

# The Municipal University of Akron

*Akron, Ohio*

*March, 1917*

## ANNUAL CATALOG

1917



PUBLISHED BY  
THE MUNICIPAL UNIVERSITY OF AKRON

Fourth Annual Catalog of  
The Municipal University  
of Akron

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And Forty-Sixth  
Annual Catalog  
of Buchtel College

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AKRON, OHIO  
March, 1917

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## UNIVERSITY CALENDAR

1917

- January 2, Tuesday, 7:30 A. M.—Class Work resumed.  
 January 18, Thursday—Founder's Day.  
 January 18, Thursday, 9:15 A. M.—Senior Ashton Prize Contest.  
 January 19 and 22, Friday and Monday—Classification for Second Semester.  
 January 29 to February 2—Final Examinations.  
 February 2, Friday, 5:00 P. M.—First Semester closes.  
 February 6, Tuesday, 7:30 A. M.—Second Semester begins.  
 February 16, Friday—Senior Promenade.  
 February 22, Thursday, Washington's Birthday—a holiday.  
 March 9, Friday, 9:15 A. M.—Sophomore Ashton Prize Contest.  
 March 31, Saturday, 12:00 noon—Easter Recess begins.  
 April 10, Tuesday, 7:30 A. M.—Class Work resumed.  
 May 17, Thursday—General Student Elections.  
 May 25, Friday—Tree Day.  
 May 30, Wednesday—Memorial Day—a holiday.  
 June 8, Friday, 9:15 A. M.—Junior Ashton Prize Contest.  
 June 9, Saturday—Senior Vacation begins.  
 June 11-15—Final Examinations.  
 June 17, Sunday, 2:30 P. M. — Baccalaureate Service, Crouse Gymnasium.  
 June 18, Monday, 10:00 A. M.—Senior Class Day Exercises.  
 June 18, Monday, 8:00 P. M.—Junior Hop.  
 June 19, Tuesday, 3:00 P. M.—Out-of-door play by the Dramatic Study Club.  
 June 19, Tuesday, 8:00 P. M.—President's Reception.  
 June 20, Wednesday, 9:30 A. M.—Commencement Exercises.  
 June 20, Wednesday, 8:00 P. M.—Alumni Banquet.  
 September 17, Monday }  
 September 18, Tuesday } Registration and Classification.

September 19, Wednesday, 7:30 A. M.—Class Work begins.

September 27—Freshman Elections.

November 29, 30 and December 1, Thursday, Friday and Saturday—Thanksgiving Recess.

December 19, Wednesday, 5:00 P. M.—Christmas Holidays begin.

1918

January 2, Wednesday, 7:30 A. M.—Class Work resumed.

January 18, Friday—Founder's Day.

January 18, Friday, 9:15 A. M.—Senior Ashton Prize Contest.

January 18 and 21, Friday and Monday—Classification for Second Semester.

January 28 to February 1—Final Examinations.

February 1, Friday, 5:00 P. M.—First Semester closes.

February 5, Tuesday, 7:30 A. M.—Second Semester begins.

February 15, Friday—Senior Promenade.

February 22, Friday, Washington's Birthday—a holiday.

March 8, Friday, 9:15 A. M.—Sophomore Ashton Prize Contest.

March 23, Saturday, 12:00 noon—Easter Recess begins.

April 2, Tuesday, 7:30 A. M.—Class Work resumed.

May 16, Thursday—General Student Elections.

May 24, Friday—Tree Day.

May 30, Thursday—Memorial Day—a holiday.

June 7, Friday, 9:15 A. M.—Junior Ashton Prize Contest.

June 8, Saturday, Senior Vacation begins.

June 10-14—Final Examinations.

June 16, Sunday, 2:30 P. M.—Baccalaureate Service, Crouse Gymnasium.

June 17, Monday, 10:00 A. M.—Senior Class Day Exercises.

June 17, Monday, 8:00 P. M.—Junior Hop.

June 18, Tuesday, 3:00 P. M.—Out-of-door play by the Dramatic Study Club.

June 18, Tuesday, 8:00 P. M.—President's Reception.

June 19, Wednesday, 9:30 A. M.—Commencement Exercises.

June 19, Wednesday, 8:00 P. M.—Alumni Banquet.

## THE BOARD OF DIRECTORS

FRANK M. COOKE .....Term expires 1918  
 JAMES P. LOOMIS .....Term expires 1918  
 J. ASA PALMER .....Term expires 1918  
 F. M. HARPHAM .....Term expires 1920  
 ALBERT A. KOHLER.....Term expires 1920  
 PARKE R. KOLBE .....Term expires 1920  
 P. W. LITCHFIELD ..... Term expires 1922  
 WM. H. EAGER .....Term expires 1922  
 CLYDE F. BEERY .....Term expires 1922

## OFFICERS FOR 1916

F. M. COOKE .....*Chairman*  
 CHARLES R. OLIN .....*Clerk*

## COMMITTEES FOR 1916

*Committee on Finance:* LOOMIS, HARPHAM, PALMER.  
*Committee on Investments:* COOKE, KOHLER, BEERY. .  
*Committee on Buildings and Grounds:* KOLBE, LITCHFIELD,  
 EAGER.

ADMINISTRATIVE OFFICERS OF THE  
UNIVERSITY

PARKE R. KOLBE, Ph. D. ....*President of the University*  
 CHARLES R. OLIN, M. S. ....*Secretary of the University*  
 OSCAR E. OLIN, A. M. ....*Vice President of the Faculty*  
 M. ALICE RINES, A. M. ....*Secretary of the Faculty*  
 ALBERT I. SPANTON, A. M. ....  
 .....*Dean of Buchtel College of Liberal Arts*  
 FRED E. AYER, C. E. ....*Dean of the College of Engineering*  
 SARAH E. STIMMEL, B. S. ....  
 .....*Director of the School of Home Economics*  
 ELIZABETH A. THOMPSON, A. M. ....*Dean of Women*  
 FREDERICK SEFTON, B. S. ....*Physical Director*  
 RENA B. FINDLEY.....*Librarian*  
 GLADYS P. WEEKS.....*Registrar*

## GENERAL FACULTY AND OFFICERS

1916-1917

PARKE R. KOLBE, Ph. D.,

*President of the University and Lecturer in Department of German Language and Literature.*

President's House

CHARLES M. KNIGHT, A. M., Sc. D.,

*Professor Emeritus of Chemistry*

129 South Union Street

JOSEPH C. ROCKWELL, Ph. D.,

*Professor of Latin and Greek*

58 Casterton Avenue

OSCAR E. OLIN, A. M.,

*Messenger Professor of Economics and Philosophy and Vice President of the Faculty*

433 Carroll Street

ALBERT I. SPANTON, A. M.,

*Pierce Professor of English and Dean of Buchtel College*

407 Vine Street

SIDNEY J. LOCKNER, A. M.,

*Ainsworth Professor of Mathematics and Physics*

483 Orchard Court

HEZZLETON E. SIMMONS, M. S.,

*Buchtel Professor of Chemistry*

448 Henry Court

FRED E. AYER, C. E.,

*Professor of Civil Engineering and Dean of the College of Engineering*

401 Brown Street

SARAH E. STIMMEL, B. S.,

*Director of the School of Home Economics*

169 Rhodes Avenue

- FREDERICK SEFTON, B. S.,  
*Director of the Department of Physical Education*  
803 West Market Street
- CHARLES L. BULGER, A. M.,  
*Hilton Professor of German Language and Literature*  
72 Mayfield Avenue
- AMON B. PLOWMAN, Ph. D.,  
*Professor of Biology*  
126 South Maple Street
- MAX B. ROBINSON, M. E.,  
*Professor of Mechanical Engineering*  
286 Brown Street
- M. ALICE RINES, A. M.,  
*Professor of Romance Languages*  
362 East Buchtel Avenue
- ELIZABETH A. THOMPSON, A. M.,  
*Professor of History and Dean of Women*  
146 South College Street
- CHARLES R. OLIN, M. S.,  
*Assistant-Professor of Mathematics and Secretary of  
the University*  
421 Spicer Street
- FRANK D. STURTEVANT, A. M.,  
*Assistant-Professor of English*  
112 South Maple Street
- ARDEN E. HARDGROVE, B. S.,  
*Assistant-Professor of Chemistry and Director of the  
Bureau of City Tests*  
137 Highland Avenue
- WM. F. ZIMMERLI, Ph. D.,  
*Assistant-Professor of Chemistry*  
84 Kirkwood Street
- GEORGE E. BENNETT, A. B., LL. B.,  
*Assistant-Professor of Business Training*  
362 Carroll Street
- CARITA McEBRIGHT, A. B.,  
*Instructor in Oratory*  
396 East Market Street
- J. S. MATHEWSON, M. E.,  
*Instructor in Engineering*  
283 East Buchtel Avenue

EDWARD VON JANINSKI, A. M.,

*Instructor in German*

483 Orchard Court

ALBERT PHELPS TULLER, A. B.,

*Instructor in Classics and French*

197 Spicer Street

\*HENRI MORIN, B. Com. Sci.,

*Instructor in Romance Languages*

75 Nebraska Street

ROBERT L. SIBLEY, A. M.,

*Instructor in Chemistry*

840 Ruth Avenue

MAX MORRIS, A. M.,

*Instructor in Mathematics*

663 Mallison Avenue

\*JULIUS BOENISCH,

*Instructor in Architectural Drawing*

30 North Summit Street

LUKE S. BRICKLEY, A. B.,

*Instructor in English and Faculty Manager of Athletics*

259 Brown Street

BERNARD W. ADAMS, B. S. in Engineering,

*Instructor in Mathematics and Physics*

423 Vine Street

BURT H. YACKEE, B. S.,

*Graduate Assistant in Chemistry*

545 East Buchtel Avenue

\*MARY H. STEEDS,

*Instructor in Physical Training for Women, Graduate  
of New Haven Normal School of Gymnastics*

737 Rhodes Avenue

ISABEL A. BRADLEY, M. D.,

*Medical Examiner for Women*

221 Ash Street

Lectures on Hygiene for women were given in 1916-17 by Dr. A. B. Plowman of the Department of Biology.

The University acknowledges with gratitude the kindness of Mr. W. R. Stuart, B. A., LL. B., of Youngstown, in presenting in the Department of Economics a series of lectures on Life Insurance.

\*Part time instructors.

## STUDENT ASSISTANTS

BRUCE MCAOOO .....	<i>Biology</i>
CARL SCHAEFFER .....	<i>Biology</i>
HUBERT SQUIBBS .....	<i>Chemistry</i>
ESTHER OLIN .....	<i>Economics</i>
JOSEPHINE CUSHMAN .....	<i>English</i>
MARTIN SCHMIDT .....	<i>English</i>
HAZEL SIMMS .....	<i>German</i>
KENNETH DARRAH.....	<i>Latin and Greek</i>
JOSEPHINE CUSHMAN .....	<i>Library</i>
IRA POULES .....	<i>Library</i>
JULIA HARDIE .....	<i>Library</i>
ROBERT ROWSE .....	<i>Physics</i>
LOIS HULL .....	<i>Romance Languages</i>
ELLIOTT GEISINGER .....	<i>Bureau of City Tests</i>
AUBREY WENDT .....	<i>Bureau of City Tests</i>
EARL GUDIKUNST .....	<i>Bureau of City Tests</i>

## COMMITTEES OF THE FACULTY

1916-1917

*Executive Committee*

KOLBE, O. E. OLIN, SPANTON, AYER

*Classification and Records**Buchtel College*—ROCKWELL, SPANTON, BULGER,

SIMMONS, SIBLEY, MORRIS

*College of Engineering*—ROCKWELL, AYER*Curtis School of Home Economics*—ROCKWELL, STIMMEL*Public Speaking*

MATHEWSON, BRICKLEY, MCEBRIGHT

*Socials and Holiday Observances*

THOMPSON, STIMMEL, ZIMMERLI

*Athletics*

BULGER, VON JANINSKI, SEFTON, C. R. OLIN, BRICKLEY

*Buildings and Grounds*

C. R. OLIN, ROBINSON

*Assembly Observance*

PLOWMAN, O. E. OLIN

*Student Council*

SIMMONS, ZIMMERLI, TULLER

*Library*

SIBLEY, SPANTON, FINDLEY

*Evening Courses*

LOCKNER, BENNETT

*Extension Lectures*

ROCKWELL

*Faculty Representatives for Student Activities*

BUCHTELITE . . . . . STURTEVANT  
 ELECTIONS . . . . . SIMMONS  
 ATHLETICS . . . . . BRICKLEY  
 MEN'S CLUB ROOM . . . . . ZIMMERLI  
 WOMEN'S CLUB ROOM . . . . . THOMPSON

## GENERAL INFORMATION

### *FOUNDATION*

The Municipal University of Akron was created by an ordinance of the Akron City Council, passed on August 25, 1913. This ordinance accepted in behalf of the city the offer of the Trustees of Buchtel College to give to the city the entire plant and endowment of the college as the nucleus of a municipal university, the Council promising in behalf of the city to support properly the new institution thus created. After the transfer of property had been completed by President Kolbe and Secretary Olin for the Trustees of Buchtel College, Mayor Rockwell on December 15, 1913, together with City Solicitor Taylor, accepted the deeds of transfer in behalf of the city and appointed nine citizens of Akron as members of the Board of Directors of the Municipal University of Akron.

Buchtel College, the institution thus turned over to the City of Akron, was founded in 1870 by the Ohio Universalist Convention and took its name from its most generous benefactor, Hon. John R. Buchtel, who consecrated his life and his wealth to its support. It was chartered by the Ohio Legislature in the same year as a College of Liberal Arts and Letters and first opened its doors for the admission of students in September, 1872.

By the terms of transfer to the City of Akron provision was made that Buchtel College retain its name and identity as Buchtel College of Liberal Arts of the Municipal University.

The Municipal University of Akron, being supported in large part by public taxation, is entirely non-sectarian.

The City of Akron has, however, agreed to carry out all provisions made by donors of funds to Buchtel College. Such funds were given in most cases to establish professorships and scholarships in the College of Liberal Arts.

#### *AIM OF THE UNIVERSITY*

As a representative of the new type of municipal institution, the University seeks to develop its units or departments into such schools as may train the high school graduate in various practical and technical callings. Generally speaking, the College of Liberal Arts will be used as the basis for all the units or schools of the University. The College of Liberal Arts will also continue to give the regular four-year courses common to institutions of its kind.

#### *DEPARTMENTS OF THE UNIVERSITY*

**Buchtel College of Liberal Arts.**  
**The College of Engineering.**  
**The Curtis School of Home Economics.**

#### *BUCHTEL COLLEGE OF LIBERAL ARTS*

(See page 30)

The College of Liberal Arts will endeavor to carry out the wishes of the Founder of Buchtel College, namely, "to secure the highest grade of Classical, Scientific and Literary Culture." Four-year courses are offered leading to the degrees of Bachelor of Arts, Bachelor of Science and (in combination with the City Normal School) Bachelor of Science in Education.

#### *THE COLLEGE OF ENGINEERING*

(See page 92)

This College was opened in September, 1914, and during its first year received only the entering or first year class.

Courses in various branches of engineering are being developed. Courses are also offered in business training on the co-operative plan.

#### *THE CURTIS SCHOOL OF HOME ECONOMICS*

(See page 122)

Like the College of Engineering, the School of Home Economics was opened to students in September, 1914. A four-year course is offered leading to the degree of Bachelor of Science in Home Economics.

#### *EVENING COURSES*

(See page 134)

The University offers evening work in a number of departments. College credit is given for this work, except in a few courses. The subjects are mostly those of the first two years of college work.

#### *COMBINATION COURSES*

(See page 151)

To those who wish to enter the learned professions such as law or medicine, the College of Liberal Arts offers opportunities of combination with the various professional schools of the country. By means of such combination courses a student may receive both the Arts and the professional degree, at the same time shortening by one year the period otherwise necessary.

A course for the preparation of teachers has also been arranged in combination with the City (Perkins) Normal School. (See page 158.)

#### *COMMUNITY CO-OPERATION*

(See page 160)

It is the desire of the Directors of the University to bring its various schools into close touch with municipi-

pal activities and to assist the work of various city interests in every possible manner by expert advice and service. Advanced students will be employed wherever possible in activities of this sort, receiving credit for work thus performed and gaining the additional advantage of a practical training in various phases of municipal affairs.

### *EQUIPMENT*

At the time of the foundation of Buchtel College in 1870 a plot of six acres of ground was purchased at the outskirts of the village of Akron on a hill overlooking the valley. The growth of the city has included this site so that now the University campus lies at the head of College Street, only a short distance from the business center of the city.

In 1899 the old main building was destroyed by fire and in 1901 Buchtel Hall was completed as the first of a modern group of college buildings. From earlier times there already existed on the campus the Observatory, Crouse Gymnasium and the President's residence. Since the completion of Buchtel Hall there have been constructed the building first known as Buchtel Academy, and now used as an Engineering Building; the central heating plant; Curtis Cottage, used as the home of the School of Home Economics; the Knight Chemical Laboratory, toward the construction of which Andrew Carnegie gave \$25,000; and the Carl F. Kolbe Hall, the gift of Mr. F. A. Seiberling and Mr. F. H. Mason.

### *BIERCE LIBRARY*

The College Library had its origin in a collection of works donated in 1874 by the late General L. V. Bierce. During the early days of Buchtel College the Library was augmented by books purchased from the proceeds of a bequest received from General Bierce's estate. In recog-

dition of this early gift the Library has been called the Bierce Library. It embraces about 13,000 volumes, exclusive of public documents, and occupies the Carl F. Kolbe Hall.

#### FUNDS, PRIZES AND SCHOLARSHIPS

##### *The Katherine Claypole Loan Fund*

This fund has been established by a number of women's organizations of the city and dedicated as a memorial to Mrs. Katherine Claypole, wife of Dr. E. W. Claypole, former Professor of Natural Science at Buchtel. Mrs. Claypole was the founder of organized women's work in Akron and always manifested a deep interest in the young people of the College.

The principal of the fund is loaned to students "who in mid-term, as often happens, find themselves without sufficient means to complete the year's work." Applications should be addressed to Mrs. C. W. Milliken, Chairman Women's Committee, 396 East Market Street, or to Mrs. E. F. Voris, Treasurer, 77 Fir Street.

##### *The Ashton Prizes*

A fund consisting of \$3,000 has been established by the late Oliver C. Ashton, endowing the O. C. Ashton Prizes for excellence in reading and recitation.

The annual income of this fund will be paid, one-third to competitors from the senior class, one-third to competitors from the junior class, and one-third to competitors from the sophomore class, in a first and second prize to each class, in the proportion of two to one.

These are public exercises, and will take place at stated times during the year.

##### *The Senior Alumni Prize*

A fund has been established by the Alumni Association for the purpose of awarding an annual cash prize of \$50.00 to that senior student in Buchtel College of Lib-

eral Arts who has completed the regular four-year course with the highest average grade. Only students who have spent their entire course at Buchtel College are eligible.

*The Tomlinson Prizes*

Thru the kindness of Rev. Irving C. Tomlinson, Class of '80, of Boston, Mass., two prizes of \$30.00 and \$20.00 respectively will be offered each year to those two students of the University who present the best papers on a subject related to the work of the Municipal University. The subject is to be treated with especial reference to broadening the field and increasing the usefulness of the University, to its true character as a municipal university, and to its value, and need by the city.

*Buchtel College Scholarships*

(See page 32)

A number of scholarships have been endowed by friends of the College to aid worthy and deserving students. The donor of a scholarship may, at all times, designate one student who shall be entitled to the remission of a part of the tuition charges in the College of Liberal Arts. Scholarship benefits will be limited to \$50.00 per year to any one student, and in the distribution of these scholarships by the University, preference will be given to the immediate descendants of the donor, if the donor is deceased.

Students thus receiving scholarships may be called upon to render services to the University for any part, or all, of such aid. They will be expected to maintain their standing in scholarship, and to conduct themselves in accordance with the rules of the institution. A scholarship is granted with the expectation that the student will complete his course of study at the University of Akron, and, without a reason that shall be satisfactory to the Directors, honorable dismissal will not be granted until full tuition and all other college dues have been paid.

### FREE TUITION

(*Extract from The By-laws of the University Directors.*)

Tuition in Buchtel College of Liberal Arts shall be free to all students whose parents are residents of Akron.

Students whose parents are not residents of Akron must prove one year's *consecutive residence* in Akron before they can be considered as candidates for remission of tuition charges.

Tuition will be charged in the case of all students under twenty-one years of age (whose parents do not reside in Akron) who move into the city with the express purpose of attending college, even tho such students be self-supporting.

*Non-residents owning property taxed in Akron:* Any person living outside of Akron but owning property within the city of Akron which is taxed, may receive credit on tuition of his child or children during any semester to the extent of taxes actually paid by him for that half-year towards the University levy, upon presenting a certificate from the County Auditor or Treasurer, stating the amount so paid.

### STUDENT ORGANIZATIONS

The following student organizations have been formed in the University:

The Athletic Association; the Women's League; the Tel-Buch Association (Junior Class); the College Orchestra; the Buchtelite Association; the Dramatic Study Club; the Chemistry Club; the Modern Authors' Club; the Engineer's Club; the Camera Club; the Y. W. C. A.; the class organizations.

Elections for the great majority of these are held on the same day and are controlled by a joint Board from the Faculty and the student body.

### THE BUREAU OF STUDENT EMPLOYMENT

This Bureau is established for the purpose of aiding self-

supporting students in finding part-time work during the school year. Its organization is directed by the University and its services are free to all students.

#### *PHI SIGMA ALPHA*

Phi Sigma Alpha is an honorary society, founded for the purpose of encouraging high scholarship among the Buchtel College students. Three students are chosen for membership from each senior class.

First:—That member of the senior class having the highest grades for three and one-half years.

Second:—The two members (one a man, the other a woman) having the next highest grades for three and one-half years.

These three students are elected for membership at the beginning of the second semester of their senior year, and are given at once the privilege of wearing the fraternity's badge and colors during the remainder of their senior year. The regular initiation takes place during Commencement week of the same year.

The badge of the fraternity is of gold in the shape of an ancient coin, bearing on the obverse side a serpent, a helmet and the Greek letters Phi Sigma Alpha, and upon the reverse side ten stars, the owner's name, the year of the class and "Buchtel College."

The colors of the fraternity are green and silver.

#### *ATHLETICS*

All participation in intercollegiate athletics is under the direct supervision of the Faculty and the Department of Physical Training. All teams representing the University are governed by the rules of the Ohio Conference.

#### *ADMISSION*

Each candidate for admission must have had at least a full high school preparation, or college preparatory course, amounting to 15 units and embracing the specific subjects named for college entrance.

No student will be admitted to the freshman class who has an entrance deficiency of more than one unit, or the equivalent of a year's work in one study, and no student from the Akron High Schools will be admitted with less than 16 units without the recommendation of the Superintendent of Schools.

Students coming from other institutions of collegiate rank must furnish certificates of honorable dismissal.

Admission is by examination or on certificate.

In place of entrance examinations the following certificate plans will be accepted:

I. The certificate of principals of approved high schools and academies will admit students to the freshman class on probation, and such statement must be a certification of the specific subjects covering the requirements as stated for college entrance.\* Such certificate must be filed with the Committee on Classification by the candidate on application for entrance. Blank forms for the record of such work will be furnished on application to the President or Secretary of the University.

II. The pass-cards, certificates and academic diploma of the State Board of Regents of New York State for the subjects which they cover will be accepted for college entrance on probation. Such credentials will not, however, be accepted for advanced standing.

Any freshman failing to receive unconditional credit for at least eight term hours at the end of the first semester or of the second semester shall be dropped from the institution, and shall be allowed to re-enter only after passing the entrance examinations as specified by the Faculty.

#### *SPECIAL STUDENTS*

Students over 21 years of age who have not fulfilled the entrance requirements may be admitted as *special*

\*Examinations will be required in subjects presented for admission with grades below 70%.

*students, not in candidacy for a degree*, to such courses as they are prepared to enter.

#### ADVANCED STANDING

Students may be admitted to advanced standing on presentation of a certificate of work from an institution of recognized standing, together with a certificate of honorable dismissal.

Applicants for advanced credit, who do not present satisfactory grades from other colleges, will be examined in the courses in question and receive full credit on the successful passing of such examinations.

Students presenting high school credits in a modern language or in mechanical drawing above and beyond the entrance requirements for college will be allowed college credit at the rate of fifty per cent. in term hours for high school work, provided that it results in a full credit in term hours and also provided that the student shows the ability to carry advanced work.

#### REGISTRATION

The registration days\* for the beginning of the school year 1917-1918 will be Sept. 17 and 18; for the second semester, January 18 and 21.

All students, both old and new, are required to register and classify for work on these days between the hours of 8:30 A. M. and 5:00 P. M.

Candidates for admission to the freshman class are required to submit a certificate giving details of their high school work as early as possible during the summer preceding entrance to the University. Such certificate should be addressed to the Registrar.

#### *Procedure for registration and classification*

1. Fill out registration card.

\*This refers to registration for all work except evening classes. For these see page 134.

2.
  - a. If a new student, present yourself to the Committee on Entrance; then see the Classification Committee of the school to be entered.
  - b. If not a new student, take registration card to the Classification Committee of the school to be entered.
3. Take Classification slip to the Secretary's office, where term bills should be paid.

### GENERAL REGULATIONS

*The Term-Hour*—The unit of instruction is one hour per week for one semester. From two to three hours of laboratory work shall be considered as equivalent to one recitation hour with preparation therefor. This unit is known as a "term hour."

*Required for degree*—128 term hours, except in the College of Engineering.

*Freshman Failure*—Any freshman failing to receive unconditional credit for at least eight term hours at the end of the first semester or of the second semester shall be dropped from the institution, and shall be allowed to re-enter only after passing the entrance examinations as specified by the Faculty.

*Election of Subjects in other Schools of the University*—No student in one school or college shall be allowed to elect subjects in other schools until all freshman and entrance requirements are satisfied.

*Curtis School of Home Economics*—Students in Buchtel College may elect a maximum of twenty hours' work in the Curtis School to be applied toward the requirements for graduation from Buchtel College.

*College of Engineering*—Students in the scientific course in Buchtel College may elect the following subjects in the College of Engineering to be applied toward the requirements for graduation from Buchtel College. The subjects must be elected in groups of two:

Mechanical Drawing 811 .....	4	hours
Descriptive Geometry 812 .....	4	"
Strength of Materials 815 .....	3	"
Applied Mechanics 816 .....	3	"
Electricity 833, 834 .....	6	"
Electricity Lab. 835, 836 .....	4	"
Hydraulics 820 .....	3	"

Total.....27 hours

Work thus elected must not interfere with required major and minor studies in the College of Liberal Arts, nor can it be substituted for them.

