, O., and 2336 Wheeler St.
HUCKE, ELMER FRANK, M. E.....	203 Main Ave., Elmwood, O.
HUFFMAN, LLOYD CHRISTO, E. E.....	Dayton, O., and 264 Calhoun St.
HURXTHAL, FREDERICK ELLIOT, M. E....	Ronceverte, Va., and 127 Calhoun St.
JENKS, JOHN F., M. E.....	Sheblyville, Ind., and 419 Southview Ave.
JONES, LLOYD ARTHUR, CH. E.....	Arlington Heights, O.
JONES, WILLIAM, E. E.....	249 Floral Ave., Dayton, O.
JOYCE, JOHN NEAL, C. E.....	Cleveland, O., and 2354 Flora Ave.
JUERGENS, OSCAR SAMUEL, C. E.....	West Park, O., and 757 Delta Ave.
KALLAHER, MICHAEL JOSEPH, E. E.....	753 Delta Ave.
KAMPHAUSEN, RUDOLPH CARL, E. E.....	Chicago, Ill., and 309 Ludlow Ave.
KAPP, CECIL ABRAM, E. E.....	Somerville, O., and 309 Ludlow Ave.
KATZ, HENRY ALBERT, E. E.....	1127 Race St.
KECK, KARL GLENN, M. E.....	3628 Reading Rd.
KEIDEL, CLARENCE EMILE, C. E.....	2908 Euclid Ave.
KELLY, ERWIN COLUMBUS, C. E.....	Hazelwood, O.
KEMPER, SAMUEL FREDERICK, M. E.....	2512 Moorman Ave.
KENNEDY, EDWARD PORTER, E. E.....	Erlanger, Ky.
KIEFER, DANIEL DANZIGER, E. E.....	447 Wood Ave.
KIENKER, CARL HENRY, E. E.....	2244 Victor St.
KNEBEL, ARTHUR, M. E.....	3738 Carthage Ave.
KNOWLTON, CHARLES OSMOND, M. E.....	71 Hollister St.
KOHLMANN, IRWIN LAQUE, C. E.....	528 Howell Ave.
LADD, ELWOOD KENZIE, C. E.....	Peotone, Ill., and 7657 Dennis St.
LONDON, STEWART PRATT, M. E.....	Elmira, N. Y., and 2568 Euclid Ave.
LANG, GORDON B., E. E.....	Dana, Ind., and 309 Ludlow Ave.
LEARY, JOHN FRANCIS, M. E.....	Little Falls, N. Y., and 350 Terrace Ave.
LEIGHTON, HARRY RANDOLPH, CH. E.....	Cleveland, O., and 2483 Paris St.
LITWIN, JACOB HENRY, CH. E.....	431 Richmond St.
MCBETH, ROBERT WHITEHILL, C. E.....	Kingston, O., and 3231 Bishop St.
MCCOMB, HUGH LEE, E. E.....	Dayton, O., and 272 McCormick Pl.
McFARLAN, JAMES POWELL, E. E.....	726 W. Ninth St.
McFARLAND, JAMES CLARK, CH. E.....	Mt. Washington
MACKENZIE, COLIN STEPHENSON, C. E.....	Gary, Ind., and 2210 Ohio Ave.
MAHAM, DALLAS J., C. E.....	3722 Miami Ave., Red Bank, O.
MAYNARD, JULIAN LOUIS, E. E.....	41 S. Warwick Bldg.

MERTEN, HAROLD ADAMS, CH. E.....	3519 Middleton Ave.
METZGER, LELAND CARLISLE, CH. E.....	Detroit, Mich., and 485 Riddle Rd.
MILLER, JEPHTHA MACKENZIE, M. E.....	4146 Floral Ave., Norwood, O.
MITSCH, EDWARD HENRY, M. E.....	3718 Morris Pl.
MOORE, KARL FRANCIS, E. E.....	Southport, Ind., and College Hill
MORGAN, WILLIAM JAMES, E. E.....	1133 Carson Ave.
NEUFFER, ARNOLD, C. E.....	315 Patterson St., Lockland, O.
NOCKA, ALFRED JACOB, E. E.....	4810 Wesley Ave., Norwood, O.
NORRIS, CLIFTON DWIGHT, C. E.....	Nashville, Tenn., and 2521 Auburn Ave.
O'CONNELL, JOHN, E. E.....	627 Hawthorne Ave.
OLBERDING, FRANCIS JOSEPH, E. E.....	850 Academy Ave.
PEARSON, HAROLD EARL A., M. E.....	Rockford, Ill., and 309 Ludlow Ave.
PECK, WILLIAM KENNETH, C. E.....	Toledo, O., and 2354 Flora Ave.
PETRY, WALTER WILLIAM, E. E.....	Seventeen, O., and 2514 Ravine St.
PRIEBE, CEDRIC JOSEPH, M. E.....	1617 Brewster Ave.
REINHARD, JOSEPH HARRY, C. E.....	2318 Stratford Ave.
REMSTER, ROBERT RUSK, M. E.....	Hoopeston, Ill., and 2415 Auburn Ave.
RHODES, GUY AMOS, E. E.....	Otwell, Ind., and 264 Calhoun St.
ROBINSON, PHILIPS FANEUIL, E. E.....	Braintree, Mass., and 3231 Bishop St.
ROCKBURG, GEORGE ALBERT, M. E.....	Wells, Mich., and 485 Riddle Rd.
ROOKSTOOL, RUSSELL, E. E.....	Arcanum, O., and 2519 Auburn Ave.
ROSS, RUSSELL ALBERT, E. E.....	Arcanum, O., and 2519 Auburn Ave.
RUBEL, EDWARD, M. E.....	709 W. Seventh St.
RUNNELS, WILLIAM DICKEY, CH. E.....	Glendale, O.
SARVIS, ROBERT GUYLE FENTON, C. E.....	8149 Woodbine Ave., Hartwell
SCHINAMAN, CLARENCE WILLIAM, C. E.....	Lawrenceburg, Ind.
SCHNEIDER, FRANK LOUIS, C. E.....	4183 Hamilton Ave.
SCHREIER, LESTER INGALLS, M. E.....	Cleveland, O., and 309 Ludlow Ave.
SCHUBERT, EDWARD HERMAN, M. E.....	Freeburg, Ill., and 264 Calhoun St.
SELLORS, CARL, E. E.....	Greenville, Pa., and 108 E. University Ave.
SHAFER, HARRY MILTON, E. E.,	
Marietta, O., and L. B. Harrison Hotel, 540 W. Seventh St.	
SHAFER, ROBERT TINSLEY, M. E.....	2814 Oakley Ave.
SHRYOCK, CHARLES SHATTUC, E. E.....	Zanesville, O., and 309 Ludlow Ave.
SLATER, RAY WAYLAND, E. E.....	Carter, Wis., and 3231 Bishop St.
SMITH, FRED CRAWFORD, CH. E.....	Marion, Ind., and 264 Calhoun St.
SMITH, LELAND HENDRICK, M. E.....	Decatur, Ill., and 264 Calhoun St.
SMITH, ROSS R., E. E.....	Philadelphia, Pa., and 32 Hollister St.
SMYTHE, JESSE VIRGIL, C. E.....	Peru, Ind., and 1586 Tremont St.
STAFFORD, LEOPOLD DUDLEY, M. E.....	114 Ivanhoe St., Saylor Park
STANLEY, FRED M., E. E.....	Lowell, O., and 913 Elberon Ave.
STORY, RAYMOND, E. E.....	309 Poplar St., Bellevue, Ky.
SWEENEY, JOSEPH ROGER, C. E.....	3042 McHenry Ave.
SWENEY, LOWRY HOUSTON, C. E.....	1376 Myrtle Ave.
TAULMAN, WILLIAM BRYAN, C. E.....	Hazelwood, O.
VAN NESS, ARTHUR GORDON, C. E.....	Athens, Pa., and 2521 Auburn Ave.
VOGEL, CARL CONRAD, M. E.....	Rockport, Ind., and 264 Calhoun St.
VON DERAN, RALPH ANTHONY, E. E.....	2343 E. Fifth St., Dayton, O.
VON SCHLICHTEN, WALTER WILLIAM, M. E.....	2141 Clifton Ave.
WARTCKI, MARK ABRAHAM, CH. E.....	535 Rockdale Ave.
WEBSTER, ROBERT ADRIANCE, E. E.....	Cazenovia, N. Y., and 108 E. University Ave.
WEISNER, JOHN MAURICE, E. E.....	Franklin, O., and 3231 Bishop St.
WENZEL, ALFRED WILLIAM, E. E.....	2214 Cameron Ave., Norwood, O.
WERFELMAN, ELMER HENRY, C. E.....	3422 Liston Ave.
WIESSLER, JOHN ELMER, C. E.....	419 E. Liberty St.
WILKERSON, WALTER THEODORE, C. E.....	3750 Andrews Ave.