### FEES

*Resident Students*—All students who are residents of the City of Akron according to the rules adopted by the Board of Directors (see "Free Tuition," page 21), or whose parents are residents of Akron, are entitled to free tuition at the University. They are, however, required to pay an incidental fee of \$10.00 per semester, covering registration, incidentals and student activity fee. If not paid before September 25 of the first semester, or February 12 of the second semester, the fee is \$12.50 per semester. Fees to cover breakage and materials are also charged to all students in laboratory courses. (See pages 48, 99, 124.)

*Non-resident Students*—The tuition for non-resident students is \$40.00 per semester in the College of Liberal Arts and the School of Home Economics, in addition to the incidental fee of \$10.00 per semester. The tuition for co-operative students in engineering is \$30.00 per semester plus the

regular incidental fee of \$10.00 per semester. Fees to cover breakage and materials are also charged to all students in laboratory courses. If not paid before September 25 of the first semester or February 12 of the second semester the tuition fee is \$35.00 in the Engineering College and \$45.00 in other departments and the incidental fee is \$12.50.

### SUMMARY OF FEES

The following table gives a summary of all fees for resident and non-resident students (except laboratory fees), also for students electing eight hours or less:

#### Tuition Fee—

For residents of Akron: free.

For non-residents per semester:

	If paid before Sept. 25 Feb. 12	If paid be- tween Sept. 25 and Nov. 1 or Feb. 12 and April 1
More than 8 hours per week.....	\$40.00	\$45.00
From 5 to 8 hours per week.....	25.00	27.50
3 or 4 hours per week.....	15.00	17.50
1 or 2 hours per week .....	8.00	

#### Incidental Fee—

Payable by resident and non-resident students.

	If paid before Sept. 25 Feb. 12	If paid be- tween Sept. 25 and Nov. 1 or Feb. 12 and April 1
More than 8 hours per week.....	\$10.00	\$12.50
From 5 to 8 hours per week.....	8.00	10.00
3 or 4 hours per week .....	5.00	6.50
1 or 2 hours per week .....	3.00	

All persons registering for work after the specified days of registration will be charged a fee of \$1.00 for the first day and twenty-five cents for each additional day of delay in registration.

Students whose entire fees are not paid by Nov. 1 for the first semester or by April 1 for the second semester will be suspended from further participation in class work until such fees are paid.

Non-resident students, already registered during the school year 1913-1914, will, by special act of the Board of Directors, be allowed to finish their courses on the basis of the rate of tuition charged in that year.

#### *EXPENSES FOR LIVING*

Non-resident students at the University of Akron can obtain a good room for \$2.00 to \$3.00 per week. The common price for a single room, occupied by one person, is \$2.50 per week; for a double room, occupied by two persons, \$2.00 per person. The University maintains no dormitories, but lists of rooms for men may be found at the general office. All women attending the University are under direct charge of the Dean of Women. No non-resident woman is allowed to select a rooming place not on the approved list of the Dean of Women. Non-resident women intending to enter the University should write beforehand to Mrs. E. A. Thompson, Dean of Women, who will gladly assist them in obtaining suitable living quarters.

Board may be secured in private families (often in connection with room), in boarding houses near by or at the Y. M. C. A. and Y. W. C. A. A number of restaurants also offer rates by the week.

The School of Home Economics serves a cafeteria luncheon in Curtis Cottage every noon during the school year.

*SELF HELP*

A large proportion of the men of the institution are self supporting. Akron offers a great variety of work for men students, such as clerking, soliciting, waiting on table, playing in orchestras, etc. The University maintains a Bureau of Student Employment which helps new students in getting work for odd hours, evenings and on Saturdays. The demand for such student aid on the part of Akron citizens is usually larger than the University can supply.

No student, however, should enter without sufficient money for payment of term bills and for living expenses for several months, since too much outside work often seriously hampers the beginning of a college course.

The opportunity for women in the matter of self help is more limited. It consists largely of work during certain hours of the day in private families in return for board and room, clerking and, to a limited extent, work in offices or libraries.

The University offers a number of student assistantships in various departments to upper classmen. Such positions pay from \$50 to \$150 per year. All inquiries regarding self help for men should be addressed to the Bureau of Student Aid; for women, to the Dean of Women.

## BUCHTEL COLLEGE OF LIBERAL ARTS

Buchtel College was founded as a College of Liberal Arts in 1870 by the Ohio Universalist Convention in co-operation with the Hon. John R. Buchtel. It became a part of the Municipal University of Akron on December 15, 1913. The following is a list of the original incorporators of Buchtel College:

- \*J. S. CANTWELL, D. D.
- \*COL. GEO. T. PERKINS.
- \*HENRY BLANDY.
- \*REV. GEO. MESSENGER.
- REV. B. F. EATON.
- \*JUDGE NEWELL D. TIBBALS.
- \*REV. J. W. HENLEY, D. D.
- \*JUDGE E. P. GREEN.
- \*O. F. HAYMAKER.
- \*JOHN R. BUCHTEL.
- \*REV. H. F. MILLER.
- REV. E. L. REXFORD, D. D.
- REV. H. L. CANFIELD, D. D.
- \*WILLARD SPAULDING.
- \*GEORGE STEESE.

### *PRESIDENTS OF BUCHTEL COLLEGE*

S. H. MCCOLESTER, D. D., Litt. D. ....	1872-1878
E. L. REXFORD, D. D. ....	1878-1880
*ORELLO CONE, D. D. ....	1880-1896
C. M. KNIGHT, Sc. D. (ad interim) ....	1896-1897
I. A. PRIEST, D. D. ....	1897-1901
*A. B. CHURCH, D. D., LL. D. ....	1901-1912
P. R. KOLBE, Ph. D. ....	1913-

\*Deceased.

**ENDOWMENTS***MESSENGER PROFESSORSHIP*

The Messenger Professorship of Mental and Moral Philosophy was endowed by Mrs. Lydia A. E. Messenger, late of Akron, in memory of her deceased husband, Rev. George Messenger.

*HILTON PROFESSORSHIP*

The Hilton Professorship of Modern Languages was endowed by John H. Hilton, late of Akron.

*PIERCE PROFESSORSHIP*

The Pierce Professorship of English Literature was endowed by Mrs. Chloe Pierce, late of Sharpsville, Pa.

*BUCHTEL PROFESSORSHIP*

The Buchtel Professorship of Physics and Chemistry was named in honor of Mrs. Elizabeth Buchtel, late of Akron.

*AINSWORTH PROFESSORSHIP*

The Ainsworth Professorship of Mathematics and Astronomy was endowed by Henry Ainsworth, late of Lodi.

*RYDER PROFESSORSHIP*

The Ryder professorship of Rhetoric and Oratory was established by the Board of Trustees in memory of Dr. William H. Ryder, late of Chicago.

*MESSENGER FUND*

The Messenger Fund was created by Mrs. Lydia A. E. Messenger, late of Akron. The fund consists of \$30,000.

*ISAAC AND LOVINA KELLY FUND*

The Isaac and Lovina Kelly Fund was created by Isaac Kelly, late of Mill Village, Pa. This fund consists of \$35,788.

*BUCHTEL COLLEGE**WILLIAM PITT CURTIS FUND*

This fund was established by William Pitt Curtis, late of Wadsworth, O. It now amounts to \$25,000.

*CROSLEY LIBRARY FUND*

Rev. Lotta D. Crosley has established this fund with a gift of \$3,000.

**PERPETUAL SCHOLARSHIPS IN BUCHTEL  
COLLEGE**

The following named persons have established perpetual scholarships in Buchtel College:

- \*MISS E. V. STEADMAN .....Marietta
- \*JAMES PIERCE .....Sharpville, Pa.
- \*ELIJAH DRURY .....Girard, Pa.
- \*MRS. MARY C. MARTIN .....Lebanon
- \*JAMES F. DAVIDSON .....Brimfield
- \*†MISS BETSEY THOMAS .....Irwin
- \*JOHN PERDUE .....Lafayette, Ind.
- \*ELI M. KENNEDY.....Higginville, Mo.
- \*JOHN K. SMITH .....Ravenna
- \*N. S. OLIN .....Ravenna
- \*JOHN B. SMITH .....Urbana
- \*MRS. CANDIA PALMER ..... Painesville
- \*MRS. GEO. W. STEELE ..... Painesville
- \*GEORGE W. STEELE ..... Painesville
- \*MRS. BETSEY DODGE .....McConnellsville
- \*JOHN ESPY .....Kenton
- \*JOSEPH HIDY, SR. ....Jeffersonville
- \*MRS. HENRY BOSZAR .....Brimfield
- \*HENRY BOSZAR (3) .....Brimfield
- \*H. D. LOUDENBACK.....Westville
- \*THOMAS KIRBY .....Muncie, Ind
- \*ISAAC AND LOVINA KELLY .....Mill Village, Pa.

*S. T. AND S. A. MOON.....	Cuba
*GEORGE THOMAS .....	Greenwich
*MRS. E. W. TERRILL.....	Jeffersonville
*MRS. JOHN H. HILTON .....	Akron
*SAMUEL BIRDSELL .....	Peru
*SAMUEL GRANDIN .....	Tidioute, Pa.
*N. B. AND A. E. JOHNSON .....	Mingo
*HENRY AINSWORTH (10) .....	Lodi
MR. AND MRS. JOHN MILLER .....	Edgerton
*JOHN P. CHAPIN .....	New Philadelphia
*CHRISTIAN SWANK .....	Creston
*MRS. S. O. ACOMB .....	Tidioute, Pa.
*MRS. JANE BETZ (2) .....	Hamilton
*‡MISS HANNAH ALLYN .....	Akron
*MRS. ROSA G. WAKEFIELD .....	Green
*MARTHA A. BORTLE .....	Hamilton
‡‡DELIA LORING MORRIS .....	Belpre

These scholarships are intended to aid worthy and deserving students, and are awarded by a Scholarship Committee under authority from the Board of Directors.

\*Deceased.

†In honor of her father, Eliphas Burnham.

‡In memory of her father and mother, Mr. and Mrs. Israel Allyn, and her sister, Lucy Allyn.

‡‡In memory of her father, Oliver Rice Loring.

### ENTRANCE REQUIREMENTS

Unconditional requirements (all courses): 15 units.

No student will be admitted to the University who has an entrance deficiency of more than one unit, and no student from the Akron High Schools will be admitted on less than 16 units without the recommendation of the Superintendent of Schools. Examinations will be required in subjects presented for admission with grades below 70 per cent.

A unit is a full year's work in a subject with recitation periods of one hour held four times a week, or 45 minutes held five times a week.

Of the foreign language offered, at least two units must be in one language. Not less than a full unit *in the beginning* of any language will be accepted.

#### A. B. COURSE

The candidate must present :

English (page 36) .....	3	units
Mathematics (page 36) .....	2½	units
*Foreign Languages (page 38) .....	4	units
General History (page 43) .....	1	unit
Elective (from the subjects on pages 34 and 35) .....	4½	units

#### B. S. COURSE

The candidate must present :

English (page 36) .....	3	units
Mathematics (page 38) .....	3	units
Foreign Languages (page 43) .....	4	units
Sciences (page 41) [one unit must be Chemistry or Physics] .....	2	units
Elective (from the subjects on pages 34 and 35) .....	3	units

#### ELECTIVE SUBJECTS

The elective work for admission to any of the three courses may be made from the following subjects or their equivalents, details of which will be found on the pages referred to:—

Astronomy (page 38) .....	½	unit
Botany (page 42) .....	1 or ½	unit
Chemistry (page 41) .....	1	unit
Civics (page 43) .....	½	unit

\*For a major in Latin, or in Greek and Latin (see page 45) four years of Latin are required for entrance.

History, General, 1 or 2 units (page 43).....	} Not more than 3 units
History, English, 1 or 1/2 unit (page 43).....	
History, Advanced U. S., 1 or 1/2 unit (page 43) .....	
Physics (page 41) .....	1 unit
Physical Geography (page 42) .....	1 or 1/2 unit
Physiology (page 42) .....	1/2 unit
Zoology (page 42) .....	1 or 1/2 unit
Language .....	Not more than 6 units
Domestic Science.....	}.....1 unit
Manual Training.....	
Commercial Law.....	}.....1 unit
Commercial Geography..	

Graduates of manual training courses in high schools are allowed a maximum of two units in manual training and mechanical drawing toward entrance to the scientific course.

*ENTRANCE AT MID-YEAR*

Students graduating from high schools at mid-year with two or more years of German or four years of Latin may elect from the following subjects if they desire to enter at once:

- Latin 26 (4 h.)
- German 104 (3 h.)
- German 132 (4 h.)
- Federal Govt. 262 (2 h.)
- English 65 or 66 (3 h.)
- Rhetoric 51 (3 h.)
- Mathematics 301 (4 h.)

At the beginning of the following fall the student will be assigned to the regular freshman work of one of the courses and can pursue his studies without irregularity.

## DESCRIPTION OF ENTRANCE UNITS

Following is a detailed statement of the requirements in each of the various subjects that may be offered for admission to college:

*ENGLISH, 3 Units*

The requirements include the College Entrance Requirements in English, practically uniform thruout the United States.

Three years, with five recitations a week, should be given to preparation, the work in Rhetoric and Composition being done simultaneously with the reading and study of the required English and American classics.

The applicant should bring a written statement from the principal or superintendent of the school attended, stating definitely the books read, and the amount of time given (1) to Rhetoric and Composition and (2) to the reading and study of the required classics.

The leading requirement, however, is the ability of the student to express his ideas in his mother tongue, clearly, forcefully, and accurately. Lacking this, his preparation to enter college is very inadequate, no matter how many books he may have read, or how much time he may have given to English in the grammar school and the high school.

*MATHEMATICS AND ASTRONOMY*

Algebra and Plane Geometry are required for entrance to all courses. Solid Geometry is required for entrance to the scientific course. Astronomy may be offered as one of the electives in any course, but it is required in none.

*Algebra, 1 1/2 Units*

The work in Algebra should include the following subjects: fundamental operations, factors, multiples, fractions, simple equations, methods of elimination, problems, interpretation of solutions, involution, evolution, surds, exponents, complex numbers, quadratic equations, theory of quadratic equations, simultaneous quadratics, binomial theorem for positive integral exponents, ratio, proportion, variation, series and logarithms.

It is suggested that the time spent in preparing to meet this requirement be five 55-minute periods per week for a year and a half. It is further suggested that the work of the last half-year be done late in the preparatory school course in order that there may be close and ready articulation with the required mathematics of the freshman year in college. It is especially desirable that the student come to his college work with habits of neatness and accuracy well formed, and that he have some sense of mastery over so much of mathematics as he may have studied.

*Geometry, 1 1/2 Units*

Plane and Solid Geometry. The set propositions required are those found in the older text books. Among the topics required may be mentioned: Plane rectilinear figures; the circle and the measure of angles; similar polygons; areas, regular polygons; the measure of the circle, the relation of lines and planes in space; the properties and measure of prisms, pyramids, cylinders, and cones; the sphere, and the spherical triangle.

From the demonstration of many original propositions and the solution of many original problems, the student should have gained a fair degree of confidence in his own ability to build up a geometrical proof. Accuracy of statement and elegance of form are to be emphasized.

It is suggested that the time spent in preparing in Geometry be one and one-half school years, and that the work of the last half-year come in the third or fourth year of the preparatory course.

*Astronomy, 1/2 Unit*

A thoro knowledge of the fundamental facts and principles of Astronomy is required. Familiarity with so much of the science as is contained in Young's Elements of Astronomy will suffice.

*FOREIGN LANGUAGES*

*Latin. 1, 2, 3 or 4 Units*

Four units of at least four recitations a week are required for entrance to Major I or II of the A. B. Course (see page 45). One, two, three, or four units may be offered for entrance to any other major of either the A. B. or B. S. course, subject to the requirement that at least two units must be offered in some one foreign language.

*First Year. (One Unit.)* Collar and Daniell's First Latin Book, or Bennett's Latin Lessons, with twenty-five pages of Viri Romae or an equivalent.

*Second Year. (One Unit.)* Cæsar's De Bello Gallico, Books I-IV, or an equivalent, with thirty lessons in Prose Composition.

*Third Year. (One Unit.)* Cicero's Orations: Four against Catiline, Poet Archias, the Manilian Law, Verres and Roscius. For the last two an equivalent may be offered. Thirty lessons in Latin Prose Composition based upon Cicero.

*Fourth Year. (One Unit.)* Virgil's Eneid, Books I-VI.

Grammar, including Prosody (New Allen and Greenough, Bennett, or Harkness).

*Greek, 1 or 2 Units*

One or two years of Greek may be offered for entrance.

*First Year.* Beginners' Lessons in Greek.

*Second Year.* Xenophon's Anabasis.

*German, 1, 2, 3 or 4 Units*

One, two, three or four years of German may be offered for admission to either the A. B. or the B. S. Course, except in the case of Majors I and II (see page 45). Candidates must present from former teachers a full statement of work covered, texts used, and time spent. No student will be allowed to enter an advanced course without examination.

The following work should be offered for one, two, three or four years' credit, respectively:

*One Year.* Joynes-Meissner's Grammar (Part I.) Fair equivalents in standard beginners' books will be accepted as substitutes. One hundred and fifty pages of simple German, in which should be embraced some of the best known songs and ballads and at least one longer story, such as Immensee, Garmelshausen, or Hoher als die Kirche. The candidate should be able to pronounce German correctly, to understand and form simple sentences, and to write German script.

*Two Years.* In addition to the requirements for the first year, the candidate should by review have accurately familiarized himself with the principles of grammar, and should be able to translate with readiness easy connected English prose into German.

He should be able to write German from dictation, and should have read at least one of the easier classics besides two hundred pages of easy prose.

*Three Years.* In addition to the requirements for the first two years, the candidate should have read at least two more classic dramas, and at least one hundred pages of

more difficult prose, such as *Die Harzreise* or selections from *Dichtung und Wahrheit*, and should be able to discuss these freely in the German language. He should show the results of an additional year's drill in translating more difficult English prose into German either by writing or orally, and should have had instruction in the literary history of Germany in the later Classic and Modern Period.

*Four Years.* The work of this year should be a continuation on the groundwork of the first three years, and should include at least eight hundred pages of reading, altho a less number may be presented if more difficult works have been attempted. In addition the candidate should have a knowledge of the history of German literature from the earliest periods, and should know something of Germany and modern German life.

It is advised that some subjects of general practical interest such as German schools, stores, meals and amusements be treated.

#### *French, 1, 2, 3 or 4 Units*

One, two, three or four years of French may be offered for admission to either the A. B. or the B. S. Course, except in the case of Majors I and II (see page 45). Candidates must present from former teachers a full statement of work covered, texts used, and time spent. No student will be allowed to enter a higher course than French 154 without examination or personal conference with the instructor in charge of the French Department.

The following work should be offered for one, two, three or four years' credit, respectively:

*One Year.* A thoro knowledge of the leading principles of French grammar as set forth, for instance, in Fraser and Squair; an accurate acquaintance with the more common irregular verbs; the ability to translate easy English prose

into French and to read easy French at sight; the ability to pronounce French, and the careful reading of two hundred pages of less difficult French.

*Two Years.* In addition to the above, the candidate should know accurately all irregular verbs in common use, and should be able to read a page of French with accurate pronunciation. He should have read at least four hundred pages of various authors, which should include one or two classic dramas. He should have had some practice in writing from dictation, and should be able to translate ordinary English prose into French.

*Three Years.* The work of the third year should comprise the reading of approximately five hundred pages of French of ordinary difficulty; memorizing of passages of matter read, either prose or poetry; writing from dictation; review of grammar.

*Four Years.* The work of the fourth year should include the reading of at least eight hundred pages of standard French, classical and modern; the writing of numerous short themes in French; a knowledge of the principal authors and works of French literature and of the important periods in French history; an ability to discuss in French the works read.

## SCIENCES

### *Physics, 1 Unit.*

Recitations at least four times per week for a school year, together with a note-book, containing the description and results of at least fifty experiments, neatly recorded.

### *Chemistry, 1 Unit*

Recitations three times a week for a school year, together with laboratory practice for two hours per week and

a note-book containing an account of all experiments made by the student's own hands, with sketches of the apparatus used.

*Zoology, 1/2 or 1 Unit*

To count for one unit, the course should extend throughout a year of 36 weeks, five times per week, reciting at least 45 minutes. One-fourth should be laboratory work in dissections and drawings. Drawings and notes should be presented to show the nature of the work done. Davenport or any good elementary text.

*Botany, 1/2 or 1 Unit*

If offered for one unit, it should consist of thirty-six weeks of work, five times per week, at least one-fourth of which should be of the nature of field or experimental work and dissections. Coulter, or Bergen and Caldwell, is recommended as a text-book. Note-book required.

*Physiology, 1/2 Unit*

Only work done above the grades will count for entrance. It should consist of eighteen weeks' work, five times per week, of at least 45-minute periods each. Not less than about twenty hours of laboratory work, of dissections, drawings, and experiments should be offered. Martin's Human Body (briefer course) revised by Fitz is recommended as a good text.

*Physical Geography or Physiography, 1/2 or 1 Unit*

Five times per week for one-half year. A good text-book, such as Davis' Physical Geography, should be supplemented by field excursions and laboratory, to cover about one-fourth of the time. Note-book required.

*NOTE:—In all science subjects at least two periods of laboratory or experimental work should count as the equivalent of one recitation.*

HISTORY AND CIVICS

*Advanced U. S. History, 1/2 or 1 Unit*

One year's work with any approved high school text book.

*General History, 1 or 2 Units*

The equivalent of one or two years' work in Ancient and Modern History, using any approved high school or academy text.

*English History, 1/2 or 1 Unit*

One year's work in high school or academy, using any standard text.

*Civics, 1/2 Unit*

One half-year's work in Civil Government. Only high school or academy work accepted.

## COURSES OF STUDY AND DEGREES

Two courses of study, each requiring 128 term hours for graduation, and leading respectively to the degrees A. B. and B. S., are offered in Buchtel College.\* (For terms of admission to these courses see page 33.)

The studies of the freshman year are definitely assigned and required in each course.

First-year special students are not allowed to elect work above the freshman year.

FRESHMAN STUDIES (*required*)I. *The A. B. Course*

First Half-Year	Term Hrs.	Second Half-year	Term Hrs.
Rhetoric 51 .....	3	Rhetoric 52 .....	3
†Chemistry 353, or .....	} 4	†Chemistry 354, or .....	} 4
Chemistry 351, or .....		Chemistry 352, or .....	
Biology 401 .....	} 1	Biology 402 .....	} 1
Hygiene .....		Current Events .....	

The above-mentioned subjects are required of all students in the A. B. course. Additional freshman studies in A. B. course leading toward Majors I and II (see page 45) are:

Greek 1 .....	4	Greek 2 .....	4
Latin 25 .....	4	Latin 26 .....	4

†Students who have not had a year of Chemistry in high school are required to take Chemistry 353 and 354. Students who have had a year of Chemistry in high school will take Chemistry 351 and 352, or Biology 401 and 402.

Additional freshman studies in A. B. Course leading toward Majors III-VII (see page 46) are:

Foreign Language .....	4	Foreign Language .....	4
Greek 1, Latin 25, or.... } 4		Greek 2, Latin 26, or..... } 4	
Mathematics 301 or 303.. } 4		Mathematics 302 or 301... } 4	

\*For combination courses and training course for teachers see pages 151 and 158.

II. *The Scientific Course*

First Half-Year	Term Hrs	Second Half-year	Term Hrs.
Rhetoric 51 .....	3	Rhetoric 52 .....	3
*Chemistry 353, or.....	} 4	*Chemistry 354, or.....	} 4
Chemistry 351, or.....		Chemistry 352, or.....	
Biology 401.....		Biology 402 .....	
Hygiene .....	1	Current Events .....	1
Mathematics 301 or 303....	4	Mathematics 302 or 301....	4
German or French .....	4	German or French .....	4

*\*Students who have not had a year of Chemistry in high school are required to take Chemistry 353 and 354. Students who have had a year of Chemistry in high school will take Chemistry 351 and 352, or Biology 401 and 402. But students planning to major in Biology will take Biology 401 and 402 even if they have had no high school Chemistry, and will make up their freshman Chemistry in the sophomore year.*

MAJORS AND MINORS

At the end of the freshman year the student is asked to indicate to the Committee on Classification whatever line of work he may wish to pursue. This subject is then known as the "major." Each major brings with it a number of required "minor" subjects. All major and minor work must be beyond the student's freshman requirements. Twenty-four term hours above the freshman year is the minimum requirement for a major, a term hour being a study carried one hour per week through one semester. All work beyond the freshman year and outside of the major and minor requirements is elective, 16 hours per semester being counted as regular work.

I. MAJORS LEADING TO THE A. B. DEGREE

For list of Minors, see pages 46, 47.

(Unless otherwise specified, the work required for the major is twenty-four hours above the freshman year.)

- I. Greek and Latin (with minors 1-6 inclusive).  
At least twelve hours must be in the Greek language above the freshman year.
- II. Latin (with minors 1 to 6 inclusive).
- III. German (with minors 1 to 5 inclusive, and 7).
- IV. Romance Languages (with minors 1 to 5 inclusive, and 8).
- V. Philosophy and Economics (with minors 1 to 4 inclusive, 7 and 8). Twelve hours each.
- VI. History (with minors 1 to 3 inclusive, 5, 7 and 8).
- VII. English Literature (with minors 3, 5, 7, 8, 9, and English History).

## II. MAJORS LEADING TO THE B. S. DEGREE

(Unless otherwise specified, the work required for the major is twenty-four hours above the freshman year.)

- VIII. Chemistry (with minors 1, 2, 4, 5, 10, 12, 13).
- IX. Mathematics and Physics (with Minors 1, 2, 4, 5, 10, 11, 13). Includes Calculus, 10 hours; Surveying, 2 hours; Physics, 12 hours.
- X. Biology (with minors 1, 2, 4, 5 [Psychology], 11, 12, 13).

## III. MINORS

	Term hrs.
1. Rhetoric 53 .....	2
2. Literature 65 or 66 (or 75 and 76) .....	3 or 4
3. *Science (other than that taken in freshman year) .....	8
4. History .....	6
5. Philosophy, Logic, Economics, Political Science .....	6
6. Modern Language .....	6 or 8
7. French .....	6 or 8
8. German .....	6 or 8

9. Classical Masterpieces 9 and 10 .....	6
10. Biology .....	8
11. Chemistry .....	6 or 8
12. Physics 341 and 342 .....	8
13. Scientific German .....	6

*\*Only courses which include laboratory work.*

### *Thesis*

A thesis showing original research by the student may be presented for graduation. It shall be taken in the subject chosen as the student's major, and shall count for two term hours if carried satisfactorily beyond the regular class-room work. The thesis must be handed to the instructor in charge on or before the beginning of the senior vacation.