WILLIS, HAROLD SAMUEL, C. E.....	762 McMakin Ave.
WINKELMAN, LEON JOHN, C. E.....	Westfield, N. Y., and 2347 Clifton Ave.
WOELFEL, ALFRED FREDERICK, CH. E.....	Freeland, Pa., and 2354 Flora St.
WOLF, WILLIAM FRANKLIN, M. E.....	715 McMakin Ave.
WOLSDORF, HENRY ADOLF, M. E.....	2329 Flora St.
WRIGHT, FRANCIS JAMES, C. E.....	Athens, Pa., and 2521 Auburn Ave.
ZUCK, FRANK, E. E.....	1117 Hopkins St.

Specials

DEMORAY, MIRON NELSON, M. E.....	Brighton, Mich., and 340 Howell Ave.
METZGER, JR., GEORGE, E. E.....	229 Hartwell Ave.
SCHREIBER, WILLIAM AUGUST, C. E.....	626 June St.
STAMM, HOWARD BLAIR	178 Woolper Ave.

COLLEGE OF MEDICINE

Seniors

ADAMSON, ELIZABETH INGRAM.....	Maysville, Ky.
BETZNER, CLARENCE WILFORD.....	2627 Vine St.
BRUNS, WILLIAM HENRY.....	St. Henry, Mercer Co., O.
CLARK, SAMUEL C.....	West Union, O.
FISK, HARLEY BRUSE.....	Falmouth, Ky.
FREYHOF, WILLIAM LOUIS.....	Glendale, O.
GALE, LARRY RICHARD.....	Newport, O.
GERISH, NETTIE LUELLA (MRS.).....	Gypsum, Kan.
HOFMANN, ALBERT PETER.....	51 West Corry St.
KREFT, FRANK GEORGE.....	2905 LaGrange St., Toledo, O.
LAMB, BENJAMIN H.....	3302 Eastside Ave.
LOWE, HENRY HUFMAN.....	709 McMakin Ave., Winton Pl.
METZGER, FRANK CURRY.....	229 Hartwell Ave.
MILLER, CHARLES LAMONT.....	423 Reynolds St., Middletown, O.
MOORE, HAZELETT ANDREW.....	German Deaconess Hospital
NORRIS, BENJAMIN, JR.....	426 Stanley Ave.
OLIVER, WADE WRIGHT.....	2233 Park Ave.
PADEN, RUSSELL HOMER.....	714 Juliana St., Parkersburg, W. Va.
SATO, SHIGEO.....	Tokudacho, Hirosaki, Aomori, Japan
WEISS, HIRAM BERTRAM.....	3314 Perkins Ave.

Juniors

BIELER, HENRY GEORGE.....	Milford, O.
CAROTHERS, RALPH GOLDSMITH.....	409 Broadway
COCHRAN, HELEN FINNEY.....	245 Gilman Ave.
GERINGER, ALBERT CONNELL.....	3485 Colerain Ave.
GOLDBERG, OTTO LEON.....	St. Paris, O.
HAUSER, SELMAR FREDERICK.....	811 Main St., Covington, Ky.
HOFFMAN, JOHN NEAL.....	Pesotum, Ill.
HUERKAMP, JOSEPH MARTIN.....	856 Rockdale Ave.
KLOTZ, JEREMIAH ALEXANDER.....	Northampton, Pa.
LINDENBERGER, LAUREN NORTON.....	Troy, O.
PERKINS, GEORGE ALLEN.....	541 Sherwood Ave., Pittsburg, Pa.
SCHANER, MORRIS.....	Toledo, O.
STARK, JOHN REIS.....	1108 E. McMillan St.
WARNER, ELMER.....	Petroleum, Ind.

Irregular Juniors

HETTLER, GEORGE ANDREW.....	2917 Lagrange St., Toledo, O.
HUCKINS, EDWARD SPAULDING.....	Bay City, Mich.
ORWIG, EARL ALBERT.....	2306 Walnut St., Toledo, O.
SHANK, REED ALBERT.....	Woodbine Ave., Hartwell
SHEARER, CHARLES CORNELIUS.....	119 East Woodruff Ave., Toledo, O.
SPRINGER, HENRY ANTHONY.....	Dickinson, North Dakota
TUCKER, JR., DAVID ANDREW.....	No. 11 The Westmoreland, Mt. Auburn

Sophomores

COLEMAN, JOHN McFERREN.....	Loveland, O.
DENSER, CLARENCE HUGH.....	888 Felton Ave., Columbus, O.
ERVIN, DWIGHT MOHJNEAUX.....	709 Terrace Ave., Dayton, Ky.
HARRISON, CLAUDE CLIFFORD.....	R. R. No. 2, Rushville, Ind.
HEATH, JR., JOHN FRANCIS.....	Hamilton, O.
JENKINS, WALTER ISAAC.....	St. Paris, O.
MATUSKA, ANTHONY.....	2129 Rice St.
PAYNE, FOY CLAWSON.....	315 Lexington Ave., Dayton, O.
SHARKEY, JOHN THOMAS.....	Excello, O.
SMITH, PARKE GILLESPIE.....	Oxford, O.

Irregular Sophomores

BLACKFORD, HENRIETTA VIRGINIA.....	8 Bella Vista Place
JOHNSTON, ALEXANDER ROBERT.....	Lore City, O.
MORGAN, LIBBIE ANNA.....	Libbie, Ky.
NICHOLSON, GEORGE PRICE.....	2000 Wilson Ave., Youngstown, O.
NORMAN, JOHN WARREN.....	St. Paris, O.
POGGENDICK, PHILIP F.....	7207 Van Kirk St.
ROUSEY, SCHUYLER COLFAX.....	1037 Madison Ave., Covington, Ky.
STAATS, JAMES CLINTON.....	2223 Chickasaw St.

Freshmen

ALBERS, FRANK JOSEPH.....	1320 Broadway
BENZINGER, MARTIN.....	Oakland, Cal.
BRISCOE, HUGH ALAN.....	Silver Hills, New Albany, Ind.
CHRISTOPHER, JR., ARTHUR COWELL.....	Milford, O.
CLAASEN, HARRY LOUIS.....	2723 Scioto St.
CLARK, FREDERICK ROY.....	Williamstown, Ky.
FISCHBACH, VICTOR WILLIAM.....	Fourth and Washington Aves., Newport, Ky.
FREIBERG, HENRY BERNARD.....	2239 Park Ave.
HANCE, GEORGE JOSEPH.....	Troy, O.
MANNINO, JOSEPH DANTE.....	2525 E. 14th St., Cleveland, O.
OLIVER, SYMMER FRANCIS.....	2233 Park Ave.
POTTS, RAYMOND DUSTIN.....	227 Valley St., Dayton, O.
PRUGH, GEORGE SHIPLEY.....	2115 Eastern Ave.
SIEBLER, SALMEN KORKES.....	908 Lexington Ave.
WINSTON, ETHEL FORBIS.....	278 Oakmont St., Hartwell

Irregular Freshmen

CLARK, NOBLE VIRGIL.....	West Union, O.
JAMES, EDWARD MURDOCH.....	310 Oak St.
OWENS, THOMAS ROGER.....	Venedocia, O.
WHITE, ROBERT ALEXANDER.....	N. W. Cor. Fourth and Broadway
WITTENMYER, JOHN EDMUND.....	Peebles, O.

Special Students

GORDON, JOHN WHITLOCK.....	Fernbank
KING, EDWARD, M. D.....	936 Clark St.
SCOVILLE, DOROTHEA HAVEN [LA].....	No. 4 Lansing Ave., Troy, N. Y.
WAGNER, HAROLD H.....	1114 Draper St.

*COLLEGE OF COMMERCE

AGNESS, FRANK A.....	Cedar Ave. and Lathrop Pl.
AUER, JAMES S.....	30 Poinciana Bldg.
BAIER, GEORGE ALBERT.....	2215 Nelson Ave.
BECKER, CARL EMIL.....	3148 Daytona Ave.
BECKER, FRED JOHN.....	4018 Taylor Ave.
BECKER, JOHN J. [ELA].....	4136 Jerome Ave.
BEEKLEY, ALBERT MICHAEL.....	1929 Kinney Ave.
BENNETT, FRED M.....	823 Lincoln Ave.
BINGHAM, RALPH MELVILLE [ELA].....	2206 Burnet Ave.
BLACKBURN, JESSIE MEDORA.....	130 Oak St., Ludlow, Ky.
BLERSCH, ELMER CLEMENT.....	4226 Pitts Ave.
BONN, GEORGE GARFIELD.....	1429 Pleasant St.
BROOKBANK, BENJAMIN HARRISON [ELA].....	811 Oak St.
CAMERON, JOSEPH GAY.....	6508 Ridgeway Ave., Kennedy Heights
CARROLL, MAY.....	4262 Ashland Ave., Norwood, O.
CHATFIELD, FREDERICH H.....	1939 Madison Rd.
CLARK, ABRAHAM.....	19 Franklin Ave., Ft. Thomas, Ky.
CLEMENTS, JAMES MICHAEL.....	1349 Burdette Ave.
CLEMENTS, THOMAS LEROY.....	2109 Foraker Terrace, Norwood, O.
CONSTABLE, WILLIAM HARVEY.....	3916 Forest Ave., Norwood, O.
COOK, WALLACE A.....	639 Hawthorne Ave.
COORS, GEORGE CLEMENTS.....	4138 Georgia Ave.
CREMINS, WALTER EDWARD.....	2826 May St.
DAVIS, IRVIN LAKE [ELA].....	Eighth St. and Linden Ave., Newport, Ky.
DERONDE, PHILIP.....	3970 Taylor Ave.
DERONDE, WILLIAM.....	208 Mulberry St.
DEWALD, PAUL.....	2335 McMicken Ave.
DICKENS, MERVIN.....	3770 Drake Ave.
DOLAN, WILLIAM EDWARD.....	732 German St., Newport, Ky.
DOUGLAS, FREEMAN S.....	2229 Kemper Lane
DRUCK, CLIFFORD W.....	351 E. Third St.
DUBELL, EDWARD J.....	3620 Edwards Rd.
DUBELL, GEORGE W.....	3562 Burch Ave.
EHLMANN, ALFRED C.....	1114 Main St., Covington, Ky.
EICH, CLARENCE PETER.....	2 Principio Ave.
FEVRIER, O. L.....	1621 Brewster Ave.
FORCHHEIMER, FREDERICK.....	2428 Auburn Ave.
FORCHHEIMER, LANDON LONGWORTH.....	2428 Auburn Ave.
FOSTER, RALPH FIRBANK.....	36 Mills Ave., Wyoming, O.
FRANK, WILLIAM.....	2540 Homestead Pl.
FRANKENBERGER, JOHN EDWIN.....	239 Calhoun St.
FRANKENSTEIN, MAYME [ELA].....	The Wilhelm Flats
FREDRICKS, CLARA M.....	2034 Reading Rd.
FRISCH, DAVID [ELA].....	950 W. Court St.