### *Master's Degree*

The degree of A. M. may be conferred upon those who have acquired the degree of A. B., and the degree of M. S. upon those who have acquired the degree of B. S. These degrees may be granted in not less than two years after graduation, unless the applicant, in residence, can devote his entire time to the work, when the degrees may be granted in one year. At least one year of residence is required of all candidates for a Master's degree.

The candidate must accomplish the equivalent of a full college year's work of thirty-two term hours, choosing his subjects as majors and minors, twenty-four of which must be in the major field.

In the minor the work may be partly unduplicated undergraduate, but the applicant will be expected to carry it beyond the lines of usual college work. In the major, the work must be confined to graduate subjects and methods, and in this a satisfactory thesis must be presented which will give evidence of original work in the investigation of

some new field rather than of a mere re-statement of what is already known. The subjects and methods must have received the sanction of the instructors in the departments chosen.

An examination will be required in both subjects.

A candidate for either of these degrees at any given commencement must present his thesis and report for examination not later than June 1st.

### FEES

For general statement see pages 26, 27. The following laboratory fees are charged for courses in the College of Liberal Arts. By action of the Directors these laboratory fees are collectable strictly in advance and are a necessary prerequisite to enrollment in classes.

Chemistry 351, 352, 353, 354, per semester.....	\$ 3.00
“ All other courses .....	4.00
“ Deposit for breakage in all courses, per semester .....	5.00

The unused portion of this breakage deposit will be returned at the end of each semester.

Physics 343 and 344 each .....	\$ 2.50
Biology courses 401-410 inclusive, each.....	2.50
Surveying .....	2.00
Graduation fee—Payable one week before graduation .....	5.00
Master's degree—Payable one week before graduation .....	10.00

Students who have not met all term bills by November 1 for the first semester, or April 1 for the second semester, may be suspended from classes until payment is made.

## DEPARTMENTS OF INSTRUCTION

The general system of numbering and arrangement is according to the following groups:

Subject	Course Numbers
Ancient Languages .....	1- 50
English .....	51-100
German .....	101-150
Romance Languages .....	151-200
Mental and Moral Philosophy.....	201-250
Economics, Political Science, History .....	251-300
Mathematics .....	301-350
Chemistry .....	351-400
Biology .....	401-450
Physical Training .....	

Courses starred in the following pages are open only to Juniors and Seniors.

## GREEK

PROFESSOR ROCKWELL.

*Major:* Of the twenty-four hours necessary for a major in Greek and Latin, twelve hours at least must be of the Greek language above the freshman year.

1. *Goodwin's Greek Grammar and Xenophon's Anabasis—*  
(*First Semester.*) M., W., F., S., 8:25.
2. *Xenophon (Anabasis, 3 books).—(Second Semester.)*  
M., W., F., S., 8:25.

Advanced courses in Greek will be arranged for those wishing to continue the subject. The great masterpieces of prose and poetry will be studied in their proper historical and literary setting.

- \*9. *Greek Masterpieces thru English Translations.—(First Semester.)*  
Not given 1917-1918.

A careful study will be made of the various forms of Greek Literature and the chief works in the field of lyric and epic poetry, the drama, history and philosophy.

- \*10. *Latin Masterpieces thru English Translations.—(Second Semester.)*  
Not given 1917-1918.

The continuation of the preceding course.

## CLASSICAL ARCHEOLOGY.

PROFESSOR ROCKWELL.

Courses 19 and 20 are open to all students above the freshman year. Courses 17 and 18 will count toward either major offered in this department.

- \*17. *History of Greek Sculpture.—(First Semester.)*  
M., W., Th., 9:20.

This has been planned as a general course and will not require work in Greek or Latin. It will consist largely of lectures. There will be a short introduction setting forth the relation of Greek Art to the Art of Egypt, Assyria and Phenicia, and this will be followed by a discussion of the various periods and schools of Greek Sculpture and the more important artists. The subject will be illustrated by photographs and lantern-slides. Richardson's Greek Sculpture will be made the basis of the course, and some collateral reading in histories of art will be required. The ability to read German, tho not absolutely necessary, will be decidedly advantageous. Note-books of the students will be examined by the instructor from time to time.

\*18. (*Second Semester.*)

Continuation of Course 17. M., W., Th., 9:20.

19. Classical Mythology.—(*First Semester.*)

Tu., Th., 8:25.

A careful study will be made of the Greek myths and also how they are represented in vase paintings and in sculpture. Special reference will be made to the use of these myths in English poetry.

20. *General Course in Classical Archeology.—(Second Semester.)*

Tu., Th., 8:25.

## LATIN

PROFESSOR ROCKWELL.

Four units in Latin are required of all students entering freshman Latin.

*Major:* Twenty-four hours elected above freshman year constitute a major in Latin.

*Major:* Twelve hours each of Greek and Latin above the freshman requirements constitute a major in Greek and Latin.

25. *Cicero (De Senectute); Plautus (Menaechmi)*—(First Semester).

M., W., F., S., 7:30. Required of freshmen in Majors I and II.

During the freshman year a careful study is made of grammatical forms, syntax and idiomatic expressions, and written translations constitute a prominent feature of the work.

26. *Pliny (Selected Letters)*—(Second Semester.)

M., W., F., S., 7:30. Required of freshmen in Majors I and II.

27. *Livy (Books XXI-XXII); Plautus Trinummus*—(First Semester.)

M., W., F., 11:10. Courses 27 and 28 are open to students who have completed 25 and 26.

28. *Terence (Andria); Horace (Odes and Epodes)*—(Second Semester.)

M., W., F., 11:10.

Advanced courses in Literature and Antiquities will be arranged for those desiring to continue the study of Latin.

## ENGLISH

DEAN SPANTON.

ASSISTANT-PROFESSOR STURTEVANT.

MR. BRICKLEY.

## RHETORIC

ASSISTANT-PROFESSOR STURTEVANT.

MR. BRICKLEY.

To meet the needs of all entering students, Freshman Rhetoric during the first semester will consist of a sub-freshman class and classes doing the work regularly prescribed for credit. Students assigned to the sub-freshman class must do the work without receiving for it regular college credit. They may, however, be promoted to one of the regular classes whenever their work seems to warrant such a change. Similarly, any student in a regular section of freshman rhetoric may be transferred to the sub-freshman class—with loss of credit—whenever his work ceases to be satisfactory to the instructor. Furthermore, to accommodate students entering the second semester, and to provide means of prompt repetition of the course for students who fail, both Rhetoric 51 and Rhetoric 52 will be given each semester.

S-51. *Sub-freshman Rhetoric.*—(*First Semester.*)

M., W., F., 10:15.

Required of all freshmen who show themselves unable to do the work of the regular sections of Rhetoric 51. Thoro drill in spelling, punctuation, correct grammar, and the principles of sentence structure. It is especially urged that students, who know their preparation for composition work to be weak, elect this course.

51. *Freshman Rhetoric.*—(*First and Second Semesters.*)

First semester, two sections: Section a, M., W., Th., 9:20; Section b, M., W., F., 10:15. Second semester, one section, M., W., F., 10:15.

Required of all freshmen. A thoro review of the principles of style. Two themes each week. Monthly reading of short stories. Frequent conferences with instructors in regard to work in composition.

52. *Freshman Rhetoric.*—(*First and Second Semesters.*)

First semester, M., W., Th., 9:20. Second semester: Section a, M., W., Th., 9:20; Section b, M., W., F., 10:15.

Required of all freshmen. Weekly themes. Conference work continued. Reading of selected novels and modern plays.

53. *Parliamentary Law.*—(*First Semester.*)

M., W., 11:10.

Required of all sophomores. The class is organized as an Assembly with the instructor as chairman. Study and practice of rules of order; the writing of minutes. Study of manual of debate. Text-book: Cushing's Manual of Parliamentary Practice (Revised edition).

54. *News Writing.*—(*Second Semester.*)

M., W., 11:10.

Recitation and practice work. Writing of leads, heads, types of news stories, and editorial articles. As far as time permits, the student will do actual reporting on a "beat" assigned to him.

\*55. *Advanced Composition.*—(*First Semester.*)

(Two term hours.) Time to be arranged when class meets.

Prerequisite: Courses 51, 52; but students are urged not to elect the course earlier than the junior year. Close study of the expository and descriptive essay. Wide reading in illustrative work of the best modern writers. A large amount of composition is required.

\*56. *Advanced Composition.—(Second Semester.)*

A continuation of Course 55. Study of the short-story with wide illustrative reading. Text-book: Pitkin's Short-Story Writing.

## LANGUAGE AND LITERATURE

DEAN SPANTON.

ASSISTANT-PROFESSOR STURTEVANT.

MR. BRICKLEY.

*Required work.* In addition to the required work in Rhetoric, students in all courses must take, after the freshman year, at least three hours' work in the department of English Language and Literature. To fulfill this requirement, students will take Literature 65 or 66, one semester, or American Literature 75 and 76 thruout the year.

*Majors.* The minimum for a major in English Literature is twenty-four term hours. Students choosing a major in English Literature must elect a year of Composition in addition to the required freshman and sophomore Rhetoric.

*Order of Work.* Courses 65 and 66 are prerequisite to the more advanced courses. Hence students who desire to take all or most of the work offered in English must elect these courses in their sophomore year, and in no case should they be postponed to the senior year unless a student be sure that he desires no further work in this department.

65. *General Introduction to English Literature.—(First and Second Semesters.)*

First Semester, M., W., F., 10:15.

Second Semester, M., W., F., 7:30.

The chief purpose of this course is to give the student such information and training as will enable him to see what constitutes good literature and will lead him to read good literature with greater intelligence and keener delight.

With literature 66, this course is prerequisite to the other courses in English Literature. It is also a required minor for all majors, altho American Literature 75 and 76 may be substituted for it if the student is not planning to take further work in the department.

66. *The History of English Literature.*—(Second Semester.)

M., W., F., 10:15.

The work includes:

(a) The history of English Literature. Text-book: Long's English Literature.

(b) The reading of masterpieces illustrating literary types and representing the main movements in English Literature. Much reading is required; still more is recommended. Text-book: Newcomer and Andrews' Twelve Centuries of English Poetry and Prose.

\*67. *Chaucer.*—(First Semester.)

(Two term hours.)

A close study of the best of the Canterbury Tales, and a rapid reading of some other portions of Chaucer's work.

Not given 1917-1918.

\*68. *Word Study.*—(Second Semester.)

(Two term hours.)

After a few introductory lectures on language, the work centers in the study of words—their origin, development, significance, and habits.

Not given in 1917-1918.

\*70. *Shakspeare.*—(First Semester.)

M., W., F., 11:10.

A study of the development of Shakspeare as a dramatist and his place in the Elizabethan Age and in the history of English literature. Most of the plays are read, but the chief stress is on the few greatest tragedies and comedies.

- \*71. *The English Bible as Literature.*—(First Semester.)  
M., W., Th., 9:20.

To the student of literature the Bible has a two-fold interest entirely apart from its religious value: (1) It is itself noble literature; (2) It has influenced the literature of the English-speaking world more profoundly than has any other book. The object of this course is to help the student to see the beauty and the power of the Bible as literature; its narrative, exposition, poetry and song.

- \*72. *Continuation of 71.*—(Second Semester.)

- \*73. *British Poets and Essayists of the Nineteenth Century.*—(First Semester.)

Studies in Wordsworth, Coleridge, Scott, Byron, Shelley, Keats, Macaulay, Lamb, De Quincey.

Not given 1917-1918.

- \*74. *Continuation of Course 73.*—(Second Semester.)

Tu., Th., 10:15.

Studies in Tennyson, the Brownings, Arnold, Landor, Clough, Rossetti, Morris, Swinburne, Carlyle, Ruskin.

75. *American Literature.*—(First Semester.)

Tu., Th., 8:25.

After a somewhat rapid survey of the literature of the Colonial and Revolutionary Periods, the work centers in a study of the leading poets and prose writers of our later literature.

76. *American Literature.*—(Second Semester.)

Continuation of Course 75.

Students are not allowed to enter this course in the middle of the year.

- \*79. *English Fiction.*—(First Semester.)

M., W., F., 7:30.

The development of prose fiction to 19th century. Study of the evolution of the novel as a distinct literary type as

illustrated in the stories popular in Saxon, Medieval, Elizabethan, Puritan, and Restoration Periods. The 18th century novel. Reading of important works.

\*80. *English Fiction.*—(*Second Semester.*)

Continuation of Course 79.

Study of 19th and 20th century fiction with special emphasis upon the work of living writers.

\*81. *English Drama.*—(*First Semester.*)

Survey of play-writing in England till close of the 18th century, with special attention to the social conditions which created and shaped the plays of each period.

Not given 1917-1918.

\*82. *Modern Drama.*—(*Second Semester.*)

Continuation of Course 81.

Study of the life and work of the great modern dramatists, with some time devoted to the plays of writers not English or American.

Not given 1917-1918.

## PUBLIC SPEAKING

MISS MCEBRIGHT.

A three-years' course is offered in the department of Public Speaking. Progressive educators recognize a well-trained voice with a well-trained mind to be an essential part of education. The voice is the reporter of the individual. A distinct and cultivated enunciation, a well-controlled and cultured voice, an effective and natural manner of speech, are all valuable assets in the business, educational and social world.

91. *Elementary Course.—(First Semester.)*

Tu., Th., S., 10:15.

Fundamental principles. Voice technique, tone placing, tone building, enunciation, literary analysis, gesture, evolution of expression—vocal and physical.

92. *(Second Semester.) Continuation of 91.*

Literary analysis, gesture, evolution of expression, development of imagination and sympathetic insight into literature.

\*93. *Advanced Course.—(First Semester.)*

Tu., 9:20; Th., 11:10.

Literary, dramatic, artistic interpretation, character study. Shakspeare's plays. Classic comedies.

\*94. *(Second Semester.)*

Course 93 continued. Shakspeare's plays, extempore speeches, critiques, personal development.

\*95. *Dramatic Study (First Semester.)*

Time of reciting to be arranged when class meets.  
(One term hour).

The Dramatic Study Club meets once a week for class work. Only junior and senior students who have had one year of Public Speaking or its equivalent are eligible to this

class. Any member of this class pledges himself not only to the class, but to all rehearsals called by the President of the Study Club, or by the Instructor of Public Speaking. This club presents publicly all plays rehearsed. At least one play a semester will be presented.

\*96. *Dramatic Study.*—(*Second Semester.*)

Continuation of Course 95.

Instruction will be given those students who enter the oratorical and prize speaking contests.

97. *Physical and Voice Work.*—(*First Semester.*)

Friday, 11:10.

Open to all upper-classmen.

Special attention is given to the needs of the individual student.

98. *Continuation of 97.*—(*Second Semester.*)

## GERMAN LANGUAGE AND LITERATURE

PROFESSOR BULGER.

MR. VON JANINSKI.

DR. KOLBE.

It is the aim to make German the language of the classroom. In the elementary courses it is sometimes necessary to use English for the purposes of explanation; however, the effort is made to reduce this amount to the minimum. For the advanced courses all lectures and reports are in German. The intention is to accustom the student to using the language and hearing it used by others. Idiomatic and technical accuracy in the use of the language, and, above all, care in pronunciation, are insisted upon. Courses given as prose composition are more in the nature of free reproduction of German texts than of translation.

The following is suggested as the proper order in which a major in German should be taken by those who enter unprepared in this language. For those who have studied modern languages in secondary schools, a personal conference with the instructor will be found necessary in planning major work.

*REQUIREMENTS FOR GERMAN MAJOR*

A minimum of 24 term hours *above* the freshman year constitutes a major. The following courses are required for a major and must be included: 111, 112 and at least two semesters' work to be selected from the following courses: 107, 108, 115, 116, 123.

*ORDER OF COURSES**Students Beginning German in College*

should take the introductory courses in the following order:

## BUCHTEL COLLEGE

*Freshman Year*

Courses 101 and 102.

*Sophomore Year*

Courses 103 and 104.

Courses 105 and 106.

(Students whose work in the first year has been graded below G are advised to defer Courses 105 and 106 until the third year.)

The advanced courses may be selected as follows:

Course 104 admits to 105, 107, 109, 111, 115, 119, and 123.

Course 106 (or 131) admits to 107, 109, 111, 115, 119, and 123.

Course 108 (or 116 or 124) admits to 109, 111, and 119.

Course 110 admits to 111, 115, 117 and 119.

*Students presenting German from Secondary Schools are* admitted as follows:

Those presenting one year are advised to enter 101.

Those presenting two are admitted on probation to 103.

Those presenting three or four years will enter 131.

## COURSES OF STUDY

## INTRODUCTORY COURSES.

(Given every year.)

101. *First Year German.—(First Semester.)*

(a) M., Tu., W., Th., 9:20. (b) M., W., F., S., 11:10.

Elementary grammar, stories and poems, simple conversation. Students with one year of secondary school German may elect this course but will receive only half credit (2 hours).

102. *First Year German.—(Second Semester.)*

(a) M., Tu., W., Th., 9:20. (b) M., W., F., S.,  
11:10.

A rapid review of grammar. The reading of some simple connected text will be started about Christmas and continued to the end of the second semester. The aim of the course is to enable the student to read and understand German of ordinary difficulty. Oral and written reproductions of the reading lesson are required.

103. (a) *Second Year German.—(First Semester.)*

M., W., F., 10:15.

This course is intended for those who have completed courses 101 and 102, or their equivalent. Students with one year of secondary school German will be admitted *on probation*. The time will be divided between prose composition and reading of prose and poetical works. Reproductions in German of the lesson and written themes are required. Students with two years of secondary school German must elect this course or 103 b.

104. (a) *Second Year German.—(Second Semester.)*

M., W., F., 10:15.

Course 104 carries out in the second semester the work of Course 103.

103. (b) *Second Year German.—(First Semester.)*

M., W., F., 11:10. A parallel course to 103 a, with equivalent work.

104. (b) *Second Year German.—(Second Semester.)*

M., W., F., 11:10. A parallel course to 104 a, with equivalent work.

105. *Dictation.—(First Semester.)*

Tu., Th., 7:30.

The work of this course is intended primarily for those who have completed courses 101 and 102 (with a grade no

lower than G), or courses 103 and 104. The work will consist of lectures, dictated in German, on the history of German literature, and of a review of grammar.

106. *Dictation.*—(*Second Semester.*)

Tu., Th., 7:30.

The nature of this course is the same as that of course 105. For the grammar review of course 105 a prose composition will be substituted.

131. *Fifth Year German.*—(*First Semester.*)

M., W., F., S., 10:15.

Students who present three or four years of secondary school German for entrance are required to take this course. Such students are not eligible to other courses. The work will consist of a rapid review of grammar, prose-composition and reading and discussion of representative works from modern literature. Outside reading, preparation of German themes in connection with the works read, investigation of assigned topics in the library, and note books required. The aim is to develop accuracy and certainty in the use of the spoken language.

132. *Fifth Year German.*—(*Second Semester.*)

A continuation of Course 131.

129. *Scientific German.*—(*First Semester.*)

M., W., F., at 8:25.

Prerequisite, 104 or 131. Chemistry and Physics, Exercises based on text. Special vocabulary drill.

130. *Scientific German.*—(*Second Semester.*)

M., W., F., at 8:25.

A continuation of course 129. Technical subjects.

## ADVANCED COURSES

*First Semester.*

1917—1918.

123. *Lessing*. M., W., Th., at 9:20. Prerequisite: Course 104 or 131. A study of Lessing's life and works. Library work, class reports.

1918—1919

107. *Goethe*. M., W., Th., at 9:20. Prerequisite: Course 104 or 131. *Goethe's early life and works*.

1919—1920

115. *Schiller*. M., W., Th., at 9:20. Prerequisite: Course 104 or 131. *Schiller's early life and dramas*.

*Second Semester.*

1917—1918.

124. *Post-Classical Writers*.

M., W., Th., at 9:20. Prerequisite as for 123.

1918—1919

108. *Goethe*. M., W., Th., at 9:20. Prerequisite, as for 107. *Goethe's later life and work*.

1919—1920

116. *Schiller*. M. W., Th., at 9:20. Prerequisite, as for 115. *Schiller's later work*.

*First Semester.*

1917—1918.

\*117. *Faust*. (Time of meeting will be arranged to suit the convenience of the class.) 3 term hours. Prerequisite: Any one of the following courses: 107, 109, 118, 115, 123, 111, 131, 119. Class discussion, themes, library work, class reports.

1918—1919

109. *German Novel*. M., W., F., at 10:15. Prerequisite; 104 or 131.

*Second Semester.*

1917—1918.

- \*118. *Modern Drama*. Prerequisite, as for 117. Rapid reading and discussion of selected works. Reports, lectures, library work. Time to be arranged.

1918—1919

110. *German Novel*. M., W., F., at 10:15. Prerequisite, as for 109. A continuation of 109.

1917—1918.

*First Semester.*

119. *German Life*. Tu., Th., at 8:25. Prerequisite: 104 or 131. A study of German life and customs. Class themes, practice in conversation.

1918—1919

- \*111. *German Literature*. Tu., Th., at 8:25. Prerequisite: Course 107, 123, 115, 109, 119, 117. A survey of German literature from the earliest times. Lectures, class reports, outside reading.

*Second Semester.*

1917—1918.

120. *Conversation*. Tu., Th., at 8:25. Prerequisites, as for 119.

1918—1919

- \*112. *German Literature*. Tu., Th., at 8:25. Prerequisite, as for 112. A continuation of the work of 112.

## ROMANCE LANGUAGES

PROFESSOR RINES.

MR. TULLER.

MR. MORIN.

*Major:* Twenty-four hours in Spanish and French, not including Courses 151 and 152, constitute a major in the Romance Languages.

## FRENCH

PROFESSOR RINES.

MR. TULLER.

MR. MORIN.

151. *Beginning French.—(First Semester.)*  
M., Tu., W., Th., 9:20. If necessary, a second section reciting M., W., F., S., at 11:10.  
Olmsted's Elementary French Grammar, Reader, *Petits Contes de France.*
152. *Beginning French.—(Second Semester.)*  
Continuation of Course 151. Selected readings.
153. *Second Year French.—(First Semester.)*  
M., W., F., 7:30.  
Review of grammar. Composition. Schinz and King's Seventeenth Century French Readings.
154. *Second Year French.—(Second Semester.)*  
Continuation of Course 153. Selected plays of Molière.
165. *French Diary.—(First Semester.)*  
150—200 words in French to be entered daily in notebook. Bi-weekly conferences with the instructor. No class room work. One term-hour.
166. *French Diary.—(Second Semester.)*  
Course 165 continued.

167. *French Conversation.—(First Semester.)*  
 Hour arranged. Rittmann's *French Daily Life*.  
 Two term hours.
168. *French Conversation.—(Second Semester.)*  
 Course 167 continued.
- 155—164. *Advanced French.*  
 At least one course in advanced French will be given each year, which will be chosen from the following list: The Short Story in French Literature, Modern Prose and Poetry, the Classic Period, the Works of Victor Hugo, History of France studied and recited in French. The course given in 1917-1918 will probably be Modern Prose and Poetry, 157-158.  
 Two term hours. Hour to be arranged.

## SPANISH

PROFESSOR RINES.

171. *Beginning Spanish.—(First Semester.)*  
 M., W., F., 11:10.  
 Espinosa and Allen's Elementary Spanish Grammar. Turrell's Reader.
172. *Beginning Spanish.—(Second Semester.)*  
 M., W., F., 11:10.  
 Course 171 continued. Selected texts.
173. *Second Year Spanish.—(First Semester.)*  
 M., W., F., 10:15.  
 Review of grammar. Composition. Selected texts.
174. *Second Year Spanish.—(Second Semester.)*  
 Course 173 continued.

## MENTAL AND MORAL PHILOSOPHY

PROFESSOR O. E. OLIN.

*Major:* Philosophy may be combined with Economics for a major, Philosophy and Economics, twelve term hours required in each subject.

\*201. *Psychology.*—(*First Semester.*)

M., W., F., 8:25. Text-book: James's Psychology.

Psychology is an elective for one year in either a major or a minor group. A text-book affords the basis of study, and is supplemented by laboratory work which follows the lines of modern investigation.

\*202. *Psychology.*—(*Second Semester.*)

Continuation of Course 201. One hour of seminar work a week is given in this semester.

\*203. *Ethics.*—(*First Semester.*)

M., W., F., 10:15. Text-book: Mackenzie.

Moral Philosophy is an elective for two semesters. The subject embraces theoretical and practical ethics and is studied with reference to the origin and development of ethical ideas as viewed in the light of modern philosophy.

Open only to those who have had Psychology.

\*204. *Ethics.*—(*Second Semester.*)

Continuation of Course 203 with Natural Theology.  
Text-books: Mackenzie and Valentine.

During the last thirteen weeks of the second semester, the course in Ethics is supplemented by a course in Natural Theology. A text-book is used as an outline, while the student is given problems for original investigation and application, and topics for library research.

## LOGIC

PROFESSOR O. E. OLIN.

205. *Logic.*—(*First Semester.*)

M., W., F., 7:30. The text-book, Jevons' *Advanced Logic*. Any other logic is good for reference: Mill, Bain, Hibben, Davis, Robinson, and others.

It would be well for students to elect logic early, because inductive and deductive reasoning are fundamental to all other studies.

## SOCIAL SCIENCE

*Economics, Sociology and Political Science*

PROFESSOR O. E. OLIN.

*Major:* Economics can be combined with Philosophy for a major, Philosophy and Economics, twelve hours of each.

Such students as desire to take all the work in this department are advised to take Courses 251 and 261 in the sophomore year.

The courses are so arranged that they can be taken in consecutive terms, and should be taken in the following order:

Course 251 should precede any other; 261 should precede 262; 252 should follow 251; the other three courses can then be taken at any time.

251. *Political Economy.*—(*First Semester.*)

M., W., Th., 9:20. Text-book: Ely's *Outlines*, revised edition. References to Seligman, Fetter, Seager, Laughlin, Blackmar, Bullock, Fairchild, and others.

This is an introductory course, designed for the study of the leading principles of the science, and aiming to acquaint the student with the data of economic inquiry and the nature of economic laws.

252 *Sociology.—(Second Semester.)*

M. W., Th., 9:20. Text-book: Fairbanks' Introduction to Sociology. References: Small and Vincent, Dealey, Ross, Blackmar, and others.

An elementary course designed to introduce the student to the principles of human association, and to develop the power of observing and analyzing social facts.

\*253. *Sociological Problems.—(First Semester.)*

Tu., 9:20; Th., 11:10.

This course will be an application of the principles brought out in Sociology to a few of the problems of society. The work will be lecture and research, with two hours of field work each week.

254. *Economic Problems.—(Second Semester.)*

Tu., 9:20; Th., 11:10.

A detailed study of the problems and theories involved in some of the great economic questions now before the American people, such as transportation, taxation, corporations, money, and banking. The method is lecture, seminar, and research, with reference to late economic books, journals and periodicals. Field work may be taken.

261. *Political Science.—(First Semester.)*

Tu., Th., 10:15. Text: Leacock's Elements of Political Science.