* In addition, there are 19 students taking work in the College of Commerce, who are listed in other departments as follows: Liberal Arts, 4; Engineering, 1; Household Arts, 14.

FULLER, FREDERICK WILLIAM [ELA].....	2321 Clifton Ave.
GARTNER, ALPHONSE.....	404 E. Liberty St.
GATES, TERRY M.....	540 W. Seventh St.
GEORGE, ALLIE.....	540 W. Seventh St.
GOERL, GEORGE JOSEPH.....	3731 Lovell Ave., Cheviot, O.
GRAHAM, BERL GORDON.....	3105 Markbreit Ave., Oakley
GROTE, SYLVESTER ANTHONY.....	521 Lowell Ave.
GUILLAUDEU, ARTHUR [ELA].....	4724 Winona Terrace
HAMPTON, JOSEPH F.....	4653 Smith Rd., Norwood, O.
HANAUER, ALVIN.....	161 W. Fourth St., Covington, Ky.
HARRIS, LEON J.....	921 Blair Ave.
HARRISON, FRANCIS G.....	Grandin Rd.
HEARNE, BURTON MOLER.....	No. 3 Norfolk Bldg.
HEIBERTSHAUSEN, GEORGE [ELA].....	24 W. McMillan St.
HELM, AUGUST [ELA].....	3760 Edgar St.
HEMAN, ADOLPH.....	3115 Scioto St.
HERZFELD, LOUIS MAYER.....	809 E. Ridgeway Ave.
HESSE, EARLE EDWARD.....	3564 Eden Ave.
HEY, ANNA MARIA.....	1049 Linn St.
HILLER, CARL A. [ELA].....	2238 Wheeler St.
HOFFELDER, GEORGE ANTHONY.....	2552 Westview Ave.
HOWARD, JAMES FRANCIS.....	954 Richmond St.
HUEBER, JOHN W.....	2908 Ziegler Ave.
HUGHES, HENRY JAMES.....	1513 Vine St.
HUGLE, WILLIAM MAGILL.....	2719 Norwood Ave., Norwood, O.
HUTCHINS, MABEL.....	3317 Jefferson Ave.
HUYETT, ROBERT B.....	4317 Thirty-third St., Oakley
ISEKEIT, CHESTER C.....	122 W. Sixty-fourth St., Carthage
JACOBS, WILLIAM VEITH.....	553 Mitchell Ave.
JOERLING, BEN FRANK [ELA].....	2331 Flora Ave.
JONES, RUTH.....	1704 Highland Ave.
KATZ, PAUL EMIL.....	1127 Race St.
KENDALL, CHARLES P.....	6 Blue Grass Ave., Ft. Thomas, Ky.
KINDERMANN, FRANK M.....	3550 Zumstein Ave.
KINKER, EDWARD [ELA].....	3119 Borrman Ave.
KIRSCHNER, CHARLES FRANK [ELA].....	3548 St. Charles Pl.
KLUSMEYER, GEORGE HENRY.....	304 Warner St.
KOCH, STUART JAY.....	3569 Bogart Ave.
KOENIG, HENRY FREDERICK.....	2846 May St.
KRAUSE, WALKER CARL [ELA].....	933 Putnam St., Newport, Ky.
LANG, CHARLES LOUIS.....	2734 Ravine St.
LAWRENCE, GORDON ELLSWORTH.....	3447 Linwood Ave.
LEIBOLD, MATILDA.....	2849 Winslow Ave.
LEVI, JOSEPH HARRY.....	812 Mann Pl.
LIBBERT, JOHN C.....	8 Denver St.
LUDDECKE, RALPH.....	3567 Wilson Ave.
LUDWIG, LOWELL HOBART.....	1011 Scott St., Covington, Ky.
LUHRMAN, ALBERT HERMAN.....	2845 May St.
LUSHAUGH, CLARENCE C.....	29 Delmar Pl., Covington, Ky.
McALPIN, RICHARD WILLIAM [ELA].....	1034 Academy Ave.
McDONALD, MATTHEW A.....	3545 Paxton Rd.
McINTIRE, WALTER ALAN.....	2318 Williams Ave., Norwood, O.
McLAUGHLIN, THOMAS JOHN.....	142 Fifteenth St., Newport, Ky.
MARSCH, HARRY JOSEPH.....	363 Berry Ave., Bellevue, Ky.
MASSMAN, WALTER J.....	267 Bodmann Ave.
MATHIS, CLIFFORD WALTER.....	6021 Madison Rd.
MATT, JOSEPH BENJAMIN.....	4108 Ivanhoe Ave., Norwood, O.

MAYER, FRANK ERNEST.....	716 E. Tenth St., Newport, Ky.
MILLER, MARK DONOVAN.....	Eighth St. and Linden Ave., Newport, Ky.
MITCHELL, CARL PIATT.....	4340 Ashland Ave., Norwood, O.
MOORMANN, PAUL K. [ELA].....	822 Hathaway St.
MUELLER, HARRY WILLIAM.....	4224 Ivanhoe Ave., Norwood, O.
MUHLHAUSER, EUGENE FRED.....	1315 Walnut St.
NOLTING, EDWIN GARFIELD.....	232 Lyon St.
OBERHELMAN, HENRY BERNARD.....	2947 Colerain Ave.
OESTERLEIN, CHARLES DANIEL [ELA].....	5524 Madison Rd.
PAYNE, HARRY V.....	614 Linden Ave., Newport, Ky.
PERIN, OLIVER WILLIAM.....	123 W. Fourth St.
PETTIT, EDWIN WILLIAM.....	1334 Yarmouth Ave., Bond Hill
PIERLE, EDWIN F. [ELA].....	3439 Middleton Ave.
PRESSLER, FREDERICK J.....	3712 Columbia Ave.
RACKE, ALBERT ADAM.....	31 Eighteenth St., Newport, Ky.
RANZ, WILLIAM.....	Blue Ash, O.
RAU, LESTER CARL.....	3408 Colerain Ave.
RICHARDS, JAMES SANDERS.....	3541 Burch Ave.
RICHEY, CARL.....	4122 Eastern Ave.
ROBINSON, IVA ZALUMA.....	Anna Louise Inn
ROSENBAUM, DAVID NATHAN [ELA].....	1333 Locust St.
SAHLFELD, ROBERT ALPHONSE [ELA].....	3434 Burch Ave.
SCHALLER, JOHN F.....	2403 Columbia Ave.
SCHMID, ROBERT GEORGE [ELA].....	640 Probasco St.
SCHOOK, KATHERINE HENRIETTA.....	6601 East Ledge, Madisonville
SCHURMAN, BRYCE LORIN [ELA].....	3564 Edwards Rd.
SCHUSTER, CHRISTIAN A.....	1028 Seton Ave.
SCHWAB, ALBERT.....	1935 South St., Oakley
SCHWARTZ, ALBERT WILLIAM.....	3515 Middleton Ave.
SEIBERT, THEODOR CHARLES [ELA].....	913 Dayton St.
SEIVER, FREDERICK JOHN.....	1043 Celestial St.
SHIELDS, LYCURGUS L.....	3916 Burwood Ave., S. Norwood, O.
SHREVE, JOHN HAROLD.....	1534 Pullan Ave.
SIMLICK, WILLIAM NELSON.....	3766 Isabella Ave.
SINGER, MAX MYER [ELA].....	812 W. Court St.
SLAUGHTER, BERNARD JOHN.....	Foley Rd., Price Hill
SLEEVYS, JENNIE LOUISE.....	1546 Jonathan Ave., Evanston
SMITH, GEORGE HOLCOMBE [ELA].....	526 York St.
SMITH, HARRISON BRAXTON.....	1883 Madison Rd.
SPRITZ, SIDNEY DAVID [ELA].....	833 E. Rockdale Ave.
STAAB, ALBERT.....	3120 Glendora Ave.
STANLEY, WILLIAM HENRY.....	288 Ludlow Ave.
STICHTENOTH, ERIC WILLIAM.....	3473 Brookline Ave.
STIERINGER, WILLIAM CHARLES.....	427 Milton St.
STILES, CHARLES BAKER.....	5525 Madison Rd.
STOREY, FRANCIS W.....	3255 Glendora Ave.
STRECKER, PAUL.....	4819 Myrtle Ave., Norwood, O.
STRUBBE, LOUIS HENRY.....	2350 Stratford Ave.
STUGARD, ANNA.....	3022 Euclid Ave.
STURLA, HARRY LAWSON.....	3372 Hillside Ave.
TAGLAUER, EDWARD E.....	1513 Cavanaugh St., Covington, Ky.
TAYLOR, FRANK FOULDS [ELA].....	Springfield Pike, Wyoming, O.
TOMASSENE, JOHN WARREN.....	1846 Kinney Ave.
TRUMBULL, GEORGE W.....	4540 Floral Ave., Norwood, O.
TU, M. L. [ELA].....	2614 Stratford Ave.
TURNER, JOHN PAUL.....	Nordeck Bldg., Norwood, O.
UNGAR, IRVINE.....	3018 Hackberry St.

UPSON, CHARLES HOLENSHADE.....	5640 Belmont Ave.
VON BREMEN, LILLIAN RUTH.....	3616 Bevis Ave., Evanston
WATERS, G. BAIN.....	2016 Maple Ave., Norwood, O.
WEIGEL, CHARLES.....	2422 Hudson Ave., Norwood, O.
WHITE, WILLIAM JULIUS.....	1828 Clarion Ave.
WILLIG, LAWRENCE H.....	3025 Murdock Ave.
WILSON, JOSEPH ALBERT [ELA].....	3522 Eastern Ave.
WILSON, ROBERT BENTLEY.....	Y. M. C. A., Covington, Ky.
WOLFF, W. H.....	3961 Hazel Ave., Norwood, O.
WUEST, EDWARD J. [ELA].....	3430 Cornell Pl.

*SCHOOL OF HOUSEHOLD ARTS

Seniors

BRUNHOFF, ELSE [TC].....	215 Forest Ave.
DEITEMEIER, WILHELMINE MARIE [TC].....	2519 Homestead Pl.
GEOGHEGAN, MARGUERITE [TC].....	2108 Fulton Ave.
HORTON, MRS. MARY B. [ELA&C].....	398 Grand Ave., Price Hill
POHLMAN, HELEN LOVETT [TC].....	736 Circle Ave., Winton Pl.
RICHARDSON, RUTH KATHARINE [TC].....	2632 Kemper Lane
SHELOW, ELIZABETH.....	3741 Elsmere Ave., Norwood, O.
STOCKMAN, LOUISE MAY [C].....	2302 Norwood Ave., Norwood, O.

Juniors

CHACE, MRS. FLORENCE W. [C].....	3231 Bishop Ave.
HYDE, BERTHA MAY.....	814 Lincoln Ave.
MORTEN, RUTH DUNHAM [TC].....	2015 Hudson Ave., Norwood, O.
RUCKER, MARGARET CLARK [TC].....	4 The Romaine
SAUER, ALMA GENEVIEVE [TC].....	2411 Fairview Ave.
WALTON, CLARA VIRGINIA [TC].....	12 The Elstun Bldg.
WIRTH, MARGARET LOUISE [TC].....	622 Prospect Pl.

**Candidates for a Diploma

†SECOND YEAR

BROSIUS, RUTH [ELA&C].....	511 Prospect Pl.
BUCK, LILA [TC].....	Mason, O.
GILLHAM, OLIVE [TC].....	217 Sterritt Ave., Covington, Ky.
HAND, NELL SANFORD.....	2510 Gilbert Ave.
JAMES ELIZABETH PAGE [TC].....	106 E. Seventh St., Covington, Ky.
MESSERSMITH, EDNA MYRTLE [TC].....	408 Highland Ave., Elmwood Pl., O.
OEHLER, ALICE ELIZABETH [ELA&C].....	717 Elberon Ave.
SHEEHY, KATHLEEN E. [ELA&C].....	928 York St., Newport, Ky.
SMITH, RUTH LENORE [ELA&C].....	37 Hartwell Ave., Hartwell
VICKERY, HELEN [TC].....	3749 Rosedale Ave., Linwood
WELLER, MARY PURDUE [ELA&C].....	347 Bryant Ave.
WILLIAMS, FRANCES CORINNE [TC].....	3415 Paxton Rd., Hyde Park
WILSON, GLADYS SHEPARD [TC].....	4235 Forest Ave., Norwood, O.
WILSON, RUTH E. [TC].....	287 McGregor Ave.
YEATMAN, ADARETTA [TC].....	4520 Circle Ave., Winton Pl.

* In addition, there are 7 students taking work in Household Arts, who are listed in other departments as follows: Graduates, 3; Liberal Arts—Seniors, 2, Juniors, 2.

** Diploma students have fulfilled all requirements for regular entrance into the University. The first year Household Arts students have the standing of Freshmen in the University.

† The second year Household Arts students have the standing of Sophomores in the University.