A study of the nature of the state, the organization of government of every kind, and the province of government. The course is designed to open the field of Political Science, and lay a foundation for later college or university work.

262. *Federal Government.—(Second Semester.)*

Tu., Th., 10:15.

This course continues Political Science in the study of Federal Government, by a comparative study of the fed-

eral governments of the world. Lecture, library, and research work.

\*264. *Municipal Organization and Management.*—(Second Semester.)

Tu., Th., 8:25. (Three term hours.)

A detailed study of the organization and administration of city government in Europe and America. A comparative study of Federal Form, Commission Form, and Manager Form of Government. A careful study of municipal ownership of public utilities. Two lectures each week, and two hours of field work in the municipal departments of Akron. Open only to those who have had Political Science.

## HISTORY

PROFESSOR THOMPSON.

*Major:* Twenty-four hours elected above freshman year constitute a major in History.

273. *History of England to the Seventeenth Century.*—(First Semester.)

M., W., F., 11:10.

The formation of the English race and civilization, the growth of a national government, economic and social conditions, influence of the church. Frequent readings from original sources, and from authorities other than the prescribed text-book.

274. *History of the British Empire from the Seventeenth Century to the present time.*—(Second Semester.)

Continuation of 273.

Emphasis will be laid on the history of the various colonies, and the present problems of the British Empire.

275. *History of Western Europe. The development of Europe from the beginning of the Sixteenth Century to 1815.—(First Semester.)*  
M., W., F., 8:25.
276. *History of Western Europe from 1815 to the present time.—(Second Semester.)*  
Continuation of 275.
277. *American History, 1789-1850.—(First Semester.)*  
Tu., Th., 8:25.
278. *American History from 1850 to the present time.—(Second Semester.)*  
Tu., Th., 8:25. Continuation of 277.
- \*279. *History of the Renaissance and Reformation. (For Juniors and Seniors only.) Prerequisite 273-274 or 275-276.*  
Not given 1917-1918.
- \*280. *History of the Renaissance and Reformation.*  
Continuation of 279.  
Not given 1917-1918.
281. *Ancient History—The Orient and Greece.—(First Semester.)*  
Tu., Th., 10:15.
282. *Ancient History—Rome.—(Second Semester.)*  
Continuation of 281. Tu., Th., 10:15.
283. *Growth of the French Nation.—(First Semester.)*  
Not given 1917-1918.
285. *Growth of German Nationalism from 1648 to present time.—(First Semester.)*  
Tu., Th., 7:30.
290. *Current Events. (For Freshmen only.)—(Second Semester.)* Three sections: (a), Tu., 7:30; (b), Th., 7:30; (c), W., 3:00.
287. *History of Art.—(First Semester.)*  
Tu., 9:20; Th., 11:10.
288. *Continuation of 287.—(Second Semester.)*  
Tu., 9:20; Th., 11:10.

## MATHEMATICS—PURE AND APPLIED

PROFESSOR LOCKNER.

ASSISTANT-PROFESSOR OLIN.

MR. MORRIS.

MR. ADAMS.

*Major in Mathematics and Physics*

Calculus, ten term hours.

Surveying, two term hours.

Physics, twelve term hours.

Total, twenty-four term hours.

303. *College Algebra.—(First Semester.)*

M., W., F., S., 8:25.

At the end of the first month the freshman class is divided into two classes, depending upon the ability and preparation of the student. Those qualified are allowed to continue their work in course 301 in Trigonometry. All others are required to take additional work in Algebra in course 303.

The work in this course consists of a general review of the high school algebra to be followed by regular work in college algebra.

301. *Plane and Spherical Trigonometry.*

(Given both first and second semesters.)

First semester, in two sections. Section a, M., W., F., S., at 7:30. Section b, M., Tu., W., Th., at 9:20. Second semester, only one section, at 8:25. This work includes goniometry, trigonometric equations, solution of plane and spherical triangles and construction of tables.

302. *Plane and Solid Analytic Geometry.*—(Second Semester.)

In two sections. Section a, M., W., F., S., at 7:30. Section b, M., Tu., W., Th., at 9:20. Prerequisite for the course, Plane and Spherical Trigonometry.

The work includes: The straight-line and general equation of the first degree, polar co-ordinates, transformation of co-ordinates, conic sections and equations of the second degree, tangents, normals, loci, parametric equations, poles and polars, the general equation of the second degree, a few higher plane curves, the plane and straight-line in space and surfaces of the second order.

305. *Differential Calculus.*—(First Semester.)

At 10:15. M., Tu., W., Th., F.

Prerequisite: Courses 301 and 302.

The work includes functions, theory of limits, differentiations, series, expansion of functions, indeterminate forms, maxima and minima of functions of one or more variables, partial derivatives, direction of curves, curvatures, tangents and normals, evolutes, involutes, order of contact and envelopes.

306. *Integral Calculus and Differential Equations.*—(Second Semester.)

At 10:15. M., Tu., W., Th., F.

Prerequisite: Courses 301, 302 and 305.

The work includes integration of standard forms, constant of integration, integration of rational fractions, integration of irrational fractions, trigonometric forms, integration by parts, integration by substitution, summation and the definite integral, application to curves and simple volumes of revolution, moments of inertia, center of gravity of any solid, application to pressure of fluids, force of attraction, etc. The solution of ordinary differential equations of the first and higher orders.

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304. *Elementary Surveying.*—(*Second Semester.*)  
 (Two term hours.) One recitation each week, F., 10:15, to be accompanied by at least forty hours of field work to be put in during the afternoons and Saturday mornings if necessary. Required of scientific students with major in Mathematics and Physics. Elective for all others except freshmen. Prerequisite: Plane and Spherical Trigonometry.

The work of the course covers the general principles of leveling and transit surveying, and the making of one map.  
 Text: Raymond.

## ASTRONOMY AND GEOLOGY

PROFESSOR LOCKNER.

- \*323. *General Geology.*—(*First Semester.*)  
 M., W., F., 10:15.

The work includes dynamic, structural, physiographical and historical geology. Instruction is given in regard to geological forces and their effects, the formation, alteration and destruction of land masses, the succession of geological ages with regard to both their physical features and their plant and animal life.

Before taking up the historical geology a brief lecture course is given in systematic zoology in order that the student may become somewhat familiar with various forms of animal life.

- \*320. *Descriptive Astronomy.*—(*Second Semester.*)  
 M., W., F., 10:15. Elective for those who have completed Mathematics 301. Text: Young's Manual of Astronomy.

Celestial sphere, astronomical instruments, elementary celestial mechanics, solar system, fixed stars, double stars, nebulae, constellations. Study one evening a week, demonstration at equatorial, meridian circle and other instruments of the observatory.

## PHYSICS

PROFESSOR LOCKNER.

MR. MORRIS.

MR. ADAMS.

*Major in Mathematics and Physics*

Physics, twelve term hours.

Surveying, two term hours.

Calculus, ten term hours.

Total, twenty-four term hours.

*Major in Physics*

Physics, twenty-four term hours.

341. *General Physics.—(First Semester.)*

Four recitations a week: M., Tu., W., Th., 9:20.

The work includes elementary mechanics, wave motion and sound. Required of all scientific students, elective for all others.

Prerequisites for the course: A year of Elementary Physics, a year of Chemistry, Plane and Spherical Trigonometry and Plane and Solid Analytical Geometry.

342. *General Physics (Continued).—(Second Semester.)*

Required of all scientific students, elective for all others. The work includes light, heat, electricity and magnetism. Prerequisite: Course 341.

343. *General Physics, Laboratory.—(First Semester.)*

Two three-hour laboratory periods: M., W., 1:00-3:00. (Two term hours.)

344. *General Physics, Laboratory.—(Second Semester.)*

Continuation of 343.

For advanced courses in Strength of Materials, Applied Mechanics, Electricity, and Hydraulics, see p. 108-ff.

## BUCHTEL COLLEGE

## CHEMISTRY

PROFESSOR SIMMONS.

ASSISTANT-PROFESSOR ZIMMERLI.

MR. SIBLEY.

ASSISTANT, MR. YACKEE.

*Major:* Twenty-four term hours in Chemistry above the freshman year constitute a major.

351. *General Chemistry.—(First Semester.)*

A study of the newer theories of Chemistry. Six hours per week. Section a—recitations Tu., Th., 8:25; laboratory, 1:00-3:00 M. and F. Section b—recitation Tu., Th., 10:15; laboratory 3:00-5:00 M. and F. (Four term hours.)

353. *General Chemistry.—(First Semester.)*

Text: McPherson and Henderson. Six hours per week. Tu. and Th., 7:30; Tu. and W., 1:00-3:00. (Four term hours.) Required of freshmen beginning Chemistry.

352. *General Chemistry.—(Second Semester.)*

Six hours per week. Continuation of 351. Inorganic Preparations; Blow-pipe Analysis.

354. *General Chemistry.—(Second Semester.)*

Six hours per week. Continuation of 353. (Four term hours.) Inorganic Preparations.

365. *Qualitative Analysis.—(First Semester.)*

Lecture F., 2:00. Laboratory M., W., F., 3:00-5:00. (Three term hours.) Open to students who have passed 352 or 354.

366. *Qualitative Analysis.—(Second Semester.)*

Lecture F., 2:00. Laboratory M., W., F., 3:00-5:00. (Three term hours.)

\*357. *Organic Chemistry.—Recitations and Laboratory Practice.—(First Semester.)*

Six hours per week, M., W., 9:20; Th., 1:00 to 5:00. (Three term hours.) A study of the aliphatic series of hydrocarbons and their derivatives.

Required of all students who select Chemistry as their major.

\*358. *Organic Chemistry.—(Second Semester.)*

A continuation of Course 357.

\*359. *Quantitative Analysis.—(First Semester.)*

Lecture and Laboratory Practice, Th., 9:20; Tu., 1:00-5:00; F., 1:00-3:00. (Three term hours.)

\*360. *Quantitative Analysis.—(Second Semester.)*

A continuation of 359.

\*363. *Chemistry of India Rubber.—(First Semester.)*

F., 7:30; Tu. and Th., 1:00-5:00. (Three term hours.) Lecture and laboratory covering the theory and practice in the chemistry of india rubber.

The course pre-supposes a year of organic chemistry and a year of quantitative analysis.

\*364. *Chemistry of India Rubber.—(Second Semester.)*

Continuation of 363.

\*367. *Organic Chemistry.—Lectures, Recitations and Laboratory Practice.—(First Semester.)*

Six hours per week. Tu., 1:00 to 5:00; Tu., Th., 10:15. (Three term hours.) A study of the aromatic series of hydrocarbons and their derivatives.

\*368. *Organic Chemistry.—(Second Semester.)*

A continuation of Course 367.

(Required of students who major in Chemistry.)

- \*369. *Advanced Practical Chemistry.—(First Semester.)*  
Laboratory and Seminar. (Three term hours.)  
F., 1:00-5:00; S., 7:30-12:00. (Courses 360 and 368 required.) The course will deal with problems of an industrial nature and with co-operative work in connection with the Bureau of City Tests.
- \*370 *Advanced Practical Chemistry.—(Second Semester.)*  
Continuation of 369.

## BIOLOGY

PROFESSOR PLOWMAN.

Twenty-four semester hours above the freshman year in Biology is the minimum requirement for a major in this department. Minor requirements are stated on page 46. Students who desire to do their major work in this department should carry Biology 401-402 as their first year science, and should do their required work in Physics and Chemistry in the second and third years, respectively. Prospective students in this department are requested to observe that almost all courses above the freshman year are offered in alternate years and that schedules must be arranged accordingly.

401. *General Biology.—(First Semester.)*  
Lectures, Tu., Th., 8:25. Seminar, Th., 3:00, or F., 11:10. Laboratory: section a, M., W., 1:00 to 3:00; section b, Tu., Th., 1:00 to 3:00. (Four term hours.)

A study of parallel groups of the lower and simpler plants and animals, seeking to familiarize the student with the fundamental laws and processes of living things, and to emphasize the essential unity of the whole realm of life.

Abbott's *General Biology* is used as a collateral text. A special notebook, including outlines of the biosphere, chart

outlines, and all necessary paper, will be supplied by the department, at a price of \$1.00.

402. *General Biology.—(Second Semester.)*

A continuation of 401.

While the studies of the first semester deal with the first three phyla of the animal kingdom and with thallophytes, the course in the second semester includes the remaining invertebrate animals and non-flowering plants, together with a very brief examination of a few higher animals and plants, for the purpose of general comparison.

The courses in General Biology are designed to meet the needs of students seeking the broadest liberal culture, as well as of those who wish to specialize in biological lines. When taken as minors under another department, these courses should be carried not later than the sophomore year.

403. *Vertebrate Zoology.—(First Semester.)*

Lectures M., W., F., 8:25. Laboratory four to six hours per week. (Four term hours.) Offered for 1917-1918 and alternate years.

A study of the comparative anatomy and histology of vertebrate animals, together with their ecologic relations, economic importance, and outlines of their classification.

404. *Animal Embryology.—(Second Semester.)*

Lectures M., W., F., 8:25. Laboratory four to six hours per week. (Four term hours.) Offered for 1917-1918 and alternate years.

A comparative study of the early developmental stages of animals. Laboratory work is confined chiefly to a study of the embryology of the chick. In the lectures considerable attention is given to the study of thremmatology.

405. *Vascular Plants.*—(*First Semester.*)

Lectures M., W., F., 8:25. Laboratory four to six hours per week. (Four term hours.) Given in 1916-1917, and alternate years.

A study of the morphology, anatomy, physiology and ecology of vascular plants, with special reference to their economic interest and importance, including particularly those forms that supply foods, drugs and timber.

407. *Human Physiology.*—(*First Semester.*)

Lectures and recitations, M., W., Th., 9:20. Three to five hours' laboratory work per week. (Four term hours.) Given in 1916-1917, and alternate years. Men's course.

A detailed study of the human mechanism and its functioning. Halliburton's text, or its equivalent, is used in the class, while constant reference is made to the works of Gray, Flint, Howell, and others. Each student should be provided with a good pocket medical dictionary. A fair knowledge of physics and chemistry will be found quite essential in the work of this course. Open only to college men.

408. *Human Physiology.*—(*Second Semester.*)

Continuation of 407. Men's course.

409. *Human Physiology.*—(*First Semester.*)

Lectures and recitations, M., W., Th., 9:20. Three to five hours' laboratory work per week. (Four term hours.) Offered for 1917-1918, and alternate years. Women's course.

This course is essentially the equivalent of course 407, but with greater emphasis upon its hygienic relations, and the physiology of development. The same textbook and references are used here as in course 407. Open only to college women. Required in Curtis School of Home Economics.

410. *Human Physiology.*—(*Second Semester.*)

Continuation of 409. Women's course.

413. *Freshman Hygiene.*—(*First Semester.*)

Lectures, Tu., 3:00. (One term hour.)

A course of lectures dealing primarily with the subject of personal hygiene, to the end that young college men may better conserve their energy and health, and thereby fit themselves for lives of the greatest efficiency, as students and as citizens. Required of all first-year men.

415. *Freshman Hygiene.*—(*First Semester.*)

Lectures, W., 3:00. (One term hour.)

A parallel course to 413, particularly adapted to the needs of young college women. Required of all first-year women.

416. *Organic Evolution.*—(*Second Semester.*)

Lectures, M., W., F., 8:25. Laboratory and reference reading, three to four hours per week. (Four term hours.) Given in 1916-1917, and alternate years.

A survey of the history of the doctrine of organic evolution, together with a detailed consideration of its underlying principles, and its bearing upon other fields of thought and investigation. Heredity and eugenics are dealt with from the point of view of possible human betterment.

418. *Conservation.*—(*Second Semester.*)

Two lectures per week, and reference reading. (Two term hours.) Tu. and W., 3:00.

A study of natural resources, such as minerals, fuels, timber, soils, water, plant and animal crops, and human life.

It will be observed that courses 401-402, 413, 415 and 418 are offered every year. Courses 403-404 alternate with 405-416, and courses 407-408 alternate with courses 409-410. General Biology 401-402 is essential as an introduc-

tion to any of the more advanced courses, but above the freshman year the work of this department may be taken in any order of sequence. Students doing major work in this department should choose a thesis subject not later than April first of the Junior year.

## PHYSICAL EDUCATION

MR. SEFTON, DIRECTOR.

Physical education is conducted under the direct supervision of an experienced physical director, who is a member of the college faculty. He is assisted by an associate director for women. The main floor of the gymnasium (80 by 50 feet) is well equipped with modern gymnastic apparatus. It is used by the men on Tuesday, Wednesday, and Thursday, and by the women on Monday and Friday afternoons.

College students of the three upper classes desiring to specialize as coaches or instructors in certain sports, games, or events, may do so by conferring with the physical director.

The aims of the department are to develop organic power, the basis of vitality, the prerequisite to physical and mental efficiency; to secure and maintain good posture, a harmonious muscular development, and a certain degree of bodily skill and grace.

A thoro physical examination is given, and measurements taken of all students on entering and also on leaving the University. Physical defects, abnormalities, and weaknesses are noted, and judicious, healthful exercise is prescribed to fit the student's individual needs; this may include athletic sports or remedial gymnastics.

All freshmen are required to take the course in Hygiene given by Dr. Plowman the first semester, one hour a week.

## PHYSICAL TRAINING FOR MEN

MR. SEFTON.

All first-year and second-year men are required to take the following work: 32 hours of out-door work; 24 hours in-door class work; 8 hours lecture work (hygiene, dietetics and exercises).

For this work they are to receive one hour credit for the first year and one hour for the second year.

The gymnasium is one hundred feet in length and fifty feet in width. On the ground floor are locker rooms and bath rooms. Above is the practice floor where exercises are conducted. Directly over the practice floor is the running track.

A four-acre athletic field is provided for the use of the men students, and all intercollegiate and other games and meets are held there. The field is equipped with a grandstand, dressing rooms, cinder running track, baseball diamond, and football field with bleachers to accommodate 4000 spectators.

The intercollegiate sports are under the government of the Ohio Athletic Conference, the faculty committee appointed by the President, and a Board of Control consisting of members from the faculty and representatives of the student body elected by the students.

A limited number of intercollegiate games are scheduled subject to the approval of the faculty.

The Athletic Association is honored by the gift of the Medal presented by Mr. Frank Talbot Fisher, of New York, and also by his very generous donation of prizes for the Track Meet. They consist of two cups of the value of \$50 each and a Medal, and are given under the following conditions:

The Individual Cup is to be awarded to the athlete making the greatest number of points in the Track Meet,

and must be won by him three years in succession in order to become his permanent property.

The Class Cup is the permanent property of the Athletic Association and is to be competed for by classes each year. An honorary position upon the cup is awarded the name of the class scoring the greatest number of points in each annual Track Meet.

The medal is to be given to the athlete scoring the greatest number of points, and at once becomes his personal possession. One such Medal is to be offered for each annual Track Meet.

The Individual Cup and the Medal are open to all bona fide students. The Class Cup is open to the four classes.

The annual Track Meet to compete for these prizes will be held early in June of each year.

#### PHYSICAL TRAINING FOR WOMEN

##### MISS STEEDS

The regular work in physical training for women will begin about the middle of November and will continue for eighteen weeks. The work is required of all first-year students, and may be elected by others. The course will include gymnastics, dancing, and athletics.

**Class Schedules**  
for  
**Buchtel College**

# SCHEDULE FOR FIRST SEMESTER

Courses starred are open only to Juniors and Seniors

	MONDAY	TUESDAY	WEDNESDAY
	Cicero 25 *Eng. Fiction 79	German 105	Cicero 25 *Eng. Fiction 79
<b>7:30</b>	French 153 Logic 205 Trigonometry 301a	German History 285 Chemistry 353	French 153 Logic 205 Trigonometry 301a
	Greek 1	Class. Myth 19 Amer. Literature 75 German 119	Greek 1
<b>8:25</b>	Sci. German 129 *Psychology 201 Hist. West Europe 275 Algebra 303 Vert. Zool. 403	American History 277 Chemistry 351a Freshm. Biol. 401	Sci. German 129 *Psychology 201 Hist. West Europe 275 Algebra 303 Vert. Zool. 403
	*Greek Sculpture 17 Rhetoric 51a Rhetoric 52 *Bible Literature 71 First yr. German 101a Lessing 123 First yr. French 151a Pol. Econ. 251	*Adv. Pub. Sp. 93 First yr. German 101a  First yr. French 151a *Soc. Prob. 253 History of Art 287 Trigonometry 301b Physics 341	*Greek Sculpture 17 Rhetoric 51a Rhetoric 52 *Bible Literature 71 First yr. German 101a Lessing 123 First yr. French 151a Pol. Econ. 251
<b>9:20</b>	Trigonometry 301b Physics 341 *Org. Chem. 357 Physiology 409	Trigonometry 301b Physics 341	Trigonometry 301b Physics 341 *Org. Chem. 357 Physiology 409
	Sub-fresh. Rhet. 51 Rhetoric 51b Eng. Literature 65 German 103a German 131 Spanish 173 *Ethics 203	Elem. Pub. Sp. 91  Pol. Sci. 261 Anc. History 281 Calculus 305	Sub-fresh. Rhet. 51 Rhetoric 51b Eng. Literature 65 German 103a German 131 Spanish 173 *Ethics 203
<b>10:15</b>	Calculus 305 *Geology 323	Chemistry 351b *Org. Chem. 367	Calculus 305 *Geology 323
	Livy 27 Parl. Law 53 *Shakspeare 70 First yr. German 101b German 103b First yr. French 151b Spanish 171 Hist. of England 273	Student Meetings	Livy 27 Parl. Law 53 *Shakspeare 70 First yr. German 101b German 103b First yr. French 151b Spanish 171 Hist. of England 273
<b>11:10</b>			
	Freshm. Chem. 351a Freshm. Biol. 401a Gymnasium (Women) (2:00-4:00) Physics Lab. 343	<b>AFTERNOON</b> Freshm. Chem. 353 Freshm. Biol. 401b Gymnasium (Men) (2:00-5:00)	Freshm. Chem. 353 Freshm. Biol. 401a Gymnasium (Men) (2:00-5:00) Physics Lab. 343
<b>1:00 to 3:00</b>		*Quant. Anal. 359 *Rub. Chem. 363 *Org. Chem. 367	
<b>3:00 to 5:00</b>	Fresh. Chem. 351b Qual. Anal. 365	Fresh. Hygiene (Men) 413 (3:00-4:00) *Quant. Anal. 359 *Rub. Chem. 363 *Org. Chem. 367	Fresh. Hyg. (Women) 415 (3:00-4:00) Qual. Anal. 365

### ADDITIONAL STUDIES

The time of the following studies will be arranged to suit the convenience of instructor and student: \*Advanced Composition 63

# SCHEDULE FOR FIRST SEMESTER

	THURSDAY	FRIDAY	SATURDAY
		Cicero 25 *Eng. Fiction 79	Cicero 25
<b>7:30</b>	German 105 German History 285 Chemistry 353	French 153 Logic 205 Trigonometry 301a *Rub. Chem. 363	Trigonometry 301a *Adv. Prac. Chem. 369 (7:30-12:00)
<b>8:25</b>	Class. Myth 19 Amer. Literature 75 German 119 American History 277 Chemistry 351a Freshm. Biol. 401	Greek 1 Sci. German 129 *Psychology 201 Hist. West Europe 275 Algebra 303 Vert. Zool. 403	Greek 1 Algebra 303
<b>9:20</b>	*Greek Sculpture 17 Rhetoric 51a Rhetoric 52 *Bible Lit. 71 First yr. German 101a Lessing 123 First yr. French 151a Pol. Econ. 251  Trigonometry 301b Physics 341 *Quant. Anal. 359 Physiology 409	Assembly	
<b>10:15</b>	Elem. Pub. Sp. 91  Pol. Sci. 261 Anc. History 281 Calculus 305  Chemistry 351b *Org. Chem. 367	Sub-fresh. Rhet. 51 Rhetoric 51b Eng. Literature 65 German 103a German 131 Spanish 173 *Ethics 203  Calculus 305 *Geology 323	Elem. Pub. Sp. 91  German 131
<b>11:10</b>	*Adv. Pub. Sp. 93  *Soc. Prob. 253  History of Art 287	Livy 27 *Shakspere 70 Voice Work 97  First yr. German 101b German 103b First yr. French 151b Spanish 171 Hist. of England 273 Freshm. Biol. Sem. 401	First yr. German 101b First yr. French 151b
<b>1:00 to 3:00</b>	Freshm. Biol. 401b Gymnasium (Men) (2:00-5:00)  *Rub. Chem. 363 *Org. Chem. 357	<b>AFTERNOON</b> Freshm. Chem. 351a  Gymnasium (Women) (2:00-4:00)  *Quant. Anal. 359 Qual. Anal. 365 (2:00-5:00) *Adv. Prac. Chem. 369	
<b>3:00 to 5:00</b>	Freshm. Biol. Sem. 401 (3:00-4:00)  *Rub. Chem. 363 *Org. Chem. 357	Fresh. Chem. 351b  Qual. Anal. 365 (2:00-5:00) *Adv. Prac. Chem. 369	

(two term hours), \*Dramatic Study Club 95 (one term hour), \*Faust 117 (three term hours), French Diary 165 (one term hour), French Conversation 167 (two term hours), Advanced French 157 (two term hours), Vertebrate Zoology Lab. 403, Physiology Lab. 409.