FIRST YEAR

AVERY, OLIVIA.....	2023 Meryton Pl., College Hill
DOWNING, MARIE ROMAINE [ELA].....	The Anthony
FISHER, ADELAIDE PEALE.....	404 Crestline Ave.
GRAHAM, LAURA SMITH.....	322 Rockdale Ave.
HALL, MARION VIRGINIA [ELA&C].....	2366 Flora Ave.
HARGITT, DORA [ELA&C].....	312 Straight St.
HARPER, MARY ANN [C].....	1957 Cleaney Ave., Norwood, O.
HAYES, LENORE [TC].....	7211 Fair Park Ave.
HERRMANN, EDA ANNA [TC].....	No. 18 The Parkside Flats
HOWE, LILLIAN [ELA].....	1322 E. McMillan St.
HUTCHINS, MABEL [TC].....	3317 Jefferson Ave.
JONES, FRANCES LOUISE [TC].....	4349 Erie Ave., Madisonville
KNABE, NELLIE MARIE.....	3802 Clifton Ave.
MIHALOVITCH, AMY FLETCHER.....	3264 Delaware Ave.
MUHLHOFER, MARY ELIZABETH [TC].....	3544 Mooney Ave.
SNODGRASS, MARJORIE LEONARD [ELA&C].....	8357 Curzon Ave., Hartwell
STABLETON, MARY LOUISE [TC].....	926 Nassau St.
TOMPKINS, ISABEL [TC].....	Walton, Ky.
VALERIO, BERNICE [TC].....	907 Elberon Ave.

‡Irregular Students

CRAWFORD, ELIZABETH.....	701 S. Crescent Ave.
FRIEND, LISETTE.....	No. 1 Greenwood Court
HAUSS, VIVIAN.....	1622 Bruce Ave.
KAHN, MRS. BLANCHE BING.....	876 Hutchins Ave.
RANDALL, GRACE MAY.....	911 Marion Ave.

§Special Students

BROWN, MRS. FLORENCE [C].....	284 McGregor Ave.
BUTLER, RACHEL BARTON.....	The New Westminster Flats
CRAMER, MRS. ANGIE S.....	124 W. 34th St., Covington, Ky.
DITMARS, MRS. ANNIE LEA.....	185 E. Second St., Covington, Ky.
FRITZ, MRS. WALLACE.....	Bruce and Hamilton Aves.
JOHNSON, DELLA MARTHA.....	2343 Park Ave.
KELLOGG, DOROTHY DICKENS.....	2854 Winslow Ave.
MATTHEWS, DOROTHY.....	2415 Maplewood Ave.
MATTHEWS, MARY DANESI.....	2415 Maplewood Ave.
NEWBURGH, EMILY CAROLINE.....	655 Forest Ave.
SCHMIDT, IRMA M.....	3005 Scioto St.
SKINNER, MRS. JULIA [C].....	2626 May St.
SLADE, MRS. GRACE SMITH [TC].....	2912 Park Ave.
SORIN, RUTH HANNAH [TC].....	2612 Eden Ave.
TRAGER, ELMA HORTENSE.....	3863 Reading Rd.
WALTON, MABEL.....	Milford, O.
WESTHEIMER, DUFFIE H.....	3607 Reading Rd.
WOODMANSEE, FLORENCE THORNE.....	500 Rockdale Ave.

Graduates

CONDON, KATHARINE ELEANOR.....	3818 Winding Way
EGGERS, CHARLOTTE MARGARET.....	2949 Harrison Ave.
FRANK, MRS. SELMA BING.....	S. E. Cor. Forest and Burnet Aves.
KRAMER, GRACE FRANCES [ELA].....	Forest and Alaska Aves.
SCHMUCK, MRS. RUTH KINSEY.....	189 E. McMillan St.

‡ Irregular students have fulfilled all entrance requirements, but are taking only a partial course.

§ Special students are those who are at least twenty years of age and qualified to do University work.

SUMMARY OF STUDENTS

End of Academic Year, 1913-14

The Graduate School..... 174

The McMicken College of Liberal Arts:

Seniors	89
Juniors	100
Sophomores	133
Freshmen	237
Irregulars	19
Specials	71
	— 649
Classes for Teachers.....	62
Evening Academic Classes.....	511

The College for Teachers:

Graduates	49
Seniors	49
Juniors	11
Sophomores	2
Art Students.....	12
Kindergartners	29
Home Economics.....	27
Teachers	122
	— 301

The College of Engineering:

Regular Students:

Seniors	14
Sophomores	8
Freshmen	8
Special	1

Co-operative Students:

Fifth Year.....	23
Fourth Year.....	44
Third Year.....	47
Second Year.....	87
First Year.....	176
Specials	3
	— 411

The College of Medicine:

Seniors	14
Juniors	15
Sophomores	12
Freshmen	19
Irregulars	1

 61

College of Commerce	104
----------------------------------	-----

Gross Total (Regular Departments).....	2273
--	------

Twice Counted.....	272
--------------------	-----

Net Total (Regular Departments).....	2001
--------------------------------------	------

Affiliated Department:

Clinical and Pathological School of the Cin- cinnati Hospital.....	77
---	----

Twice Counted	37
---------------------	----

Net Total (Affiliated Department).....	40
--	----

* Net Total (All Departments).....	2041
------------------------------------	------

* This does not include the group of auditors in the External Courses, numbering 362.

REGISTRATION OF STUDENTS

Beginning of Academic Year, 1914-15

The Graduate School..... 141

The McMicken College of Liberal Arts:

Seniors	85
Juniors	127
Sophomores	158
Freshmen	283
Irregulars	24
Specials	60
	— 737
Classes for Teachers (Including 51 Duplicates) .	63
Evening Academic Classes (Including 131 Duplicates)	502

The College for Teachers:

Graduates (Including 36 Duplicates).....	36
Seniors (Including 44 Duplicates).....	44
Juniors (Including 25 Duplicates).....	25
Sophomores (Including 3 Duplicates).....	3
Art Students.....	8
Kindergartners	21
Home Economics (Including 29 Duplicates)...	29
Teachers	139
	— 305

The College of Engineering:

Regular Students:

Seniors	6
Juniors	6
Sophomores	3
Freshmen	16
Specials	1

Co-operative Students:

Fifth Year.....	28
Fourth Year.....	48
Third Year.....	56
Second Year.....	115
First Year.....	175
Specials	4

— 458

The College of Medicine:

Seniors	20	
Juniors	19	
Sophomores	10	
Freshmen	16	
Specials (Including 1 Duplicate).....	4	
Irregulars	14	
		83
College of Commerce (Including 19 Duplicates)	187	
Household Arts (Including 7 Duplicates)....	84	
		2560
Gross Total (Regular Departments).....		2560
Twice Counted.....		346
		2214
Net Total (Regular Departments).....		2214

Affiliated Department:

Clinical and Pathological School of the Cincinnati Hospital	50	
Twice Counted	40	
		10
Net Total (Affiliated Department).....		10
* Net Total (All Departments).....		2224

* This does not include the group of auditors in the External Courses, numbering 322.

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(OHIO-MIAMI MEDICAL COLLEGE)

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SCHEDULE OF LECTURES—COLLEGE OF LIBERAL ARTS

SECOND SEMESTER, 1914-15

Courses which are starred are open to Freshmen

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SAT
8.30 A. M.	*Chem. 3b Chem. 8b Chem. 18b Educ. 14 Eng. 16 *Geol. 1 *Greek 9 Hist. 15 *Math. 1-S. i Phil. 3b Pol. Sc. 11b	*Eng. 1-S. ii *Eng. 1-S. vii Eng. 2b Geol. 9 Geol. 8 *Ger. 1-S. i *Hist. 29 *Lat. 1-S. i *Math. 1-S. ii *Phys. 22b-S. i Pol. Sc. 17b *R. L. 1-S. ii R. L. 26	*Chem. 3b Chem. 8b Chem. 18b Educ. 14 Eng. 16 *Geol. 1 *Greek 9 Hist. 15 *Math. 1-S. i Phil. 3b Pol. Sc. 11b	*Eng. 1-S. ii *Eng. 1-S. vii Eng. 2b Geol. 9 Geol. 8 *Ger. 1-S. i *Hist. 29 *Lat. 1-S. i *Math. 1-S. ii *Phys. 22b-S. i Pol. Sc. 17b *R. L. 1-S. ii R. L. 26	*Chem. 3b Chem. 8b Chem. 18b Educ. 16 Eng. 16 *Geol. 1 *Greek 9 Hist. 15 *Math. 1-S. i Phil. 3b Pol. Sc. 11b	*Eng. *Eng. *Geol. *Geol. *Ger. 1 *Lat. 1 *Math. *Phys. *R. L.
9.30 A. M.	Chem. 14b Educ. 2 *Eng. 1-S. i *Eng. 5 Eng. 11 Geol. 2 *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Hist. 1 Lat. 2 *Math. 1-S. iii Math. 3 Math. 15 Phil. 2b Phil. 8b *R. L. 2-S. i *R. L. 2-S. iii Soc. Sc. 15 *Zool. 3b	Chem. 14b Econ. 15b *Eng. 3 Eng. 10 *Geol. 1-S. ii Geol. 2 *Ger. 21 Greek 20b *Math. 1-S. iv *Phys. 22b-S. i Phys. 29b *R. L. 2-S. ii R. L. 4 Soc. Sc. 5 *Zool. 4b-S. iii	Chem. 14b Educ. 2 *Eng. 1-S. i *Eng. 5 Eng. 11 Geol. 2 *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Hist. 1 Lat. 2 *Math. 1-S. iii Math. 3 Math. 15 Phil. 2b Phil. 8b *R. L. 2-S. i *R. L. 2-S. iii Soc. Sc. 15 *Zool. 3b	Chem. 14b Econ. 15b *Eng. 3 Eng. 10 *Geol. 1-S. ii Geol. 2 *Ger. 21 Greek 20b *Math. 1-S. iv *Phys. 22b-S. i Phys. 29b *R. L. 2-S. ii R. L. 4 Soc. Sc. 5 *Zool. 4b-S. iii	Educ. 2 *Eng. 1-S. i *Eng. 5 Eng. 11 Geol. 2 *Ger. 2-S. i *Ger. 4-S. ii Ger. 5 *Greek 1 *Hist. 1 Lat. 2 *Math. 1-S. iii Math. 3 Math. 15 Phil. 2b Phil. 8b *R. L. 2-S. i *R. L. 2-S. iii *Zool. 3b	Eng. Eng. Geol. Geol. *Math. Math. Phil. Phys. *R. L.
10.30 A. M.	*Ast. 1b *Bot. 7b Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 Geol. 2 *Ger. 2-S. ii *Ger. 4-S. i Greek 3 Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii Math. 2 Math. 5 Phil. 5b *Phys. Ed. 1-S. ii (Men) Pol. Sc. 1 Psy. 1-S. ii *R. L. 11 *R. L. 6 Soc. Sc. 7	Eng. 25-S. i Eng. 14 *Geol. 1-S. ii *Ger. 3 Greek 12 Greek 13 Hist. 25 Lat. 6 Math. 5 *Phys. Ed. 1-S. i (Men) *Phys. 22b-S. i Soc. Sc. 20 *Zool. 4b-S. iii	*Bot. 7b Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 Geol. 2 *Ger. 2-S. ii *Ger. 4-S. i Greek 3 Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii Math. 2 Phil. 5b *Phys. Ed. 1-S. ii (Men) Pol. Sc. 1 Psy. 1-S. ii *R. L. 11 *R. L. 6 Soc. Sc. 7	Eng. 25-S. i Eng. 14 *Geol. 1-S. ii *Ger. 3 Greek 8 Greek 12 Hist. 25 Math. 5 *Phys. Ed. 1-S. i (Men) *Phys. 22b-S. i Soc. Sc. 20 *Zool. 4b-S. iii	*Ast. 1b *Bot. 7b Educ. 1 *Eng. 1-S. iii *Eng. 1-S. iv Eng. 4 *Ger. 2-S. ii *Ger. 4-S. i Greek 3 Hist. 3 *Lat. 1-S. ii *Lat. 1-S. iii Math. 2 Math. 5 Phil. 5b Pol. Sc. 1 Psy. 1-S. ii *R. L. 11 *R. L. 6	Eng. Eng. Geol. Geol. Geol. Ger. 3 Hist. Phys. R. L.
11.30 A. M.	*Econ. 1 Educ. 20 *Ger. 1-S. ii *Ger. 2-S. iii *Greek 15 Hist. 22 Hist. 34 Lat. 3 Phil. 1b Phys. Ed. 2-S. ii (Men) *Phys. 27b Pol. Sc. 2b Psy. 1-S. i *R. L. 1-S. i	Bib. Lit. 8b Chem. 32b *Econ. 2 Eng. 25-S. ii Eng. 15b *Geol. 1-S. ii *Ger. 20 Ger. 14b Greek 17 Hist. 28 Phil. 6b Phys. Ed. 2-S. i (Men) Phys. 15b Pol. Sc. 9b R. L. 3 *Zool. 4b-S. iii	*Econ. 1 Educ. 20 *Ger. 1-S. ii *Ger. 2-S. iii *Greek 15 Hist. 22 Hist. 34 Lat. 3 Phil. 1b Phys. Ed. 2-S. ii (Men) *Phys. 27b Pol. Sc. 2b Psy. 1-S. i *R. L. 1-S. i	Bib. Lit. 8b Chem. 32b *Econ. 2 Eng. 25-S. ii Eng. 15b *Geol. 1-S. ii *Ger. 20 Ger. 14b Greek 17 Hist. 28 Phil. 6b Phys. Ed. 2-S. i (Men) Phys. 15b Pol. Sc. 9b R. L. 3 *Zool. 4b-S. iii	*Econ. 1 *Ger. 1-S. ii *Ger. 2-S. iii *Greek 15 Hist. 22 Lat. 3 Phil. 1b *Phys. 27b Pol. Sc. 2b Psy. 1-S. i *R. L. 1-S. i	Chem. *Econ. Educ. Geol. Geol. Ger. 3 Greek Hist. Phys.