# SCHEDULE FOR SECOND SEMESTER

Courses starred are open only to Juniors and Seniors

	MONDAY	TUESDAY	WEDNESDAY
	Pliny 28 Eng. Literature 65 *Eng. Fiction 80		Pliny 28 Eng. Literature 65 *Eng. Fiction 80
<b>7:30</b>	French 154 Anal. Geom. 302a	German 106 Curr. Events 290a Chemistry 354	French 154 Anal. Geom. 302a
<b>8:25</b>	Greek 2 Sci. German 130 *Psychology 202 Hist. West Europe 276 Trigonometry 301	Class. Arch. 20 Amer. Literature 76 German 120 *Mun. Org. and Man. 264 Amer. History 278 Chemistry 352a Freshm. Biol. 402	Greek 2 Sci. German 130 *Psychology 202 Hist. West Europe 276 Trigonometry 301
<b>9:20</b>	Embryology 404 *Greek Sculp. 18 Rhetoric 52a *Bible Lit. 72 First yr. German 102a German 124 First yr. French 152a Sociology 252 Anal. Geom. 302b Physics 342 *Org. Chem. 358 Physiology 410	*Adv. Pub. Sp. 94 First yr. German 102a First yr. French 152a Econ. Prob. 254 History of Art 288 Anal. Geom. 302b Physics 342	Embryology 404 *Greek Sculp. 18 Rhetoric 52a *Bible Lit. 72 First yr. German 102a German 124 First yr. French 152a Sociology 252 Anal. Geom. 302b Physics 342 *Org. Chem. 358 Physiology 410
<b>10:15</b>	Rhetoric 51 Rhetoric 52b Eng. Literature 66 German 104a German 132 Spanish 174 *Ethics 204 Calculus 306 *Astronomy 320	*Tenn. and Browning 74 Elem. Pub. Speaking 92 Fed. Gov. 262 Anc. Hist. 282 Calculus 306 Chemistry 352b *Org. Chem. 368	Rhetoric 51 Rhetoric 52b Eng. Literature 66 German 104a German 132 Spanish 174 *Ethics 204 Calculus 306 *Astronomy 320
<b>11:10</b>	Terence 28 News Writing 54 First yr. German 102b German 104b First yr. French 152b Spanish 172 Hist. of England 274	Student Meetings	Terence 28 News Writing 54 First yr. German 102b German 104b First yr. French 152b Spanish 172 Hist. of England 274
	<b>AFTERNOON</b>		
<b>1:00 to 3:00</b>	Freshm. Chem. 352a Fresh. Biol. 402a Physics Lab. 344 Gymnasium (Women) (2:00-4:00)	Freshm. Chem. 354 Freshm. Biol. 402b *Quant. Anal. 360 *Rub. Chem. 364 *Org. Chem. 368 Gymnasium (Men) (2:00-5:00)	Freshm. Chem. 354 Fresh. Biol. 402a Physics Lab. 344 Gymnasium (Men) (2:00-5:00)
<b>3:00 to 5:00</b>	Freshm. Chem. 352b Qual. Anal. 366	*Quant. Anal. 360 *Rub. Chem. 364 *Org. Chem. 368 Conservation 418 (3:00-4:00)	Current Events 290c (3:00-4:00) Qual. Anal. 366 Conservation 418 (3:00-4:00)

### ADDITIONAL STUDIES

The time of the following studies will be arranged to suit the convenience of instructor and student: \*Advanced Composition 66 (two term hours), \*Dramatic Study Club 96 (one term hour),

# SCHEDULE FOR SECOND SEMESTER

	THURSDAY	FRIDAY	SATURDAY
		Pliny 26 Eng. Literature 65 *Eng. Fiction 80	Pliny 26
<b>7:30</b>	German 106 Curr. Events 290b Chemistry 354	French 154 Anal. Geom. 302a *Rub. Chem. 364	Anal. Geom. 302a *Adv. Prac. Chem. 370 (7:30-12:00)
<b>8:25</b>	Class. Arch. 20 Amer. Literature 76 German 120 *Mun. Org. and Man. 264 Amer. History 278 Chemistry 352a Freshm. Biol. 402	Greek 2 Sci. German 130 *Psychology 202 Hist. West Europe 276 Trigonometry 301 Embryology 404	Greek 2 Trigonometry 301
<b>9:20</b>	*Greek Sculp. 18 Rhetoric 52a *Bible Lit. 72 First yr. German 102a German 124 First yr. French 152a Sociology 252 Anal. Geom. 302b Physics 342 *Quant. Anal. 360 Physiology 410	Assembly	
<b>10:15</b>	*Tenn. and Browning 74 Elem. Pub. Speaking 92 Fed. Gov. 262 Anc. Hist. 282 Calculus 306 Chemistry 352b *Org. Chem. 368	Rhetoric 51 Rhetoric 52b Eng. Literature 66 German 104a German 132 Spanish 174 *Ethics 204 Surveying 304 Calculus 306 *Astronomy 320	Elem. Pub. Speaking 92 German 132
<b>11:10</b>	*Adv. Pub. Sp. 94 Econ. Prob. 254 History of Art 288	Terence 28 Voice Work 98 First yr. German 102b German 104b First yr. French 152b Spanish 172 Hist. of England 274 Freshm. Biol. Sem. 402	First yr. German 102b First yr. French 152b
<b>1:00 to 3:00</b>	Freshm. Biol. 402b *Rub. Chem. 364 *Org. Chem. 358 Gymnasium (Men) (2:00-5:00) Freshm. Biol. Sem. 402 (3:00-4:00)	<b>AFTERNOON</b> Freshm. Chem. 352a *Quant. Anal. 360 Qual. Anal. 366 (2:00-5:00) *Adv. Prac. Chem. 370 Gymnasium (Women) (2:00-4:00) Freshm. Chem. 352b	
<b>3:00 to 5:00</b>	*Rub. Chem. 364 *Org. Chem. 358	Qual. Anal. 366 (2:00-5:00) *Adv. Prac. Chem. 370	

\*German 118 (three term hours), French Diary 166 (one term hour), French Conversation 168 (two term hours), Advanced French 158 (two term hours), Embryology Lab. 404, Physiology Lab. 410.

**COLLEGE OF ENGINEERING**

FRED E. AYER, C. E., DEAN

*GENERAL INFORMATION*

The Directors of the Municipal University of Akron established the College of Engineering in 1914 and adopted the five-year co-operative course, patterned after the "Cincinnati Plan".

The "Cincinnati Plan" aims to give the student a thorough training in both the theory and practice of engineering by requiring the practice to be learned under actual commercial conditions in local industrial organizations and the underlying science to be studied in the University under trained educators. To accomplish this the students are grouped in two sections, one of which is at work and the other in attendance at the University. For example, A, who is in section one, attends classes at the University for two weeks while B, who is paired with A and who is in section two, is at work. They then change places and B attends the University for two weeks while A is at work. Of course this necessitates the giving of all University work twice, once for each section.

Five years of eleven months each are required to complete the course, each student being allowed a vacation of one week at Christmas time, one week at Easter or during commencement week, and two weeks in the latter part of the summer.

Candidates for admission are expected to spend the summer preceding their entrance at continuous work on a job provided by the University. This probationary period affords the student an opportunity to test his fitness

and liking for the course and demonstrates his ability to satisfy his employer. Candidates who have definitely decided to take the course and who can present satisfactory evidence of their ability to do the outside work, may be excused during the first summer's probationary period. But, in order to provide a job for each entering student, it is necessary that applications be received prior to July first. Students applying after that date will not be accepted unless there are vacancies due to resignations.

While a student is at work, he is subject to all the rules and regulations imposed by his employer upon the other employees. All existing labor laws and conditions, including those pertaining to liability for accident, apply to the student in the same way as to any other employee.

In order to operate a co-operative course in engineering, the Engineering College must be located in or near an industrial center and while there are over six hundred colleges and universities in the United States, yet comparatively few of them are so located that such a course is practicable. Akron is essentially a manufacturing center, and the President and Directors of the Municipal University of Akron selected this type of engineering education as being the latest and the one best adapted to the city's needs, therefore no other courses in engineering will be offered.

### *SHOP WORK*

The Dean of the College of Engineering and the employer so plan the work that the student gets a carefully graded training beginning with work requiring no skill or experience and ending with actual engineering work.

The shop work and the University work will be co-ordinated by a technically trained man, experienced in en-

gineering practice. Thruout the five years of University work he will give courses whose aim is twofold. First, they supplement the outside training by explaining the different operations, the sequence of work, the technicalities of the machines, and, in short, any part of the work which the student does not understand, and which the foreman has not time to explain. This shows the student the vast educational opportunities open to him in his outside work and makes him more useful to his employer. Secondly, these courses cover the field of factory organization and cost accounting, routing of work for efficient production, study of the conditions leading to maximum production, and the influence of shop environment. The instruction given in all the courses is carefully planned to develop in each student the power of observation and the ability to analyze the problems arising in his work.

The outside work, properly co-ordinated with the University training, furnishes a large part of the technical detail required in engineering subjects.

#### *WAGES*

Engineering students are paid for their work in the shops the same as other employees. Beginners are paid a little more than apprentices and are increased according to a rate agreed upon by the employer and the Dean of the Engineering College. Specific information will be given applicants previous to the beginning of their work. Students are paid only for the time actually employed, and receive their wages direct, as does any other employee.

#### *ADMISSION*

Candidates for admission must be at least sixteen years of age, and must present fifteen units of secondary school

work. Students will be admitted with entrance conditions amounting to not more than one unit. Such conditions must be removed during the freshman year.

*ENTRANCE REQUIREMENTS*

The following units must be presented without conditions:

- \*English..... 3 units
- Mathematics ..... 2½ units (½ unit of Solid Geometry required)
- Foreign Language .... 2 units (In one language)
- History ..... 1 unit
- Chemistry or Physics.. 1 unit
- Elective ..... 5½ units

*COURSES OF STUDY*

The courses of study given in the Engineering College are of the same grade as those required in any recognized technical institution. The student is required to maintain good standing in both his outside and University work, and the work in both places is so planned that he will be equipped at graduation to enter practice at once without further preliminary training by his employer.

\*Graduates of the Commercial Course in Akron High Schools are admitted to the Business Training Department without condition in English.

## OUTLINE OF COURSE

(First four years.)

## FRESHMAN YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Mathematics 725 and 727.6 .		Mathematics 728 .....	6
Elementary Mechanics		Elementary Mechanics	
785 .....	2	786 .....	2
Chemistry 741 .....	8	Chemistry 742 .....	8
English 701 .....	1	English 702 .....	1
Co-ordination 801 .....	1	Co-ordination 802 .....	1
Shop Practice 805.....	2	Shop Practice 806 .....	2
Mechanical Drawing 811.2		Descriptive Geom. 812 ..	2

*Summer Term*

Mathematics, 729 .....	6
Descriptive Geometry, 832 .....	6
Surveying, 830 .....	10

## SOPHOMORE YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Mathematics 731 .....	6	Mathematics 732 .....	6
*French 719 .....	6	French 720 .....	6
Physics 781 .....	4	Physics 782 .....	4
Physics Laboratory 783. 4		Physics Laboratory 784. 4	
English 703 .....	1	English 704 .....	1
Co-ordination 803 .....	2	Co-ordination 804 .....	2
Graphic Statics 813 ....	2	Machine Drawing 814..	2

*Summer Term*

Mathematics 733 .....	6
Strength of Materials, 833 .....	6
Materials Laboratory (M. E.'s only).....	10
Surveying 831 (C. E.'s only).....	10

\*Beginning with 1917-18, modern language will commence in the Sophomore instead of the Freshman year.

## PRE-JUNIOR YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Strength of Materials 815 .....	6	Applied Mechanics 816... 0	
Steam Engineering 825.	6	English Literature 712... 2	
English Literature 711.	2	French 722 or	
French 721 or		German 792 .....	1
German 791 .....	1	Hydraulics 820 .....	4
Roofs and Bridges 827.	7	Roofs and Bridges 828.10	
(C. E.'s only)		(C. E.'s only)	
Materials Laboratory ..	2	Steam Engineering 826.	6
Mechanism 819 .....	4	(M. E.'s only)	
(M. E.'s only)		Machine Design 818....	6
Graphics of Mechanism		(M. E.'s only)	
823 .....	4	Materials Laboratory ...	2
(M. E.'s only)		(C. E.'s only)	

## JUNIOR YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Economics 737 .....	6	Economics 738 .....	6
Electricity 841 .....	6	Electricity 842 .....	6
Electrical Lab. 843.....	2	Electrical Lab. 844.....	2
French 723 or		French 724	
German 793 .....	1	or German 794 ....	1
English 707 .....	1	English 708 .....	1
Mechanical Lab. 837		Mechanical Lab. 838	
(M. E.'s) .....	2	(M. E.'s) .....	2
(C. E.'s) .....	1	(C. E.'s) .....	1
Machine Shop Tools		Production Engineering	
839 (M. E.'s) .....	5	840 (M. E.'s) .....	5
Cement 835 (C. E.'s)...	3	Structural Design 846	
Structural Design 846		(C. S.'s) .....	5
(C. E.'s) .....	2		

## DEGREES

The degrees of Civil Engineer and Mechanical Engineer will be given to those students who satisfactorily complete

the required work in those departments. In addition to his diploma, each student will receive a certificate showing his practical experience in detail.

### FEES

Resident Students:—According to the rules adopted by the Board of Directors, all students who are residents of the City of Akron or whose parents are residents of Akron, are entitled to free tuition at the University. They are, however, required to pay an incidental fee of \$10.00 per semester, covering registration, incidentals and student activity fee. If not paid within one week after registration the fee is \$12.50 per semester. Small fees to cover breakage and materials are also charged to all students in laboratory courses.

Non-resident Students:—The tuition for non-resident students is \$25.00 for the first semester, \$25.00 for the second semester and \$10.00 for the summer term in addition to the incidental fee of \$10.00 per semester. Small fees to cover breakage and materials are charged to all students in laboratory courses. If not paid within one week after registration the tuition fee is \$30.00 for the first and second semesters and the incidental fee is \$12.50 and the tuition for the summer term is \$12.50.

There are two registration days for students in the College of Engineering and the Department of Business Training, one for each section. For example, students in section one will register on September 17, 1917, and those in section two on October 1, 1917. Students registering after these dates are charged an additional fee of one dollar for the first day and twenty-five cents per day for each succeeding day thereafter, but no one will be accepted later than five days after the date set for registration.

*Laboratory Fees*

The following laboratory fees are charged for courses in the College of Engineering and the Department of Business Training. By action of the Directors these laboratory fees are collectable strictly in advance and are a necessary pre-requisite to enrollment in classes.

Chemistry 741, 742, per semester.....	\$3.00
Deposit for breakage in all courses, per semester.....	5.00
Surveying 830, 831, per summer term.....	2.00
Materials Laboratory, per semester.....	2.00

The unused portion of the breakage deposit will be returned at the end of each semester.

ESTIMATED EXPENSE OF FRESHMAN YEAR

*First Semester*

	Resident	Non-resident
Tuition .....	Free	\$25.00
Fees .....	\$18.00	18.00
Books and Drawing Instruments	22.00	22.00
	<hr/>	<hr/>
	\$40.00	\$65.00

*Second Semester*

Tuition .....	Free	\$25.00
Fees .....	\$18.00	18.00
Books .....	6.00	6.00
	<hr/>	<hr/>
	\$24.00	\$49.00

*Summer Term*

Tuition .....	Free	\$10.00
Fees .....	\$2.00	2.00
Books .....	5.00	5.00
	<hr/>	<hr/>
	\$7.00	\$17.00

Board and room can be obtained at from \$5.00 to \$7.00 per week. The minimum wage paid is twelve and one-half cents per hour or \$6.75 per week for Engineering students and \$40 per month for Business Training students, for time worked.

*DEPARTMENTS OF INSTRUCTION*

The general system of numbering and arrangement is according to the following order:

English .....	701-712
French .....	717-724
Mathematics .....	725-736
Economics and Political Science .....	737-740
Chemistry .....	741-770
Biology and Geology .....	771-779
Physics and Mechanics .....	780-790
German .....	790-800
Engineering Subjects .....	801-900
Business Training Subjects .....	901-999

*ENGLISH*

English Composition is taught by the "laboratory method". Inspection trip, laboratory, and special reports are written under the direction of the English Department and criticized by this department for language and by the Engineering Department for contents. The written work is supplemented by conferences and lectures and con-

tinues thruout the five years of the course in order to impress the student with the fact that his language, whether it be in reports, recitations or examinations, is always liable to the criticism of the English Department. The work receives one hour of credit per semester.

In addition to English Composition a two-hour course in English Literature is given thruout the third year.

701. English Composition (*Freshman Year, First Semester.*)  
(One Hour.)
702. English Composition (*Freshman Year, Second Semester.*)  
(One Hour.)
703. English Composition (*Sophomore Year, First Semester.*)  
(One Hour.)
704. English Composition (*Sophomore Year, Second Semester.*)  
(One Hour.)
705. English Composition (*Pre-Junior Year, First Semester.*)  
(One Hour.)
706. English Composition (*Pre-Junior Year, Second Semester.*)  
(One Hour.)
707. English Composition (*Junior Year, First Semester.*)  
(One Hour.)
708. English Composition (*Junior Year, Second Semester.*)  
(One Hour.)
709. English Composition (*Senior Year, First Semester.*)  
(One Hour.)

710. English Composition (*Senior Year, Second Semester.*)

(One Hour.)

711. English Literature (*Pre-Junior Year, First Semester.*)

(Two Hours.)

The object of this course is to acquaint the student with different types of good literature and develop in him a taste for good reading. Much reading is required and still more is recommended.

712. English Literature (*Pre-Junior Year, Second Semester.*)

(Two Hours.) A continuation of 711.

### FRENCH

French is a required subject for all engineering students.

\*717. (*Freshman Year, First Semester.*)

(Six Hours.)

Fraser and Squair's French Grammar. Francois and Giroud's Simple French Reader. Practice in pronunciation, dictation and composition.

\*718. (*Freshman Year, Second Semester.*)

(Six Hours.) A continuation of the work of 717.

In addition to the reader begun in the first semester, the class will read Bowen's First Scientific French Reader.

719. (*Sophomore Year, First Semester.*)

(Six Hours.)

Reading of French technical books and journals.

720. (*Sophomore Year, Second Semester.*)

(Six Hours.) Continuation of 719.

\*Not given in 1917-18.

721. (*Pre-Junior Year, First Semester.*)  
(One Hour.) Continuation of 719.
722. (*Pre-Junior Year, Second Semester.*)  
(One Hour.) Continuation of 719.
723. (*Junior Year, First Semester.*)  
(One Hour.) Continuation of 719.
724. (*Junior Year, Second Semester.*)  
(One Hour.) Continuation of 719.

#### GERMAN

Junior and Pre-Junior students who started in German will continue reading from Hütte in the following courses:

791. (*Pre-Junior Year, First Semester.*)  
(One Hour.)
792. (*Pre-Junior Year, Second Semester.*)  
(One Hour.)
793. (*Junior Year, First Semester.*)  
(One Hour.)
794. (*Junior Year, Second Semester.*)  
(One Hour.)

#### MATHEMATICS

725. *College Algebra.*—(*Freshman Year, First Semester.*)  
(Two Hours.)

This course aims to give a general review of advanced algebra. The work includes quadratics with graphical representations, variation, partial fractions, logarithms and the general theory of equations.

727. *Plane Trigonometry.*—(*Freshman Year, First Semester.*)  
(Four Hours.)

The work includes goniometry, trigonometric equations, solution of plane triangles and construction of tables. Effort is made to acquaint the student with the means of testing the accuracy of his work and to develop habits of neat arrangement and rough checking in his computations. Numerous applications to practical problems are made.

728. *Plane Analytic Geometry.*—(*Freshman Year, Second Semester.*)

(Six Hours.)

The work includes:—The straight-line and general equations of the first degree, polar co-ordinates, transformation of co-ordinates, conic sections and equations of the second degree, tangents, normals, loci, parametric equations, poles and polars, the general equation of the second degree, and a few higher plane curves.

729. *Plane Analytic Geometry.*—(*Freshman Year, Summer Term.*)

(Six Hours.) A continuation of 728.

731. *Differential Calculus.*—(*Sophomore Year, First Semester.*)

(Six Hours.)

The work includes functions, theory of limits, differentiations, series, expansion of functions, indeterminate forms, maxima and minima of functions of one or more variables, partial derivatives, direction of curves, curvatures, tangents and normals.

732. *Integral Calculus.*—(*Sophomore Year, Second Semester.*)

(Six Hours.)

The work includes integration of standard forms, constant of integration, integration of rational fractions, trigonometric forms, integration by parts, integration by substitu-

tion, summations and definite integral, application to curves and simple volumes of revolution.

733. *Integral Calculus.*—(*Sophomore Year, Summer Term.*)

(Six Hours.) Continuation of 732.

734. *Engineering Mathematics.*—(*Entire Year.*)

(Four Hours.)

This course is given during the senior year, and gives a review of the algebra, trigonometry, analytical geometry, calculus and analytical mechanics, showing the logical connection of the several subjects and their connection with engineering problems.

### ECONOMICS

737. *Economics.*—(*Junior Engineering and Sophomore Business Training Students, First Semester.*)

(Six Hours.)

A consideration of the fundamental concepts of economics; definition of terms, theory of value, production, consumption, distribution, etc.

738. *Economics.*—(*Junior Engineering and Sophomore Business Training Students, Second Semester.*)

(Six Hours.)

A study of practical economic problems such as wages, interest, rent, currency, banking, taxation, trusts, tariff and socialism.

### CHEMISTRY

741. (*Freshman Year, First Semester.*)

(Four hours recitation, four periods laboratory.)

A study of the newer theories of Chemistry with special attention to their application to commercial problems.

742. (*Freshman Year, Second Semester.*)

(Four hours recitation, four periods laboratory.)

A continuation of 741.

During the last half of the semester each student is required to make, and test before the class, at least one salt of each metal.

This course is planned to develop originality in the student rather than cover a large field. He is thrown upon his own resources as much as possible and taught how to attack a problem.

\*743. *Metallurgy.*—(*Summer Term.*)

(Six Hours.)

A review of the properties of metals and ores and the principles used in the present practice of metallurgy.

## PHYSICS

785. *Elementary Mechanics.* — (*Freshman Year, First Semester.*)

(Two Hours.)

The force triangle including the resolution and composition of forces. Parallel forces, moments and beam reactions. One recitation and one laboratory period per week.

786. *Elementary Mechanics.*—(*Freshman Year, Second Semester.*)

(Two Hours.)

Continuation of 785.

781. *General Physics.*—(*Sophomore Year, First Semester.*)

(Four Hours.)

The work includes dynamics, velocity, acceleration, impulse, work and energy, projectiles, mechanics of liquids and gases, the properties of matter and its internal forces, wave motion, general principles of sound and of heat.

\*Not given in summer of 1917.

783. *General Physics Laboratory.*—(*Sophomore Year, First Semester.*)

(Four Periods.)

Experiments involving mechanics, sound and heat.

782. *General Physics.*—(*Sophomore Year, Second Semester.*)

(Four Hours.)

The work includes light, electricity and magnetism.

784. *General Physics Laboratory.*—(*Sophomore Year, Second Semester.*)

(Four Periods.)

Experiments involving light, magnetism and electricity.

### ENGINEERING

801. *Co-ordination.*—(*Freshman Year, First Semester.*)  
(One Hour.)

Discussion of questions arising in students' work. Observation sheets, detailed reports and problems.

802. *Co-ordination.*—(*Freshman Year, Second Semester.*)  
(One Hour.) Continuation of 801.

805. *Shop Practice.* (*Freshman year, First Semester.*)  
(Two Hours.)

An elementary study of the processes, methods and equipment of production, including the work of the foundry, machine shop and forge shop.

806. *Shop Practice.* (*Freshman Year, Second Semester.*)  
(Two Hours.) Continuation of 805.

803. *Co-ordination.*—(*Sophomore Year, First Semester.*)  
(Two Hours.) Continuation of 802.

804. *Co-ordination.*—(*Sophomore Year, Second Semester.*)  
(Two Hours.) Continuation of 803.

811. *Mechanical Drawing.*—(*Freshman Year, First Semester.*)  
(Four Hours.)

Standard details of structural shapes, bolts, nuts, screws, etc. Free hand lettering and sketching. Elementary descriptive geometry.

812. *Descriptive Geometry.*—(*Freshman Year, Second Semester.*)  
(Four Hours.)

Projections of lines, intersections of planes, projections of solids with practical applications. Free hand lettering and sketching.

832. *Descriptive Geometry.* (*Freshman Year, Summer Term.*) (Six Periods.) Continuation of 812.

813. *Graphic Statics.*—(*Sophomore Year, First Semester.*)  
(Four Hours.)

The graphical solution of elementary problems in mechanics.

814. *Machine Drawing.*—(*Sophomore Year, Second Semester.*)  
(Four Hours.)

Detail drawings from measurements of machines.

833. *Strength of Materials.* (*Sophomore Year, Summer Term.*) (Six Hours.)

Tensile, compressive and shearing stresses. Stress-strain diagrams.

815. *Strength of Materials.* (*Pre-Junior Year, First Semester.*) (Six Hours.)

Center of gravity, moment of inertia and radius of gyration. Theory and design of beams, columns and shafts.

816. *Analytic Mechanics. (Pre-Junior Year, Second Semester.)* (Six Hours.)

Kinematics, kinetics and dynamics accompanied by numerous problems.

817. *Materials Laboratory. (Sophomore Year, Summer Term.)* (Five afternoons for M. E.'s only.)

Tensile, compressive, transverse and torsional tests of the common kinds of wood, iron and steel. Standard tests of paving brick, rubber and other materials.

819. *Materials Laboratory. (Pre-Junior Year, First Semester.)* (One afternoon for C. E.'s, one afternoon for M. E.'s.) See 817.

818. *Materials Laboratory. (Pre-Junior Year, Second Semester.)* (One afternoon for C. E.'s only.) See 817.

821. *Mechanism. Pre-Junior Year, First Semester.)*  
(Four Hours.)

A study of the various means of transmitting and modifying machine motions.

823. *Graphics of Mechanism. (Pre-Junior Year, First Semester.)* (Four Hours.)

Graphic representation of common methods of transmitting and modifying motion by means of cams, links and toothed wheels.

824. *Hydraulics. (Pre-Junior Year, Second Semester.)*  
(Four Hours.)

Flotation, pressures on gates and dams. Theory of the flow of water thru orifices, tubes, pipes and channels. Hydraulic machinery.

820. *Machine Design. (Pre-Junior Year, Second Semester.)* (Six Hours.)

Elementary problems in the design of gearing, shafting, bearings, flywheels, cylinders and other machine parts.

822. *Machine Design.* (*Pre-Junior Year, Summer Term.*)  
(Eight hours per day, five and one-half days per week.)

Complete design of two machines, one assigned by the instructor and one selected by the student and approved by the instructor.

825. *Steam Engineering.*—(*Pre-Junior Year, First Semester.*)  
(Six Hours.)

Elements and economy of simple and complete steam plants.

826. *Steam Engineering.*—(*Pre-Junior Year, Second Semester.*)  
(Six Hours.) A continuation of 825.

827. *Roofs and Bridges.*—(*Pre-Junior Year, First Semester.*)  
(Seven Hours.)

Calculation of stresses in framed structures under static and moving loads by both graphic and analytic methods.

828. *Roofs and Bridges.*—(*Pre-Junior Year, Second Semester.*)  
(Ten Hours.) A continuation of 827.

830. *Surveying.*—(*First Summer Term.*)  
(Ten Hours.)

The theory and use of the transit and level. The surveying of areas and computations of the same. Maps and profiles.

831. *Surveying.*—(*Second Summer Term.*)  
(Ten Hours.) A continuation of 830.

Tests and adjustments of instruments. Topographic Surveying.

835. *Cement. (Junior Year, First Semester.)*  
(Three Hours.)

Theory and manufacture. Standard laboratory tests of cement, mortar and concrete.

836. *Railroads. (Pre-Junior Year, Summer Term, C. E.'s only.)*

An intensive course in railroad construction and surveying given eight hours per day, five and one-half days per week.

837. *Mechanical Laboratory. (Junior Year, First Semester.)* (Two afternoons for M. E.'s and one afternoon for C. E.'s.)

The standardization of instruments and the testing of boilers, steam engines and gas engines.

838. *Mechanical Laboratory. (Junior Year, Second Semester.)* Continuation of 837.

839. *Machine Shop Tools. Junior Year, First Semester.)*  
(Five Hours.)

The theory and analysis of present accepted practices of cutting metal by lathe and planer tools, milling cutters, twist drills, and abrasive wheels. Advanced methods of machine production. Jigs, fixtures and attachments.

840. *Production Engineering. (Junior Year, Second Semester.)* (Five Hours.)

A study of the principles underlying production management, including motion study and time setting, wage systems, time and stock systems, routing of work and factory lay-outs.

841. *Electricity. (Junior Year, First Semester.)*  
(Six Hours.)

*Theory of Electricity and Magnetism.*

This course is mainly a mathematical treatment of the subject. It includes a general treatment of permanent magnets, terrestrial magnetism, electrostatics, capacity, electrothermo electricity, and general electro-magnetic theory. During each semester about 500 problems involving practical applications are solved.

842. *Electricity. (Junior Year, Second Semester.)*  
(Six Hours.)

This course is a continuation of course 841. During the second semester a detailed study of theory of meters, direct and alternating current machinery is made in addition to the problem work.

843. *Electrical Laboratory. (Junior Year, First Semester.)*  
(Two Afternoons.)

This course is designed to supplement and correlate course number 841.

844. *Electrical Laboratory. (Junior Year, Second Semester.)* (Two Afternoons.)

This course is designed to supplement and correlate course number 842.

845. *Structural Design. (Junior Year, First Semester.)*  
(Two Hours.)

The design of a roof truss, plate girder and pin-connected truss, including the details of the important joints. Contracts, specifications, shop inspection trips.

846. *Structural Design. (Junior Year, Second Semester.)*  
(Five Hours.) Completion of 845.

*College of Engineering and Department  
of Business Training*



SCHEDULE  
*of*  
CLASSES

## FIRST SEMESTER

### 1917—1918

	MONDAY	TUESDAY	WEDNESDAY
<b>7:30</b>	Mathematics 727 French 719 Steam Eng'r'g. 825 Economics 737	Mathematics 725 French 719 Steam Eng'r'g. 825 Economics 737	Mathematics 727 French 719 Steam Eng'r'g. 825 Economics 737
<b>8:25</b>	Spanish 917 Co-ordination 801 Mathematics 731 Strength of Mat'ls 815 Electricity 841	Spanish 917 Mathematics 731 Strength of Mat'ls 815 Electricity 841	Spanish 917 Shop Practice 805 Mathematics 731 Strength of Mat'ls 815 Electricity 841
<b>9:20</b>	Co-ordination 901 Physics 781 Machine Shop Tools 839 Cement 835	Chemistry Lab. 741 Physics Lab. 783 Machine Shop Tools 839 Cement 835	Co-ordination 901 Physics 781 Machine Shop Tools 839 Cement 835
<b>10:15</b>	Chemistry 741 Cement 835 Co-ordination 803 Co-ordination 903	Chemistry Lab. 741 Physics Lab. 783 Roofs & Bridges 827 Mechanism 821 Economic Geography 927	Chemistry 741 Cement 835 Co-ordination 803 Co-ordination 903
<b>11:10</b>	Economic Geography 927 English Lit. 711 Cement 835	Student Meetings	Economic Geography 927 English Lit. 711 Elem. Mechanics 785 Cement 835
<b>1:00</b>	English 701 (1:30 to 2:30) Materials Lab. 819 (M. E.)	Mechanical D'w'g 811 (1:00 to 3:40) English 703 (1:30-2:30) Roofs & Bridges 827	Mechanical D'w'g 811 (1:00 to 3:40) Mechanical Lab. 837
<b>5:00</b>	Machine Drawing 813 Cost Accounting 915 Accounting Problems	Electrical Lab. 843 Bookkeeping 911, 913 (1:00 to 3:40)	Bookkeeping 911, 913 (1:00 to 3:40)

## SECOND SEMESTER

### 1917—1918

	MONDAY	TUESDAY	WEDNESDAY
<b>7:30</b>	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828
<b>8:25</b>	Co-ordination 802 Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842	Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842	Shop Practice 806 Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842
<b>9:20</b>	Co-ordination 902 Physics 782 Production Eng. 840 Structural Design 846	Chem. Lab. 742 Physics Lab. 784 Production Eng. 840 Structural Design 846	Co-ordination 902 Physics 782 Production Eng. 840 Structural Design 846
<b>10:15</b>	Chemistry 742 Structural Design 846 Co-ordination 804 Co-ordination 904	Chemistry Lab. 742 Physics Lab. 784 Hydraulics 824 Economic Geog. 928	Chemistry 742 Structural Design 846 Co-ordination 804 Co-ordination 904
<b>11:10</b>	English Literature 712 Structural Design 846 Economic Geog. 928 Graphic Statics. 814	Student Meetings Descriptive Geom. 812 (1:00 to 3:40) English 704 (1:30 to 2:30) Roofs and Bridges 828 Electrical Lab. 844 Bookkeeping 912 (1:00 to 3:40) Theory of Acc'ts. 916	English Literature 712 Structural Design 846 Elem. Mech. 786 Economic Geog. 928 Descriptive Geom. 812 (1:00 to 3:40) Mechanical Lab. 838 Machine Design 820 Bookkeeping 912 (1:00 to 3:40) Theory of Acc'ts. 916
<b>1:00 to 5:00</b>	English 702 (1:30 to 2:30) Materials Lab. 820 (M. E.'s) Accounting Problems		

## FIRST SEMESTER

1917—1918

	THURSDAY	FRIDAY	SATURDAY
<b>7:30</b>	Mathematics 727 French 719 Steam Eng'r'g 825 Economics 737	Mathematics 725 French 719 Steam Eng'r'g 825 Economics 737	Mathematics 727 French 719 Steam Eng'r'g 825 Economics 737
	Spanish 917	Spanish 917 Shop Practice 805	Spanish 917
<b>8:25</b>	Mathematics 731 Strength of Mat'ls 815 Electricity 841	Mathematics 731 Strength of Mat'ls 815 Electricity 841	Mathematics 731 Strength of Mat'ls 815 Electricity 841
<b>9:20</b>	Chemistry 741 Physics 781 Machine Shop Tools 839 Structural Design 845	Assembly	Chemistry 741 Physics 781 Machine Shop Tools 839 Structural Design 845
<b>10:15</b>	Chemistry Lab. 741 Physics Lab. 783 Structural Design 845	Chemistry Lab. 741 Physics Lab. 783	Chemistry Lab. 741 Physics Lab. 783 Structural Design 845
<b>11:10</b>	Economic Geography 927 Chemistry Lab. 741 Physics Lab. 783 Structural Design 845 Mechanism 821 Roofs and Bridges 827	Economic Geography 927 Chemistry Lab. 741 Physics Lab. 783 Mechanism 821	Economic Geography 927 Chemistry Lab. 741 Physics Lab. 783 Structural Design 845 Mechanism 821 Roofs and Bridges 827
<b>1:00 to 5:00</b>	Elem. Mechanics 785 Roofs and Bridges 827 Graphics of Mechanism 823 Mechanical Lab. 837 (M. E.'s only) Cost Accounting 915 Accounting Problems	Mechanical D'w'g 811 (1:00 to 3:40) Materials Lab. 819 (C.E.) Graphics of Mechanism 823 Machine Drawing 813 Electrical Lab. 843 Bookkeeping 911, 913 (1:00 to 3:40)	

## SECOND SEMESTER

1917—1918

	THURSDAY	FRIDAY	SATURDAY
<b>7:30</b>	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828	Mathematics 728 French 720 Steam Eng'r'g 826 Economics 738 Roofs and Bridges 828
<b>8:25</b>	Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842	Shop Practice 806 Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842	Spanish 918 Mathematics 732 Analytic Mechanics 816 Electricity 842
<b>9:20</b>	Chemistry 742 Physics 782 Production Eng. 840 Structural Design 846	Assembly	Chemistry 742 Physics 782 Production Eng. 840 Structural Design 846
<b>10:15</b>	Chem. Lab. 742 Physics Lab. 784 Structural Design 846	Chem. Lab. 742 Physics Lab. 784	Chem. Lab. 742 Physics Lab. 784 Structural Design 846
<b>11:10</b>	Chem. Lab. 742 Physics Lab. 784 Hydraulics 824 Structural Design 846 Economic Geog. 928	Chem. Lab. 742 Physics Lab. 784 Hydraulics 824 Economic Geog. 928	Chem. Lab. 742 Physics Lab. 784 Hydraulics 824 Structural Design 846 Economic Geog. 928
<b>1:00 to 5:00</b>	Mechanical Lab. 838 (M. E.'s only) Elem. Mech. 786 Roofs and Bridges 828 Machine Design 820 Accounting Problems	Descriptive Geom. 812 (1:00 to 3:40) Materials Lab. 819 (C. E.'s) Graphic Statics. 814 Machine Design 820 Electrical Lab. 844 Bookkeeping 912 (1:00 to 3:40) Theory of Acc'ts. 916	

DEPARTMENT OF BUSINESS TRAINING

ASSISTANT-PROFESSOR BENNETT

GENERAL INFORMATION

The course in Business Training was established by the Board of Directors of the University in 1916, and opened with the fall term in September. It is conducted on the co-operative plan as is the course in Engineering, but is open to students of both sexes. The aim of the course is to give the student an opportunity to secure a rounded education and, at the same time, a clear insight into numerous forms of business activity, thru actual experience. The course not only gives the student a general college education, but also prepares him for a business career in any field which he may choose. This is accomplished by means of the co-operative plan whereby the student spends half of his time in a factory or other business office, and the other half in class room work. A student of application and ambition may readily work into whatever department of the business field he has capacity and liking for—and in this way secures an excellent opportunity of becoming a valuable employe to the company, and of being retained in their service at the expiration of his college course. Wages are paid to the student thruout the five years at a slightly lower rate than that paid to other employes doing similar work.

The administration of the course is in charge of the Dean of the College of Engineering and applications and inquiries should be addressed to him. Details of the operation of the course, its length, requirements for admission, tuition, fees, etc., are the same as in the College of Engineering. (See pages 92 to 95.)

DEGREES.

Students completing the required work will receive the degree of Bachelor of Science in Business Training.

OUTLINE OF COURSE

(First two years)

FRESHMAN YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Mathematics 725 and 727.....	6	Commercial Geography 914...	6
Spanish 917 .....	6	Spanish 918 .....	6
Co-ordination 901 .....	2	Co-ordination 902 .....	2
English 701 .....	1	English 702 .....	1
Chemistry 741 .....	8	Chemistry 742 .....	8
Elementary Bookkeeping 911 or Advanced Bkkg. 913....	4	Advanced Bookeeping 912 or Theory of Accounts 916...	4

*Summer Term*

Theory of Accounts, 916 or Cost Accounting 915.....	14
Advertising Principles 926 .....	8

SOPHOMORE YEAR

First Semester	Exercises per alternate period	Second Semester	Exercises per alternate period
Elementary Economics 737....	6	Advanced Economics 738.....	6
Spanish 917 .....	6	Spanish 918 .....	6
Co-ordination 903 .....	2	Co-ordination 904 .....	2
English 703 .....	1	English 704 .....	1
Economic Geography 927 ....	6	Economic Geography 928 ....	6
Cost Accounting, 915, or Ac- counting Problems No. 1... 4		Accounting Problems No. 1 or Acc. Problems No. 2.... 4	

## DESCRIPTION OF COURSES

All work of a general nature such as English, Mathematics, Chemistry, etc., is taken with the engineering students, and the description of these courses may be found under the Course in Engineering.

Courses for the third and fourth years will be announced later. The curriculum will include such courses as Money and Banking, Transportation, Salesmanship, Marketing Methods, Business Organization, etc.

901. *Co-ordination.*—(*Freshman Year, First Semester.*)  
(Two Hours.)

Discussion of questions arising in students' work. Observation sheets, detailed reports and problems.

902. *Co-ordination.*—(*Freshman Year, Second Semester.*)  
(Two Hours.)  
Continuation of 901.

903. *Co-ordination.*—(*Sophomore Year, First Semester.*)  
(Two Hours.)  
Continuation of 902.

904. *Co-ordination.*—(*Sophomore Year, Second Semester.*)  
(Two Hours.)  
Continuation of 903.

- \*917. *Spanish.*—(*Freshman Year, First Semester.*)  
(Six Hours.)

Espinosa and Allen's Elementary Spanish Grammar. Readers to be selected. As soon as practicable, the students will be given work of definite commercial value in translation and composition.

\*Given to Freshmen and Sophomores in 1917-1918.

\*918. *Spanish.*—(*Freshman Year, Second Semester.*)  
(Six Hours.) Continuation of 917.

911. *Elementary Bookkeeping.*—(*First year, first semester.*) (Four Hours.)

The purpose of the course is to prepare the student for admission to the advanced work, and everything not strictly bookkeeping is excluded. It presents the common principles underlying all systems of accounts, and considers thoroughly the terms, methods, and forms that must be understood by all bookkeepers, all transactions which are likely to occur in the conduct of a business. Special attention is paid to journalizing. The training is such that one will be able to express in journal-entry form any bookkeeping facts which may be presented to him. The course is practical in every way.

Some of the topics treated are: Principles of double entry, Form of an account, Cash account, Merchandise account, Expense accounts, Personal accounts, Proprietor's account, Journal, Ledger, Single Proprietor, Partnership, Trial balance, Simple statements, Articles of co-partnership, Drawings, Division of profits, Columnarization, Return purchases, Discounts, Commercial paper, Controlling accounts, Principles of classification.

912-913. *Advanced Bookkeeping.* (*First Year, both semesters.*) (Four Hours.)

This subject is an introduction to the study of accounting as adapted to the demands of general business. It aims to give students an understanding of fundamental principles and ability to apply them. Practice is regarded as most essential, the students being required to work out complete sets of transactions in books of account. The transactions begin with the accounts of a corporation.

Some of the topics treated are: The opening, adjusting and closing of corporation accounts, Corporation law and

\*Given to Freshmen and Sophomores in 1917-18.

procedure from the accounting standpoint, Stock, Stock discount and premiums, Surplus, Goodwill, Depreciation, Subscriptions, Capital, Corporation records, Preparation of detailed revenue statements, Consignments, Dividends, Sinking funds.

914. *Commercial Geography.*—(*Freshman year, second semester.*)  
(Six Hours.)

This course includes an intensive study of the industries of the principal commercial nations of the world, emphasizing man's activities as a direct response to geographic control and environment. The relation between exports and imports. Social and moral effects of commerce. Interpretation of comparative statistics, Maps, Charts, Illustrative material. Those countries will be considered first which contribute the raw material used in the industries of Akron.

915. *Cost Accounting.*—(*One semester.*)  
(Eight Hours.)

Cost accounting principles and methods, reasons, conditions and elements. Materials, supplies, labor, and overhead, are traced from the time acquired through the various steps until located in the finished product. Wage systems, efficiency work, graphs, and charts, etc., are considered carefully.

916. *Theory of Accounts.*—(*One semester.*)  
(Eight Hours.)

The principles underlying bookkeeping practices, the designing of systems and records, and the relation of these principles to economics, law, finance, and business organization.

926. *Advertising Principles.*—(*Freshman year. Summer Term.*) (Eight Hours.)

A practical application of the principles of psychology and of business English to the problems of the advertiser.

927. *Economic Geography.*—(*Sophomore Year, First Semester.*) (Six Hours.)

A general survey of the geography of the principal commercial nations to emphasize their influence in commercial relations with other countries of the world. A careful study and analysis is made of the geographic, human and economic causes underlying the industrial and commercial development of nations which tend to determine the localization and diffusion of industries.

928. *Economic Geography.*—(*Sophomore Year, Second Semester.*) (Six Hours.) Continuation of 927.

*Accounting Problems.*

The various courses in accounting problems follow each other in logical sequence. Each course consists of the careful study and solution of various problems selected from Certified Public Accountant examinations and other sources, and of the analysis of the principles of theory underlying the correct solution of each problem given. The principles brought out in the preceding courses are reviewed constantly.

## CURTIS SCHOOL OF HOME ECONOMICS

DIRECTOR, SARAH E. STIMMEL, B. S.

### GENERAL INFORMATION

The Curtis School of Home Economics was established as a unit of the Municipal University in 1914. It occupies the building known as Curtis Cottage, made possible by gifts from the late William Pitt Curtis of Wadsworth, Ohio, and from many citizens of Akron. Besides the necessary laboratories for work in Home Economics, the building is equipped with housekeeping apartments and cafeteria.

#### *Admission*

Candidates for unconditional admission must present at least 15 units of secondary school work. No student will be admitted with entrance conditions amounting to more than one unit. Such deficiency must be made up during the freshman year.

#### *Entrance Requirements*

English .....	3	units
Mathematics .....	2½	units
Foreign Language* .....	4	units
Physics .....	1	unit
Elective .....	4½	units

\*Two units at least must be of one language. Not less than a full unit in the beginning of any language will be accepted toward this requirement.

#### *Course of Study*

The course in Home Economics requires four years of regular university work and is planned to meet the practical needs of women students. It combines a thoro training in those branches of science essential to intelligent home

management with the broadest possible cultural education and forms a basis for those who wish to specialize in Home Economics or other lines of work. Especial attention will be given to providing training for those who may wish to become teachers of the subject.

OUTLINE OF REQUIRED STUDIES

*First Year*

First Semester.	Term hrs.	Second Semester.	Term hrs.
Chemistry 351 or 353.....	4	Chemistry 352 or 354.....	4
English 51 .....	3	English 52 .....	3
*Modern Language .....	3 or 4	*Modern Language .....	3 or 4
Biology 401 .....	4	Biology 402 .....	4
Physical Training .....		Designing 601 .....	1
Hygiene 415 .....	1		
	<hr/>		<hr/>
	15 or 16		15 or 16

*Second Year*

Organic Chemistry 621.....	3	Organic Chemistry 622.....	3
†Physiology 409 .....	4	†Physiology 410 .....	4
Foods 605 .....	4	Foods 606 .....	4
*Modern Language .....	3	*Modern Language .....	3
Mechanical Drawing 625...1½		House Planning 626.....1½	
Textiles 603 .....	2	Textiles 604 .....	2
	<hr/>		<hr/>
	17½		17½

*Third Year*

Household Chemistry 623..	3	Household Chemistry 624..	3
History Western Europe 275..	3	Hist. Western Europe 276..	3
Bacteriology 627 .....	2	Bacteriology 628 .....	2
Art 607 .....	2	Sanitation 612 .....	3
Dress 609 .....	3	Art 608 .....	2
English 65 .....	3	English 66 .....	3
	<hr/>		<hr/>
	16		16

*Fourth Year*

Dietetics 613 .....	4	Seminar 618 .....	2
Economics 251 .....	3	Sociology 252 .....	3
The House 615 .....	3	The House 616 .....	3
Teachers' Course 619 .....	3	Teachers' Course 620 .....	3
	<hr/>		<hr/>
	13		11

Elective studies must be chosen sufficient in number to complete a total of 128 term hours.

\*Modern language must consist of two years in one language.

†Offered 1917-18 and alternate years.

*Degrees*

For the completion of the four-year course in Home Economics (128 term hours required for graduation) the degree of Bachelor of Science in Home Economics will be conferred. By means of a five-year combination course degrees may be gained from both the College of Liberal Arts and the School of Home Economics, but candidates for such combination course must announce their intention at the end of the junior year.

*Fees*

The regular incidental and student activity fee of \$10.00 per semester will be charged to all students. The tuition in this school is free to all residents of Akron. The tuition for non-residents of Akron is \$40.00 per semester. A graduation fee of five dollars is charged all graduates.

*Laboratory Fees*

Chemistry 351, 352, 353, 354, per semester.....	\$3.00
Chemistry, all other courses, per semester.....	4.00
Chemistry, deposit for breakage in all chemistry courses	5.00

The unused portion of this breakage deposit will be returned at the end of the semester.

Biology 401, 402, 409, 410.....	\$2.50
Bacteriology, 627, 628, per semester.....	4.00
Bacteriology, deposit for breakage.....	5.00
Foods, per semester .....	7.50
Dietetics, per semester .....	7.50

NOTE:—Students provide their own materials in the following courses: Designing, Textiles, Mechanical Drawing and House Planning, Art, Dress, and Seminar.

**SUBJECTS OF INSTRUCTION**

All courses numbered over 600 are offered primarily only for students in the school of Home Economics and may be elected by students in the college of Liberal Arts only under the restrictions imposed by that College. For description of courses mentioned only by number, see pages 49-86 of general catalog.

**HOME ECONOMICS**

PROFESSOR STIMMEL

603. *Textiles.—(First Semester.)*

Lecture, Th., 1:00; Laboratory, Th., 2:00-4:00.  
(Two term hours.)

Concurrent, Designing. A study of fibres and fabrics. Laboratory work includes the proper selection of materials, the making of suitable designs, the making of wearing apparel, the judging of cloth and the comparison of laboratory and commercially prepared garments.

604. *Textiles.—(Second Semester.)*

Continuation of 603.

605. *Foods.—(First Semester.)*

Lecture hours, Tu., 9:20; Th., 10:15; Laboratory, W., F., 1:00-3:00. (Four term hours.)

Prerequisite, Chemistry 351-2 or 353-4. The selection and preparation of foods. Their ordinary occurrence; their nutritive values and their comparative costs. The laboratory work, the basis for certain methods of food preparation, is correlated with the lecture work.

606. *Foods.—(Second Semester.)*

Continuation of 605.

609. *Dress.—(First Semester.)*

M., 1:00-5:00; W., 11:10. (Three term hours.)

Prerequisite, Textiles 603-4; concurrent, Art 607. The making of a simple unlined dress. Drafting and modifica-

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tion of pattern; selection and combination of suitable materials. A study of dress from the historical, hygienic and economical standpoints.

612. *Sanitation.—(Second Semester.)*

M., W., F., 11:10. (Three term hours.)

Prerequisite or concurrent, Bacteriology. Principles underlying the situation, construction, sanitation, ventilation, lighting, heating and plumbing of the house. First aid to the injured and home nursing. Personal hygiene.

613. *Dietetics.—(First Semester.)*

M., F., 11:10. Laboratory, Tu., Th., 1:00-3:00.  
(Four term hours.)

Prerequisites, Foods, 605-6. Physiology 407-8, Household Chemistry 623-4. A study of the chemical, physical and physiological value of the nutrients. Dietary standards, infant and invalid cookery.

615. *The House.—(First Semester.)*

M., W., F., 10:15. (Three term hours.)

Prerequisite, Art 607-8, Economics 251, Sociology 252, Home Economics 605-6, Home Economics 603-4, Home Economics 625-6. The care and management of the home in relation to its purpose and its arrangement and decoration from a practical and attractive standpoint. Laboratory work in practise apartment in Curtis Cottage.

616. *The House.—(Second Semester.)*

A continuation of 615.

619. *Teachers' Course.—(First Semester.)*

Tu., 10:15; Th., 11:10. (Three term hours.)

Methods of presenting foods and textiles. Planning courses of study and practice teaching. Prerequisite, senior standing in Home Economics.

620. *Teachers' Course.—(Second Semester.)*

Continuation of 619.

618. *Seminar.*—(*Second Semester.*)  
(Two term hours.)  
Open only to seniors.

#### PHYSICAL TRAINING

The regular work in physical training for women will begin the first of December and will continue for three months.

415. *Hygiene.*—(*First Semester.*)  
W., 3:00-4:00. (One term hour.)

Freshman students in Home Economics are also required to attend a course of lectures on hygiene particularly adapted to the needs of young college women, given by Dr. Plowman.

#### ENGLISH

Courses: 51, 52, 65, 66.

#### GERMAN

Students who have had no German will enter 101; those with one year of German are advised to do the same. Students with two years of German will enter 103—with three or four years, 131. Courses: 101, 102, 103, 104, 105, 106, 131, 132.

#### FRENCH

Courses: 151, 152, 153, 154.

#### ECONOMICS AND SOCIOLOGY

Courses: 251, 252.

#### HISTORY

Courses: 275, 276.

#### CHEMISTRY

Courses: 351, 352, 353, 354.

621. *Organic Chemistry.*—(*First Half-Year.*)  
Five hours per week. Tu., 10:15, and Th., 11:10;  
Tu., 3:00-5:00. (Three term hours.)

The course is designed to give a thoro knowledge of the principal classes of organic compounds and their most important derivatives. The laboratory practice consists of the preparation of typical compounds.

Prerequisite—One year of general chemistry.

622. *Organic Chemistry.*—(*Second Half-Year.*)

Continuation of 621.

623. *Household Chemistry.*—(*First Semester.*)

Six hours per week. Th., 8:25; Tu., 1:00-3:00; Th., 3:00-5:00. (Three term hours.)

This course includes the chemistry of foods and testing for adulterations; also the chemistry of cooking and cleaning. This course is open to students who have completed Course 622.

624. *Household Chemistry.*—(*Second Semester.*)

Continuation of 623.

## BIOLOGY

Courses: 401, 402, 409, 410.

## BACTERIOLOGY

ASSISTANT-PROFESSOR HARDGROVE

627. *Bacteriology.*—(*First Semester.*)

Tu., 9:20-11:10; W., 1:00-4:00. (Two term hours.)

An elementary course in Bacteriology consisting of lecture and laboratory work, designed particularly for third year Home Economics students. Others will be admitted only on permission of instructor.

(In case of lecture Tuesday, period will be 10:15 to 11:10.)

628. *Bacteriology.*—(*Second Semester.*)

Continuation of 627.

MECHANICAL DRAWING

MR. BOENISCH.

625. *Mechanical Drawing.—(First Semester.)*  
M., 1:00-4:00. (One and one-half term hours.)
626. *House Planning.—(Second Semester.)*  
M., 1:00-4:00. (One and one-half term hours.)  
Prerequisite, Mechanical Drawing 625.

DESIGNING AND ART

MR. BOENISCH.

602. *Designing.—(Second Semester.)*  
Wed., 3:00-5:00. (One term hour.)  
To develop a taste for harmony in color, line and space.  
Work done in pencil, pen, charcoal and water color.
607. *Art.—(First Semester.)*  
Tu., 3:00-5:00; F., 1:00-3:00. (Two term hours.)  
Prerequisite, Designing. A continuation of Designing  
with advanced problems in color and line.
608. *Art.—(Second Semester.)*  
Tu., 3:00-5:00; F., 1:00-3:00. (Two term hours.)  
Continuation of 607.