SCHEDULE OF LECTURES—COLLEGE OF LIBERAL ARTS

SECOND SEMESTER, 1914-15

Courses which are starred are open to Freshmen

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Bot. 8b-S. i Bot. 26b Chem. 4b-S. ii Chem. 7 Chem. 9b Chem. 14b Eng. 1-S. v Eng. 1-S. vi Ger. 1-S. iii Hist. 13 Phys. Ed. 1-S. i (Women) R. L. 15 R. L. 9 Zool. 4b-S. i Zool. 10b	Bib. Lit. 9b *Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 Eng. 24 *Geol. 1-S. iv Phil. 10 *Phys. Ed. 1-S. ii (Women) *Phys. 22b-S. ii Phys. 4 R. L. 18 *Zool. 4b-S. ii Zool. 17b	*Bot. 8b-S. i Bot. 27b *Chem. 4b-S. ii Chem. 7 Chem. 9b *Eng. 1-S. v *Eng. 1-S. vi *Ger. 1-S. iii *Hist. 13 *Phys. Ed. 1-S. i (Women) R. L. 5 R. L. 15 *R. L. 9 *Zool. 4b-S. i Zool. 10b	*Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 13b Chem. 33b Econ. 11 Eng. 24 *Geol. 1-S. iv Phil. 9 *Phys. Ed. 1-S. ii (Women) *Phys. 22b-S. ii Phys. 4 R. L. 18 *Zool. 4b-S. ii Zool. 17b	Chem. 7 Chem. 17 Chem. 13b Chem. 33b *Eng. 1-S. v *Eng. 1-S. vi *Ger. 1-S. iii *Hist. 13 Phys. Ed. Vol. (Women) R. L. 5 R. L. 15 *R. L. 9 Zool. 10b	
Bot. 8b-S. i Bot. 27b Chem. 4b-S.ii Chem. 7 Chem. 9b Chem. 14b Eng. 26 Geol. 1-S. i Geol. 9 (Lab.) Phys. Ed. 2-S. ii (Women) Psy. 2b R. L. 14 Zool. 4b-S. i Zool. 10b	Bib. Lit. 9b *Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 *Geol. 1-S. iii *Geol. 1-S. iv Phil. 10 Phys. Ed. 2-S. i (Women) *Phys. 22b-S. ii Phys. 4 *Zool. 4b-S. ii Zool. 18b	*Bot. 8b-S. i Bot. 27b *Chem. 4b-S.ii Chem. 7 Chem. 9b Eng. 26 *Geol. 1-S. i Lat. 5 Phys. Ed. 2-S. ii (Women) Psy. 2b *R. L. 14 *Zool. 4b-S. i Zool. 10b	*Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 13b Chem. 33b Econ. 11 *Geol. 1-S. iii *Geol. 1-S. iv Phil. 9 Phys. Ed. 2-S. i (Women) *Phys. 22b-S. ii Phys. 4 *Zool. 4b-S. ii Zool. 18b	Chem. 7 Chem. 17 Chem. 13b Chem. 33b Geol. 8 *Phys. Ed. 1 Lecture (Men) *Phys. Ed. 1 Lecture (Women) Psy. 2b *R. L. 14 Zool. 10b	
Bot. 8b-S. i Bot. 27b Chem. 4b-S.ii Chem. 7 Chem. 9b Chem. 14b Geol. 1-S. i Geol. 9 (Lab.) Greek 6 Psy. 2b (4:30) Zool. 4b-S. i Zool. 10b	*Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 *Geol. 1-S. iii *Geol. 1-S. iv *Phys. 22b-S. ii Phys. 4 *Zool. 4b-S. ii Zool. 18b	*Bot. 8b-S. i Bot. 27b *Chem. 4b-S.ii Chem. 7 Chem. 9b *Geol. 1-S. i Psy. 2b (4:30) *Zool. 4b-S. i Zool. 10b	*Bot. 8b-S. ii *Chem. 4b-S. i Chem. 6 Chem. 17 Chem. 13b Chem. 33b *Geol. 1-S. iii *Geol. 1-S. iv Greek 5 *Phys. 22b-S. ii Phys. 4 R. L. 8 *Zool. 4b-S. ii Zool. 18b	Chem. 7 Chem. 17 Chem. 13b Chem. 33b Geol. 8 Psy. 2b (4:30) Zool. 10b	
Geol. 1-S. i Geol. 9 (Lab.) Ger. 8 Greek 6 Math. 20 Pol. Sc. 25 R. L. 10	Eng. 20 *Geol. 1-S. iii Ger. 12 Phys. Ed. Vol. (Men) Phys. 10 R. L. 24 Zool. 18b	Eng. 19 *Geol. 1-S. i Geol. 16 Pol. Sc. 3	*Geol. 1-S. iii Ger. 6 Math. 20 Phil. 11b Phys. Ed. Vol. (Men) R. L. 8 Zool. 18b		
Ger. 8 Math. 20 Pol. Sc. 25 R. L. 10	Eng. 20 Ger. 12 R. L. 24	Eng. 19 Geol. 16 Pol. Sc. 3	Ger. 6 Math. 20 Math. 11b		

HOURS TO BE ARRANGED

Ast. 3 Ast. 4 Bot. 12b Bot. 23 Bot. 31 Chem. 15b Chem. 20 Chem. 21 Chem. 24b Chem. 30	Geol. 5b Geol. 13 *Greek 2 Greek 4 Greek 16 Lat. 4 Lat. 9 Lat. 10 Lat. 12	Math. 40 Phys. 8 Phys. 16 Phys. 7 Phys. 9 Psy. 9 Psy. 3	R. L. 16 Soc. Sc. 22 Zool. 31	
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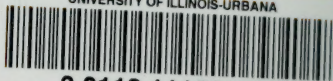
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