## SCHEDULE FOR FIRST SEMESTER

1916-1917

	MONDAY	TUESDAY	WEDNESDAY
7:30	French 153	German 105 Chemistry 353	French 153
8:25	Hist. West Europe 275	Biology 401 Chemistry 351a	Hist. West Europe 275
9:20	Rhetoric 51a German 101a French 151a Economics 251 Physiology 409 Lessing 123	German 101a French 151a Foods 605 Bacteriology 627	Rhetoric 51a German 101a French 151a Economics 251 Physiology 409 Lessing 123
10:15	Sub-fresh. Rhet. 51 Rhetoric 51b English 65 German 131 German 103a House 615	Org. Chem. 621 Bacteriology 627 Teachers' Course 619 Chemistry 351b	Sub-fresh. Rhet. 51 Rhetoric 51b English 65 German 131 German 103a House 615
11:10	German 101b German 103b Dietetics 613 French 151i	Class Meetings	German 101b German 103b Dress 609 French 151b
<b>AFTERNOON</b>			
1:00 to 3:00	Fresh. Chem. 351a Biology 401a Dress 609 Mech. Dr. 625	Chemistry 353 Biology 401b Chemistry 623 Designing 601 Dietetics 613	Chemistry 353 Biology 401a Foods 605 Bacteriology 627
3:00 to 5:00	Chemistry 351b Dress 609 Mech. Dr. 625 till 4 o'clock Gymnasium 2:00-4:00	Chemistry 621 Art 607	Hygiene 415 till 4 o'clock Bacteriology 627 till 4 o'clock

**SCHEDULE FOR FIRST SEMESTER**

1916-1917

	<b>THURSDAY</b>	<b>FRIDAY</b>	<b>SATURDAY</b>
<b>7:30</b>	German 105 Chemistry 353	French 153	
<b>8:25</b>	Biology 401 Chemistry 351a Chemistry 623	Hist. West Europe 275	
<b>9:20</b>	Rhetoric 51a German 101a French 151a Economics 251 Physiology 409 Lessing 123	Assembly	
<b>10:15</b>	Chemistry 351b Foods 605	Sub-fresh. Rhet. 51 Rhetoric 51b English 65 German 131 German 103a House 615	German 131
<b>11:10</b>	Org. Chem. 621 Teachers' Course 619	German 101b German 103b Dietetics 613 French 151b Fresh Biol. Sem. 401	German 101b  French 151b
<b>AFTERNOON</b>			
<b>1:00</b> to <b>3:00</b>	Textiles 603 Biology 401b  Dietetics 613	Chemistry 351a Art 607 Foods 605	
<b>3:00</b> to <b>5:00</b>	Chemistry 623 Textiles 603 till 4 o'clock Fresh. Biol. Sem. 401 3:00-4:00	Chemistry 351b  Gymnasium 2:00-4:00	

## SCHEDULE FOR SECOND SEMESTER

1916-1917

	MONDAY	TUESDAY	WEDNESDAY
7:30	French 154	German 106 Chemistry 354	French 154
8:25	Hist. West Europe 276	Biology 402 Chemistry 352a	Hist. West Europe 276
9:20	Rhetoric 52a German 102a French 152a Sociology 252 Physiology 410 German 124	German 102a French 152a Foods 606 Bacteriology 628	Rhetoric 52a German 102a French 152a Sociology 252 Physiology 410 German 124
10:15	Rhetoric 52b English 06 German 104a German 132 House 616	Org. Chem. 622 Bacteriology 628 Teachers' Course 620 Chemistry 352b	Rhetoric 52b English 06 German 104a German 132 House 616
11:10	German 102b German 104b Sanitation 612 French 152b	Class Meetings	German 102b German 104b Sanitation 612 French 152b
<b>AFTERNOON</b>			
1:00 to 3:00	Chemistry 352a Biology 402a House Planning 626	Chemistry 354 Biology 402b Chemistry 624	Chemistry 354 Biology 402a Foods 606 Bacteriology 628
3:00 to 5:00	Chemistry 352 b House Planning 626 till 4 o'clock Gymnasium 2:00-4:00	Chemistry 622 Art 608	Bacteriology 628 till 4 o'clock Designing 602

**SCHEDULE FOR SECOND SEMESTER**

1916-1917

	<b>THURSDAY</b>	<b>FRIDAY</b>	<b>SATURDAY</b>
<b>7:30</b>	German 106 Chemistry 354	French 154	
<b>8:25</b>	Biology 402 Chemistry 352a Chemistry 624	Hist. West Europe 276	
<b>9:20</b>	Rhetoric 52a German 102a French 152a Sociology 252 Physiology 410 German 124	Assembly	
<b>10:15</b>	Chemistry 352b Foods 606	Rhetoric 52b English 66 German 104a German 132 House 616	German 132
<b>11:10</b>	Org. Chemistry 622 Teachers' Course 620	German 102b German 104b Sanitation 612 French 152b Fresh. Biol. Sem. 410	German 102b French 152b
<b>AFTERNOON</b>			
<b>1:00 to 3:00</b>	Textiles 604 Biology 402b	Chemistry 352a Art 608 Foods 606	
<b>3:00 to 5:00</b>	Chemistry 624 Textiles 604 till 4 o'clock Fresh. Biol. Sem. 402 3:00-4:00	Chemistry 352b Gymnasium 2:00-4:00	

## EVENING CLASSES

1917-1918

The University will offer during the college year 1917-18 a number of courses for the especial benefit of teachers, employed persons, and citizens in general who may wish to enter the work. Only such courses as are elected by eight or more persons will be offered. These courses are, as far as possible, of college grade. They are divided into two classes.

*Class A.* Study courses, for which college credit is given to those who successfully complete the requirements.

*Class B.* Non-study courses, where the instruction is mainly given by lecture work and for which no college credit is given.

## ADMISSION.

Class A and B courses are open:

1. To all persons who have completed the course of a first grade high school.

2. To all other persons over 21 years of age not high school graduates, subject to the approval of the instructor in charge as to ability and preparation. Those working for an eventual college degree must complete the regular college entrance requirements before they can be considered candidates for a degree.

## REGISTRATION

Registration will take place on the following days:

For the first Semester:

Friday and Saturday, September 14 and 15, 1917, from 2:00 to 5:00 P. M. and from 6:30 to 7:30 P. M. To all registering after these dates a late-registration fee will

be charged. (See statement under Fees.) No registration for entry to classes will be allowed after Saturday, September 22.

For the second semester:

Friday and Saturday, February 1 and 2, 1918, from 2:00 to 5:00 P. M. and from 6:30 to 7:30 P. M. To all registering after these dates a late-registration fee will be charged. (See statement under Fees.) No registrations for entry to classes will be allowed after Saturday, February 9.

Class work for the first semester will begin Wednesday, September 19, 1917, and will close on February 1, 1918.

Class work for the second semester will begin Wednesday, February 6, 1918, and will close on June 14, 1918.

*CREDIT*

College credit will be given in Class A courses on the basis of one credit hour for the successful completion of a one hour per week course for one semester.

*FEES*

*Incidental and Tuition Fees*

	*Incidental Fee (to all)	*Tuition to non- residents
For 1 or 2 hours weekly per semester . . . . .	\$3.00	\$ 5.00
For 3 hours per semester . . . . .	4.00	7.50
For 4 hours per semester . . . . .	5.00	10.00
For 5 hours per semester . . . . .	6.00	12.50
For 6 hours per semester . . . . .	7.00	15.00

*Late Registration Fee*

All persons registering for work after the specified days of registration will be charged a fee of \$1.00 for the first day and twenty-five cents for each additional day of delay in registration.

\*Only the incidental fee will be charged to residents of Akron, and to teachers in Summit Co. Non-residents will pay both incidental and tuition fees.

*Breakage Deposit Fee*

From each student taking the chemistry course a deposit of \$3.00 per semester is required.

No tuition nor incidental fees are refunded. In case of absence on account of protracted sickness a proportionate credit may be given on a subsequent course.

All fees are payable before entering classes.

All inquiries should be addressed to PROF. S. J. LOCKNER, Chairman of Committee on Evening Courses.

**COURSES FOR 1917—1918****CLASS A COURSES***ROMANCE LANGUAGES**French*

PROFESSOR RINES

1701. *First Year French.—(First Semester.)*  
Grammar, reading, simple conversation. Monday, 6:45-8:45. (Two credit hours.)
1702. *First Year French.—(Second Semester.)*  
This course is a continuation of the first semester's work and will consist mainly of selected readings, dictation, memorizing and conversation. Monday, 6:45-8:45. (Two credit hours.)
1703. *Second Year French.—(First Semester.)*  
Open only to those who have had First Year French here or elsewhere. Grammar and composition work continued, with reading of modern works. Wednesday, 6:45-8:45. (Two credit hours.)
1704. *Second Year French.—(Second Semester.)*  
Continuation of the work of the first semester. Wednesday, 6:45-8:45. (Two credit hours.)

*Spanish*

MR. MORIN

1705. *First Year Spanish.—(First Semester.)*  
Grammar, reading, simple conversation. Monday,  
6:45-8:45. (Two credit hours.)
1706. *First Year Spanish.—(Second Semester.)*  
This course is a continuation of the first semester's  
work and will consist mainly of selected readings,  
dictation, memorizing and conversation. Monday,  
6:45-8:45. (Two credit hours.)
1707. *Second Year Spanish.—(First Semester.)*  
Open only to those who have had First Year Span-  
ish or its equivalent. Grammar and composition  
work continued. Selected texts for reading. Espe-  
cial emphasis will be placed upon the commercial  
side of the language. Wednesday, 6:45-8:45.  
(Two credit hours.)
1708. *Second Year Spanish.—(Second Semester.)*  
Continuation of the work of the first semester.  
Conversation, dictation, anecdotes, Spanish daily  
life, commercial Spanish and correspondence.  
Wednesday, 6:45-8:45. (Two credit hours.)

## GERMAN

MR. VON JANINSKI

1709. *First Year German.—(First Semester.)*  
Grammar, reading, simple conversation. Monday,  
6:45-8:45. (Two credit hours.)
1710. *First Year German.—(Second Semester.)*  
This course is a continuation of the first semester's  
work and will consist mainly of selected readings,  
dictation, memorizing, and conversation. Monday,  
6:45-8:45. (Two credit hours.)

## ENGLISH

1711. *Parliamentary Law.*—(*First Semester.*)

The class is organized as an Assembly with the instructor as chairman. Study and practice of rules of order; the writing of minutes. Text-book: Cushing's Manual of Parliamentary Practice (Revised edition). Tuesday, 6:45-8:45. (Two credit hours.) ASSISTANT-PROFESSOR STURTEVANT.

1712. *Business English.*—(*Second Semester.*)

This course is designed to give students practice in business correspondence. In all writing careful attention is given to accuracy of form, terseness of expression, and clearness of thought. Spelling, punctuation, and grammatical sentence structure receive constant drill. A large number of written exercises supplements the study of the text. Tuesday, 6:45-8:45. (Two credit hours.) MR. BRICKLEY.

## EXPRESSION

MISS McEBRIGHT

1714. *Public Speaking and Dramatic Work.*—(*Second Semester.*)

Fundamental principles, voice technique, tone placing, tone building, enunciation, literary analysis, gestures, evolution of expression, vocal and physical. Wednesday, 6:45-8:45. (Two credit hours.)

## PSYCHOLOGY AND ECONOMICS

PROFESSOR O. E. OLIN

1715. *Psychology.*—(*First Semester.*)

A study and lecture course including:

1. The outline of elementary psychology.

2. Relation of psychology to the problems of industrial and professional life.

3. Numerous experiments illustrative of physical and mental tests.

Thursday, 6:45-8:45. (Two credit hours.)

1716. *Municipal Organization and Management.*—(Second Semester.)

A lecture and research course including history and development of cities—importance to social and political life, forms of government, methods of administration, problems—political, social, financial, industrial, sanitary, esthetic, etc. Open to those who have had some course in civics. Thursday, 6:45-8:45. (Two credit hours.)

*In connection with this course Mr. Olson of the Municipal Research Bureau will give five lectures on Municipal Affairs. These lectures are open to the public without fee or necessity of registration in course. For details of time and subjects see announcement under Class B courses, page 145.*

BUSINESS LAW AND ADMINISTRATION

ASSISTANT-PROFESSOR BENNETT

1717. *Business Law.*—(First Semester.)

This course includes the laws governing ordinary contracts, notes, mortgages, deeds, partnerships and corporations. Thursday, 6:45-8:45. (Two credit hours.)

1718. *Business Administration.*—(Second Semester.)

This course includes elementary accounting, cost-keeping, auditing, money, credit and banking investments. Thursday, 6:45-8:45. (Two credit hours.)

## GREEK LITERATURE

PROFESSOR ROCKWELL

1719. *Greek Masterpieces thru English Translations.*—  
(*First Semester.*)

This course will comprise a careful study of the chief works in lyric and epic poetry, the drama, history and philosophy. Supplementary reading of the History of Greek Literature and of certain authors will be required. Written tests will be given. Wright's Masterpieces of Greek Literature will be used as a text. Knowledge of the Greek language is not necessary. Wednesday, 6:45-8:45. (Two credit hours.)

## HISTORY

PROFESSOR THOMPSON

1721. *English History.*—(*First Semester.*)

English History from the seventeenth century showing the development of the Empire and its colonial and industrial and commercial problems. Wednesday, 6:45-8:45. (Two credit hours.)

## CHEMISTRY

PROFESSOR SIMMONS

1723-24. *General Inorganic Chemistry.* — (*Both Semesters.*)

A study of General Chemistry for those who are beginning or those who may have had a year of Chemistry in High School. Tuesday and Thursday, 6:45-8:45. (Three credit hours each semester.)

1725-26. *Qualitative Analysis.*—(*Both Semesters.*)

For those who have completed Courses 1723-24 or the equivalent. Tuesday and Thursday, 6:45-8:45. (Two credit hours each semester.)

1727-28. *Quantitative Analysis.*—(Both Semesters.)

For those who have completed Courses 1725-26 or the equivalent. Tuesday and Thursday, 6:45-8:45. (Two credit hours each semester.)

## HYGIENE

PROFESSOR PLOWMAN

1729. *Hygiene for Women.*—(First Semester.)

The Department of Biology offers for the year two courses in Hygiene. Topics for consideration are: nutritional physiology, the physiology of exercise, natural and acquired immunity to disease, sex health, social hygiene, eugenics, euthenics, and human conservation. Lectures and class discussions will be kept as free as possible from unnecessary technicalities, but a standard of absolute scientific accuracy will be insisted upon. The purpose of the study is to bring out clearly and pointedly the vital facts regarding personal health.

Text-book: "How to Live," by Fisher and Fisk, together with selected reference reading in standard works on hygiene.

The course for the first semester is open only to women.

Monday, 6:45-8:45. (Two credit hours.)

1730. *Hygiene for Men.*—(Second Semester.)

This course is of the same general nature as the preceding course, except that it is open only to men.

Monday, 6:45-8:45. (Two credit hours.)

## MATHEMATICS AND ENGINEERING

1731. *College Algebra.*—(First Semester.)

The work will begin with the theory of quadratic equations and will include some of the more important principles

of college algebra. Prerequisite: high school algebra. Wednesday, 6:45-8:45. (Two credit hours.) MR. MORRIS.

1732. *Plane Trigonometry.*—(Second Semester.)

The work includes goniometry, trigonometric functions of an angle in any quadrant, solution of plane and oblique triangles, trigonometric equations. Wednesday, 6:45-8:45. (Two credit hours.) MR. ADAMS.

1733. *Gas Engines.*—(First Semester.)

A detailed study of the essential parts of oil, gas and gasoline engines, their efficiency and applications. Especial attention will be given to the various types of auto-engines. Monday, 6:45-8:45. (Two credit hours.) MR. MATHEWSON.

### HOME ECONOMICS

PROFESSOR STIMMEL

1735. *A Household Science Course.*—(First Semester.)

(a) A study of the house as to architecture, sanitation, decoration, and household management.

(b) A study of foods; the selection, problems in the preparation, and economic uses of food.

(c) A study of clothing from the hygienic and economic standpoints.

Monday, 6:45-8:45. (Two credit hours.)

### CLASS B COURSES

These are lecture courses in which no study is required and no college credit given:

FIRST SEMESTER

#### LECTURE GROUP I

Tuesday, 7:45-8:45.

(This group of fifteen lectures is reckoned as one term-

hour, and no reduction of fee is made to those electing less than the entire number.)

*General Astronomy. (Illustrated.)*

1. Astronomical instruments, September 25.
2. The motions of the earth, October 2.
3. The solar system, October 9.
4. The sun, October 16.
5. Nebular and star clusters, October 23.

PROFESSOR LOCKNER

*Greek Sculpture. (Illustrated.)*

6. Archaic Period, October 30.
7. Transitional Period, November 6.
8. Great Period (first half), November 13.
9. Great Period (second half), November 20.
10. Hellenistic Period, November 27.

PROFESSOR ROCKWELL

*German Literature.*

11. The earliest German literature, December 4.
12. The heroic epic and Richard Wagner, Dec. 11.
13. Minnesingers and Meistersingers, January 8.
14. Goethe and Schiller, January 15.
15. Heine, January 22.

DR. KOLBE

*COMMUNITY ORGANIZATION AND  
DEVELOPMENT.*

Monday 7:45-8:45.

This course is offered by the University in co-operation with the following Advisory Committee, representing the social workers of the city: Mr. W. S. Bixby, Director of Charities; Mr. O. E. Olin, Professor of Social Sciences, University of Akron; Mr. C. S. Weaver, General Secretary Akron Y. M. C. A.; Mr. F. L. Olson, Director Bureau of Municipal Research; Dr. J. J. McShane, Commissioner of Health; Miss O. E. Beason, Supervising Nurse, Department

of Public Health; Miss Marie Lawson, Superintendent Akron City Hospital; Miss E. Donenwirth, Superintendent People's Hospital; Mr. R. N. Neustadt, The B. F. Goodrich Company, Chairman.

The lectures will be delivered partly by local workers who are familiar with Akron's social problems, and partly by eminent authorities from other cities. A complete list of the lecturers will be published later. The subjects are:

1. Introduction to sociological study, September 24, 1917.
2. Introduction to sociological study (continued) Oct. 1.
3. Causes of social maladjustment, October 8.
4. Social conditions, October 15.
5. Industrial conditions, October 22.
6. Industrial conditions (continued), October 29.
7. Industrial conditions (continued), November 5.
8. Social efforts for readjustment, November 12.
9. The technique of social effort, November 19.
10. The technique of social effort (continued), Nov. 26.
11. The larger conception of public health, December 3.
12. The function of the public health nurse, December 10.
13. New ideals of education, January 7, 1918.
14. Public health, January 14.
15. Social legislation, January 21.
16. Subject to be chosen, January 28.

*(A fee of \$3.00 for the entire course will be charged for the purpose of enabling the committee to cover necessary expenses of lecturers from other cities.)*

SECOND SEMESTER

*THE BIBLE AS LITERATURE.*

Tuesday, 7:45-8:45.

DEAN SPANTON

*Masterpieces of Old Testament Story.*

1. Stories before Joseph, February 12, 1918
2. The Joseph Stories, February 19.

3. Stories of the Judges, February 26.
4. Stories of David, March 5.
5. Ruth and Esther, March 12.

*The Poetry of the Old Testament.*

6. The Psalms as Poetry, March 19.
7. The Psalms as Poetry (continued), April 2.
8. The Book of Job as Poetry, April 9.
9. The Poetry of Prophecy, April 16.
10. Solomon's Song, April 23.

*The Wit and Wisdom of the Old Testament.*

11. Wisdom in the Book of Proverbs, April 30.
12. Wisdom in the Book of Proverbs (continued),  
May 7.
13. Ecclesiastes as Wisdom, May 14.
14. The Wisdom of Job, May 21.
15. Summary: The Bible as Literature, May 28.

MUNICIPAL ADMINISTRATION

MR. F. L. OLSON

Akron Bureau of Municipal Research

Thursday, 7:45.

1. Present forms of administration in city government,  
March 7, 1918.
2. Different forms of city government, March 14.
3. Budgets and budget making, April 11.
4. Accounting and reporting, April 18.
5. Municipal taxation, April 25.

*(These lectures are given in connection with course 1716 on Municipal Organization and Management. However, an invitation is extended to all interested citizens to attend Mr. Olson's lectures without charge and without necessity of registration in the regular course.)*

*EVENING CLASSES**PHYSICAL EDUCATION*

DIRECTOR SEFTON

*(November to March.)*

Night school students desiring to take gymnasium work one night a week may do so by conferring with the Physical Director.

The work will consist of Basketball, Gymnastics, and other exercises that can be practiced indoors.

The night will be scheduled according to the convenience of the students.

No credit will be given.

## SCHEDULE OF CLASSES

1917—1918

*First Semester*

Day	Hours	Subject
Monday	6:45—8:45	First Year French 1701
Monday	6:45—8:45	First Year Spanish 1705
Monday	6:45—8:45	First Year German 1709
Monday	6:45—8:45	Hygiene for Women 1729
Monday	6:45—8:45	Gas Engines 1733.
Monday	6:45—8:45	Home Economics 1735
Monday	7:45—8:45	Municipal Organization and Development (lectures)
Tuesday	6:45—8:45	Parliamentary Law 1711
Tuesday	6:45—8:45	General Inorganic Chemistry 1723
Tuesday	6:45—8:45	Qualitative Analysis 1725
Tuesday	6:45—8:45	Quantitative Analysis 1727
Tuesday	7:45—8:45	Group I Lectures on Astronomy, Greek Sculpture and German Literature
Wednesday	6:45—8:45	Second Year French 1703
Wednesday	6:45—8:45	Second Year Spanish 1707
Wednesday	6:45—8:45	Greek Masterpieces in English Translation 1719
Wednesday	6:45—8:45	English History 1721
Wednesday	6:45—8:45	College Algebra 1731
Thursday	6:45—8:45	Psychology 1715
Thursday	6:45—8:45	General Inorganic Chemistry 1723
Thursday	6:45—8:45	Qualitative Analysis 1725
Thursday	6:45—8:45	Quantitative Analysis 1727
Thursday	6:45—8:45	Business Law 1717

## SCHEDULE OF CLASSES

1917—1918

*Second Semester*

Monday	6:45-8:45	First Year French 1702
Monday	6:45-8:45	First Year Spanish 1706
Monday	6:45-8:45	First Year German 1710
Monday	6:45-8:45	Hygiene for men 1730
Tuesday	6:45-8:45	Business English 1712
Tuesday	6:45-8:45	General Inorganic Chemistry 1724
Tuesday	6:45-8:45	Qualitative Analysis 1726
Tuesday	6:45-8:45	Quantitative Analysis 1728
Tuesday	7:45-8:45	The Bible as Literature (lectures)
Wednesday	6:45-8:45	Second Year French 1704
Wednesday	6:45-8:45	Second Year Spanish 1708
Wednesday	6:45-8:45	Expression 1714
Wednesday	6:45-8:45	Trigonometry 1732
Thursday	6:45-8:45	General Inorganic Chemistry 1724
Thursday	6:45-8:45	Qualitative Analysis 1726
Thursday	6:45-8:45	Quantitative Analysis 1728
Thursday	6:45-8:45	Municipal Organization and Management 1716
Thursday	7:45-8:45	Municipal Affairs (lectures by Mr. Olson)
Thursday	6:45-8:45	Business Administration 1718

## THE UNIVERSITY LECTURES

1916-1917

THE Municipal University desires to offer to the people of the city the opportunity annually of hearing, free of charge, certain talks and lectures by members of the University Faculty—not in the class room, nor even in the college buildings, but rather at such times and places as may be best suited to the needs of the citizens. This plan has been adopted in response to numerous calls received for lectures on various subjects, and represents an effort on the part of the University to serve the community to the best advantage by systematizing the work thus offered.

For the season 1916-17, a course of five lectures has been arranged. These lectures will be given under certain conditions to any society organization or body of citizens who may desire to hear them. The conditions are as follows:

1.—Any responsible organization which will guarantee an audience of not less than fifty persons may receive these lectures free of charge at dates to be mutually agreed upon with the Chairman of the Lecture Committee.

2.—The course is given only in its entirety i. e., single lectures may, under ordinary conditions, not be selected.

3.—The organization requesting the lectures shall provide a suitable place for holding them and no admission fee shall be charged.

**THE UNIVERSITY LECTURE COURSE**

1. WHAT IS A PRACTICAL EDUCATION?  
Dean A. I. Spanton
2. WHAT THE CHEMIST OF THE FUTURE MAY DO  
Professor H. E. Simmons
3. PARIS BEFORE THE WAR (Illustrated)  
Professor M. A. Rines
4. UP FROM THE DEPTHS  
Professor A. B. Plowman
5. GERMANS IN OHIO IN PIONEER DAYS  
Professor C. L. Bulger

*SCIENTIFIC LECTURES*

The University desires also to co-operate with any company or society of citizens who are interested in technical subjects, and so offers the following single lectures, which may be chosen as desired. An attendance of fifty is not required for these single lectures.

INFLUENCE OF IRRIGATION UPON THE DEVELOPMENT OF THE WEST  
Dean F. E. Ayer

MODERN ASTRONOMY (Illustrated)  
Professor S. J. Lockner

EARLY CHRISTIAN ARCHITECTURE  
Mr. Julius Boenisch

AMERICAN CHEMICAL INDUSTRIES  
Assistant-Professor W. F. Zimmerli

PROBLEMS IN GREEK ARCHITECTURE  
Professor J. C. Rockwell

MATERIALS OF CONSTRUCTION  
Mr. A. E. Hardgrove  
Director Bureau of City Tests

All requests for these lectures should be addressed to Dr. J. C. Rockwell, Chairman University Lecture Committee, Municipal University, City.

**COMBINATION COURSES***1. AT THE UNIVERSITY OF AKRON**The Arts-Home Economics Combination Course*

A combination may be made between the Arts and Home Economics Courses by which degrees may be obtained from both schools in a minimum period of five years. This may best be accomplished by spending four years in the Curtis School of Home Economics and an additional year in the College of Liberal Arts. If such combination course be desired the elective work in the fourth year must be shaped toward the fulfillment of the major and minor requirements in the College of Liberal Arts.

An arrangement is also possible by which the student may spend three years in the College of Liberal Arts and two years in the Curtis School of Home Economics, receiving both degrees. Those planning this combination should consult the Classification Committee at the beginning of the sophomore year in order that the subjects to be taken may be definitely determined, according to the major subject chosen.

*2. WITH THE OHIO STATE UNIVERSITY*

By special arrangement concluded with the Ohio State University, the University of Akron is enabled to offer combination courses in its own College of Liberal Arts with certain professional schools of the State University. By means of such a course, the student is enabled to shorten by one year the six to eight year period otherwise necessary for the acquirement of both college and professional degrees and training. Generally speaking, the plan contemplates an attendance of three years at the University of Akron with an additional two or three years (depending on the subject chosen) at the State University. During the fourth year of his course (i. e., the first year at the State University) the

student is counted as a senior in absentia by the University of Akron and at the end of this year returns to receive his Bachelor's degree with his class.

The following combinations have been arranged:

#### *THE ARTS-LAW COMBINATION COURSE*

This course comprises a total of six years, three years at the Municipal University of Akron and three years at the Law School of the Ohio State University. At the end of four years the degree of Bachelor of Arts is conferred by the University of Akron for the satisfactory completion of 128 term hours of work. At the end of six years the student may become a candidate for the degree of Bachelor of Laws at the Ohio State University.

#### *Requirements in Buchtel College of Liberal Arts*

1. No student is eligible for the combined Arts-Law Course who has not been a resident student at the University of Akron for at least three years and who has not gained at least 96 term hours credit in Buchtel College. In order to receive the Bachelor's Degree from the University of Akron at the end of the fourth year, the student must complete 101 term hours of work in Buchtel College before entering the Ohio State University.

2. No student shall be eligible for a degree from Buchtel College of the University of Akron in the combined Arts-Law Course who has not received sufficient credit at the State University to complete a total of 128 term hours of work.

3. A major must be chosen in Buchtel College of Liberal Arts in a course leading to the degree of Bachelor of Arts.

4. All of the major and minor requirements in the course chosen must be completed at the University of Akron.

5. The Faculty of Buchtel College reserve the right to refuse to recommend for the combined course any candidate who has, in their opinion, not maintained a standard of *good scholarship*.

*THE ARTS-AGRICULTURE COMBINATION COURSE*

Total time required, five years, three of which are to be spent at the University of Akron and two at the Ohio State University. At the end of four years' time, the degree of Bachelor of Science will be conferred by the University of Akron and at the end of five years the degree of Bachelor of Science in Agriculture by the Ohio State University.

*General Requirements in Buchtel College of Liberal Arts*

1. No student is eligible for the Combined Arts-Agriculture Course who has not been a resident student at the University of Akron for at least three years and who has not gained at least 96 term hours credit in Buchtel College.

2. No student shall be eligible for a degree from Buchtel College of the University of Akron in the combined Arts-Agriculture course who has not received sufficient credit at the Ohio State University to complete a total of 128 term hours of work.

3. The Faculty of Buchtel College reserve the right to refuse to recommend for the combined course any candidate who has, in their opinion, not maintained a standard of *good scholarship*.

*Combination Arts-Agriculture Course*

Three years at the University of Akron

*First Year*

First Semester		Second Semester	
English 51 .....	3	English 52 .....	3
Mod. Lang. ....	4	Mod. Lang. ....	4
Chem. 351 or 353 .....	4	Chem. 353 or 354.....	4
Hygiene .....	1	Current Events .....	1
Mathematics 301 .....	4	Mathematics 302 .....	4
	16		16

## COMBINATION COURSES

*Second Year*

First Semester		Second Semester	
English 53 .....	2	English 54 .....	2
Biology 401 .....	4	Biology 402 .....	4
Mod. Lang. ....	3 or 4	Mod. Lang. ....	3 or 4
History 275 or 277.....	3	History 276 or 278.....	3
Chem. 365 .....	3	Chem. 366 .....	3
	<hr/>		<hr/>
	15 or 16		15 or 16

*Third Year*

First Semester		Second Semester	
Polit. Economy 251 .....	3	Sociology 252 .....	3
Physics 341 .....	4	Physics 342 .....	4
Vascular Plants 405.....	4	Embryology 404 .....	4
Geology 323 .....	3	Astronomy 320 .....	3
	<hr/>		<hr/>
	14		14

In addition enough elective work to complete at least 96 hours.

Two years at the Ohio State University

*Fourth Year*

Animal Husbandry .....	4
Agricultural Chemistry ....	4
Rural Economics .....	4
Agricultural Engin. }	4
Farm Crops }	

Choice of any two of these the fourth year. The remaining two the fifth year.

In addition to the two selected, at least ten hours to be elected with approval of the Adviser.

*Fifth Year*

Two subjects of four required in senior year—8 hours.

Ten hours a week thruout the year, from any of the courses related to the previous year's work in the College of Agriculture.

### 3. WITH WESTERN RESERVE MEDICAL SCHOOL\*

By arrangement concluded on February 2, 1914, a combination course has been established between the University of Akron and Western Reserve Medical School.

The completion of this course requires seven years, the first three of which are to be spent at the University of Akron and the last four at Western Reserve University. At the end of four years, the degree of Bachelor of Science will be conferred by the University of Akron at the end of seven years, the degree of Doctor of Medicine will be given by Western Reserve University.

#### *General Requirements in Buchtel College of Liberal Arts*

1. No student is eligible for the Combined Arts-Medicine Course who has not been a resident student at the University of Akron for at least three years and who has not gained at least 96 term hours credit in Buchtel College.

2. No student shall be eligible for a degree from Buchtel College of Liberal Arts in the combined Arts-Medicine Course who has not received sufficient credit at the Western Reserve University to complete a total of 128 term hours of work.

3. The Faculty of Buchtel College reserve the right to refuse to recommend for the combined course any candidate who has, in their opinion, not maintained a standard of *good scholarship*.

#### *Subject Requirements in Buchtel College of Liberal Arts*

1. A major must be chosen in Buchtel College leading to the degree of Bachelor of Science.

2. All of the major and minor requirements in the course chosen must be completed at the University of Akron.

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\*This course is here detailed as typical of a combination possible with the large majority of medical schools.

(The following are requirements of subjects to be taken at Buchtel necessary for entrance to the Medical School.)

(A) Chemistry: The equivalent of at least one year of collegiate work of a value of not less than 8 term hours, of which at least 4 term hours shall be laboratory work, and the total instruction shall be not less than 192 hours.

(B) Physics: The equivalent of at least one year of collegiate work of a value of not less than 8 term hours, of which at least 2 term hours shall be laboratory, and the total instruction shall be not less than 192 hours. The fact that high school physics is presented will in no way diminish the requirement of collegiate physics.

(C) Biology; Zoology and Botany: The equivalent of at least one year of collegiate work of a value of not less than 8 term hours, of which at least 4 shall be laboratory work, and the total instruction shall be not less than 192 hours.

(D) German or French: A total of not less than 8 term hours, all in one of these subjects. One unit of high school work may be counted as 3 term hours of this requirement, but at least 6 term hours shall be collegiate work.

All of the requirements indicated above may be fulfilled in a space of three years. The following plan is suggested:

First Year: Regular Freshman Scientific Course.

Second Year: Zoology and Botany, 8 hours, Physics with Lab., 12 hours, German or French sufficient to make with freshman work a total of at least 8 term hours.

(This completes the requirements made by the Medical School. The remainder of time should be given to the completion of the major and minor requirements of Buchtel College.)

#### 4. COMBINATION COURSES WITH OTHER SCHOOLS

##### *With Medical Schools*

The University of Akron will enter into combination courses with any of the Medical Schools of the highest class, as fixed by the standards of the American Medical Association.

##### *With Other Professional and with Technical Schools*

The University of Akron is willing to give the opportunity for combination courses with any approved technical or professional school making graduation from a first-grade High School a prerequisite for entrance (except medical schools, see above). The approval of such courses rests with the committee on classification. In making such combinations, the University of Akron will insist on the fulfillment of the general requirements of three years' residence at Akron, the completion of 96 term hours there and of a total of 128 term hours for graduation—also of the completion of all required majors and minors.

Students are warned against haphazard work in Buchtel College of Liberal Arts with the vague idea that a course chosen at random can be combined with any professional school to which their inclination may later direct them. The choice of school with which the combination is desired should never be delayed beyond the close of the freshman year. The committee on classification is at all times ready to be of assistance to students in making combinations with reputable professional and technical schools.

**TRAINING COURSE FOR TEACHERS**

In harmony with action taken in December, 1915, by the Board of Education of the City of Akron and the Board of Directors of the Municipal University of Akron, the University and the Perkins Normal School undertake jointly the academic and professional preparation of teachers in accordance with the following regulations:

*FOUR YEAR COMBINATION COURSE*

*Graduates of this course will be accepted as Elementary School Teachers but not as High School Teachers in the Akron schools. They are, however, entitled to a provisional state high school certificate, giving them the legal right to teach in any high school in the state of Ohio.*

Students who have completed three years of work (103 hours) in a satisfactory manner, at the University shall be allowed to enter the Perkins Normal School with the prospect of completing the course there in one year.

Such students shall elect at the University adequate courses in United States History and Government, Sociology, Psychology and Ethics.

During the three years at the University the student shall complete a minimum of 103 term hours of work. On satisfactory completion of the fourth year's work at the Perkins Normal School the degree of Bachelor of Science in Education will be given by the University.

*FIVE YEAR COMBINATION COURSE*

*A five year combination course will be offered for those desiring to become high school teachers in the Akron School system. The conditions are as follows:*

The candidate for the combination five-year course shall spend the first four years at the University. During this period the election of a maximum of ten semester hours at

the Perkins Normal School shall be allowed and these hours shall be credited toward the college degree.

The student shall pursue as a major in the college course that subject in which he wishes to qualify as a High School teacher.

On the successful completion of four years' work (128 credit hours) at the University, the student shall receive the college degree to which he is entitled by the nature of his major subject.

The fifth year shall be spent at the Perkins Normal School and in observation and practice teaching, but only those students will be eligible for the combination course who have given evidence of high scholarship and have been duly recommended on this basis by the major professor and accepted by the Superintendent of Schools and the Principal of the Perkins Normal School.

On the successful completion of the fifth year's work the Perkins Normal School will grant a Teacher's Diploma in Elementary or Secondary Education.

Graduates of this course are eligible to appointment to high school positions in Akron after a reasonable probationary period in elementary school work.

**COMMUNITY CO-OPERATION**

The work in community co-operation has been undertaken for the purpose of bringing the University in all its departments into close touch with the activities of the city of Akron. The Directors of the University feel that an institution of higher learning, supported in large part by municipal taxation, should give freely to the city all possible practical aid by means of its instructors and equipment.

While the work of community co-operation is not primarily organized for the purpose of teaching, yet one of its important objects will be to bring students into contact with the work of the city and to train them along various lines of practical usefulness to the community. Whenever possible, the actual problems of civic life and administration will be substituted in the various courses for purely theoretical work, since the University considers this training as one of the most important branches of its activity.

*DIVISIONS OF CO-OPERATIVE WORK*

The work properly falls under two heads.

- I. Special organizations or Bureaus.
- II. Co-operative work by various departments of the University.

*I. SPECIAL ORGANIZATIONS**The Bureau of City Tests*

A. E. HARDGROVE, B. S., DIRECTOR.

In accordance with a proposal made by the Directors of the University and accepted by the Akron City Council, the University has assumed entire charge of the testing work of the city. The Bureau of City Tests was created and took charge of this work January 1, 1914. All analytical and diagnostic work of the city was done by the Bureau until November, 1916, when a diagnostic bacteriological labora-

tory was created at the Board of Health office, and assumed this work. The Bureau continues to do bacteriological milk and water analysis, and all other physical and chemical tests for the various city departments, together with brick testing for Summit County. The Director also offers a course in bacteriology in the School of Home Economics.

The Bureau is located in the Knight Chemical Laboratory and co-operates with the Department of Chemistry in bringing students in advanced courses in chemistry into touch with city work by giving them actual problems of the city for solution as a part of their regular class work.

The Bureau of City Tests during the first eleven months of 1916, has rendered the following services to the City of Akron:

- made 3,013 bacteriological examinations for diphtheria.
- made 151 bacteriological examinations for tuberculosis.
- made 12 bacteriological examinations for typhoid.
- made 9 miscellaneous bacteriological examinations.
- made 268 spring and well water examinations, condemning 130 supplies.
- made 239 examinations of industrial supplies.
- made 250 examinations of the city water supply.
- made 26 examinations of milk and cream, condemning 8 samples.
- made 17 examinations for suspected poisoning from an apple, candy, shoes, varnish remover, tablets, and foods.
- made 20 food examinations.
- made 35 urine examinations.
- made 15 examinations of liquors for alcohol.
- made 3 examinations to determine character of insects and skeletons.
- made 5 examinations for raw sewage in waters and soils.
- made 49 brick tests, condemning 8 samples.
- made 7 cement tests, condemning 2 samples.
- made 7 sand and gravel tests, condemning 3 samples.
- made 3 examinations of miscellaneous construction materials.

- assisted the Y. M. C. A. in the installation of a swimming pool refiltration and sterilization system.
- assisted Purchasing Department in the purchasing of supplies.
- furnished professional advice to different city departments on miscellaneous questions.

## II. CO-OPERATIVE WORK BY DEPARTMENTS OF THE UNIVERSITY

The following list covers activities of the past three years:

### *Department of Social Sciences*

Housing survey by students under direction of Board of Health and Charity Organization; work by students with Charity Organization; (political science) field work in city departments under direction of Bureau of Municipal Research; research problems for the United States Department of Labor.

### *School of Home Economics*

Class work conducted by students at Y. W. C. A.

### *Department of Physical Education*

Summer playground work by Director and students.

### *Department of English*

Field work in journalism on local newspapers.

### *College of Engineering*

Students work alternate two week periods in foundries, machine shops, and on construction and railroad work. Co-operative students in business training alternate in offices of large manufacturing plants. Students in civil engineering assigned to municipal work under direction of city engineer. Report on Akron pavements prepared and published at request of city council (*Akron Pavements*, 74 pp. Fred E. Ayer, Dean of the College of Engineering).

### *Extension Work*

Evening classes in following subjects (for 1916-17): French, Spanish, German, Business English, English

Literature, Public Speaking, Economics, Business Law, Accounting, Business Administration, European History, Biology, Chemistry, Mathematics (for details see page 134).

University Lecture Course presented to various clubs and organizations of the city by faculty members; also several lectures on technical subjects (see page 149).

*Co-operation with the Board of Education*

A combination course for the purpose of training teachers has been arranged by agreement between the Board of Education and the Directors of the University. (For details see page 158.)

## REGISTER OF STUDENTS

## BUCHTEL COLLEGE

1916-1917

## SENIOR CLASS

Azar, Robert Isaiah	S	Akron
Carlton, Clinton Arbie	S	Medina
Chain, Faye Thompson	P	Akron
Cushman, Josephine	P	Akron
Darrah, David Harley	P	Akron
Driesbach, Charles Oliver	S	Akron
Frederick, Inez	P	Copley
Freeder, Arthur	P	Akron
Gable, Norris	S	Akron
Geisinger, Elliott	S	Akron
Hardie, Julia	P	Akron
Hugi, William Edgar	P	Clarington
Kasch, Richard	S	Akron
Kittelberger, Fred	S	Akron
Knowlton, John	S	Akron
Mertz, Ray	S	Akron
Olin, Esther Ellene	P	Akron
Pfahl, Helen	P	Akron
Poules, Ira	S	Akron
Quinlan, Dorothy Ann	P	Akron
Richardson, Marion	P	Cuyahoga Falls
Roth, Samuel	S	Akron
Sammarone, Salvan	P	Akron
Santom, Baldwin	S	Akron
Schaeffer, Carl Howard	S	Akron
Shea, Joseph Bernard	P	Akron
Simms, Hazel P.	P	Akron
Squibbs, Hubert	S	Akron
Stansfield, Percy	S	Akron
Thornton, Dwight G.	P	Akron

Seniors—30

## SENIORS IN ABSENTIA

Brown, Donald—Combined Arts-Law Course with Ohio State University	Akron
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Total Seniors—31

## JUNIOR CLASS

Babcock, Mabel	P	Akron
Darrah, Kenneth	P	Akron
Durling, George K.	S	Wadsworth
Ellsworth, Lloyd	P	Hudson

Fosnight, Reed	P	Akron
Gillen, Francis	C	Akron
Grafton, John E.	S	Barberton
Green, Leonard	P	Kent
Kendall, Victor	S	Akron
Lidyard, Dewey	P	Akron
McAdoo, Bruce	S	Akron
Manthey, Edwin	P	Akron
Means, Martha	P	Akron
Nall, Anna	P	Cuyahoga Falls
Olin, Lucretia	P	Wadsworth
Place, Marguerite	P	Akron
Rogers, Virgil	P	Akron
Rowse, Robert	S	Akron
Schmidt, Martin	S	Akron
Smith, Cyril	S	Akron
Snyder, Marion	P	Akron
Swinehart, Clyde L.	S	East Akron
Tibbitts, Dorothy	P	Akron
Tomkinson, LeRoy	P	Akron
Wolcott, Mary	P	Akron
Work, Ray	S	Akron

Juniors—26

## SOPHOMORE CLASS

Arnold, Wendell	P	Akron
Babutza, Theodore	C	Indianapolis, Ind.
Bierce, Bruce	S	Cuyahoga Falls
Billow, Paul E.	P	Akron
Botsford, Lawrence	S	Akron
Bowman, Sara	P	Akron
Cable, John E.	S	Akron
Cahill, Carl J.	S	Akron
Camp, Ferdinand W.	S	Kenmore
Carroll, Marie	C	Akron
Christy, Robert	S	Akron
Fish, Albert S.	P	Akron
Fogle, Karl B.	S	Akron
Gilbert, Carl S.	S	Akron
Graham, Katherine	P	Akron
Gudikunst, Earl	C	Akron
Haley, Arthur	S	Cuyahoga Falls
Harris, Guy	P	Akron
Henegan, Olive A.	P	Akron
Hollingsworth, Edith	P	Akron
Holloway, Harold S.	S	Akron
Hottenstein, Howard	S	Akron
Hunsicker, Oscar	S	Akron
Kohn, Leona	P	Akron
Kremer, Ward Claire	P	Wadsworth
Linney, Norma	P	Akron
Long, Gladys	P	Akron
Marvin, Eleanor	P	Ravenna
Minnick, George	S	Akron

Motz, Clarence E. ....	P	Cuyahoga Falls
Myers, Howard E. ....	S	Akron
Neufield, Leo .....	S	Akron
Osborne, Joseph .....	P	Corry, Pa.
Palmer, Roland .....	S	Akron
Pfahl, Charles Alton .....	S	Akron
Pokras, Samuel .....	S	Akron
Purdy, Walter .....	S	Akron
Rood, Miriam .....	P	Akron
Rowley, Pauline .....	P	Akron
Ruttman, Carl .....	S	Akron
Shaffer, Carl .....	P	Akron
Snider, George E. ....	P	Akron
Sorg, Walter .....	S	Massillon
Spicer, Ralph .....	S	Akron
Surbey, Ethel .....	P	Akron
Swisher, Grant .....	S	Akron
Taylor, Louise .....	P	Akron
Thomas, Burchard .....	P	Akron
Todd, J. Alexander .....	S	Akron
Van de Grift, Josephine.....	P	Akron
Viering, Lawrence .....	P	Akron
Wendt, Aubrey .....	S	Coshocton
Werner, Herman .....	S	Akron
Whigham, Frances .....	P	Akron
Wilhelm, Seymour .....	S	Akron
Wortman, Eldred G. ....	S	Akron

Sophomores—56

## FRESHMAN CLASS

Alvis, Harold A. ....	S	Akron
Andreas, Anna .....	C	Akron
Babcock, George .....	C	Ravenna
Billow, Ruth .....	C	Akron
Bonstedt, Katharine .....	C	Akron
Botzum, John Frederick .....	S	Akron
Browning, Rufus .....	S	Akron
Bruner, Byron .....	S	Akron
Burt, Harriet .....	C	Akron
Butler, Whitney E. ....	S	East Akron
Calvin, Ruth .....	C	Akron
Clark, LaVerne .....	S	Akron
Clouser, Howard .....	S	Akron
Cooper, Leslie .....	S	Akron
Cramer, Ruth .....	C	Akron
Crapper, Arthur .....	S	Akron
Davis, Aubrey .....	S	Akron
Dunford, Emerson .....	S	Akron
Emmons, Clande .....	S	Akron
Fetzer, Herman .....	S	Akron
Fowler, Harold .....	S	Cuyahoga Falls
Fox, Rolland .....	S	Akron
Francis, Edgar .....	S	Cleveland

Gary, Kathryn E. ....	S	.... Grand Rapids, Mich.
Geer, Gerald .....	S	..... Akron
Gelsanliter, Charles .....	S	..... Akron
Griffith, Jack .....	S	..... Akron
Haas, Eugene .....	S	..... Akron
Hawk, Ethel .....	C	..... Akron
Hoover, Clark .....	C	..... Akron
Hudson, Vyla .....	S	..... Akron
Holmwood, Walter .....	S	..... Akron
Knowlton, Arthur .....	S	..... Akron
Makman, Saul .....	S	..... Akron
Martens, Cecile .....	S	..... Akron
Meech, Forest .....	S	..... Akron
Michel, Robert .....	S	..... Akron
Miller, Rhea .....	C	..... Akron
Miller, William G. ....	C	..... Moatsville, Va.
Mull, Julia A. ....	S	..... Akron
Myers, LeRoy .....	P	..... Akron
McConkey, Wanda .....	C	..... Akron
McCormick, Edward .....	S	..... Akron
McIlwain, Mary A. ....	C	..... Akron
Otis, Edward .....	C	..... Akron
Palmer, Frances E. ....	C	..... Akron
Penrose, William C. ....	S	..... Akron
Pethick, Russell .....	S	..... Akron
Pfahl, Wilbert C. ....	S	..... Akron
Phillipe, Lyle R. ....	C	..... Vincennes, Ind.
Price, Wilbur .....	S	..... Akron
Reynolds, Chester .....	C	..... Leroy
Rose, Myrtle .....	S	..... Akron
Ross, Donald .....	S	..... Akron
Rundell, J. Rupert .....	C	..... Adams, Mass.
Sauvain, George .....	S	..... Akron
Stockdale, Raymond .....	S	..... Akron
Swigart, Clarence .....	S	..... Akron
Toon, Lawrence .....	S	..... Akron
Turner, Roberta .....	S	..... Akron
Urpman, Nina .....	C	..... Akron
Vaughan, Wilola .....	C	..... Akron
Waldkirch, Earl .....	S	..... Akron
Waltz, Leland .....	S	..... Akron
Welker, Waldo .....	C	..... Akron
Whalen, Charles F. ....	S	..... Akron
Wiener, Blanche .....	C	..... Akron
Wilcox, Elizabeth .....	C	..... Akron
Wilkinson, George .....	S	..... Peninsula
Willems, Reynold .....	C	..... Akron
Williams, Glenn .....	S	..... Akron
Williams, Joe Martin .....	S	..... Akron
Wilson, Harold .....	C	..... Akron
Wortman, Ruth .....	C	..... Akron
Young, Henry .....	S	..... Akron

Zellars, Cleon ..... S ..... Akron  
 Zettle, Ruth ..... C ..... Akron  
 Freshmen—77

*SPECIAL STUDENTS*

Alpern, Lewis .....Pittsburg  
 Ball, Emily ..... Akron  
 Boyd, Marie ..... Akron  
 Conger, Helen ..... Akron  
 Fox, Errol L. .... Akron  
 Fry, Ida G. .... Akron  
 Gredys, L. A. .... Akron  
 Hanson, A. S. .... Akron  
 Henderson, John ..... Akron  
 Hindall, Alva ..... Mansfield  
 Jones, Carl H. .... Iowa City, Ia.  
 Johnson, I. B. .... Akron  
 Langer, Harriet ..... Akron  
 Lawrence, Frank E. .... Tallmadge  
 Lawrence, Mrs. J. C. .... Akron  
 Morris, Roy C. .... Cadiz  
 Mylroie, John M. .... Akron  
 Root, Arthur T. .... Akron  
 Schubert, Minerva ..... Akron  
 Schworm, George ..... Akron  
 Tanner, Marjorie ..... Akron  
 Tanner, Florence P. .... Akron  
 Thomas, Mary ..... Akron  
 Vladeff, Peter ..... Wooster  
 Special Students—24

**COLLEGE OF ENGINEERING**

*PRE-JUNIOR CLASS*

Boecker, Theodore J. .... Akron  
 Boedicker, Earl ..... Akron  
 Cady, Emerson E. .... Akron  
 Converse, Lucius ..... Mantua  
 Gulick, Earl ..... Akron  
 Joel, Floyd E. .... Akron  
 Judy, Lowell ..... Kent  
 Kennedy, John ..... Akron  
 Lichter, Jacob ..... Akron  
 Mitchell, Ernest ..... Akron  
 Moore, Harold ..... Akron  
 Purdy, Harold ..... Akron  
 Wybel, Howard ..... Akron  
 Pre-Juniors—13

SOPHOMORE CLASS

Bordner, Robert .....	Akron
Breen, Leo .....	Akron
Donaldson, Glenn S. ....	Cuyahoga Falls
Hoskin, Minard .....	Akron
Kuszmaul, Corliss .....	Akron
Miller, John .....	Akron
Pollock, Lloyd C. ....	Akron
Siedschlag, Karl .....	Akron
Thierry, James .....	Akron
Vogt, Walter .....	Akron
Sophomores—10	

FRESHMAN CLASS

Avery, Bryan .....	Bedford
Braucher, Fred Jay .....	Akron
Carlin, Charles .....	Kent
Close, Stanford D. ....	Akron
Dieterich, Harold .....	Tallmadge
Durling, Wm. Jacob .....	Wadsworth
Fletcher, Robert Floyd .....	Ravenna
Frank, Paul A. ....	Akron
Halter, Herbert B. ....	Akron
Hardy, F. Lance .....	Kent
Heminger, Harold Remson .....	Akron
Lelansky, Ross .....	Akron
Long, Harry K. ....	Seville, Ohio
McEwen, Willard .....	Creston
Morgan, Ray V. ....	Akron
O'Brien, Robert T. ....	Akron
Robinson, Alfred Bryan .....	Akron
Robinson, Chester P. ....	Akron
Stevens, George Edison .....	Akron
Tench, Ambrose .....	Akron
Warrick, Noel W. ....	Akron
Welker, B. Thomas .....	Akron
Freshmen—22	

SPECIAL STUDENTS

(Not candidates for degree)

Soderland, Carl .....	Worcester, Mass.
Wilgus, Ward .....	Akron
Special Students— 2	

BUSINESS TRAINING

FRESHMAN CLASS

Dugan, Martin E. ....	Akron
Fisher, Wm. A. ....	Akron

Leonard, J. Russell .....	Akron
Schwartz, Sidney H. ....	Akron
Spalding, Fred .....	Akron
Stump, Walter Huber .....	Akron
	Freshmen— 6

## CURTIS SCHOOL OF HOME ECONOMICS

### SENIOR CLASS

Burkman, Anne .....	Akron
Cleaver, Josephine .....	Akron
Fleming, Rachael .....	Akron
Mallory, Helen .....	Cuyahoga Falls
Tobin, Honora .....	Akron
	Seniors— 5

### JUNIOR CLASS

Leland, Florida .....	Akron
McConnell, Hazel .....	Akron
Putt, Hazel .....	Akron
	Juniors— 3

### SOPHOMORE CLASS

Hardie, Helen V. ....	Akron
Jones, Loretta .....	Akron
Kepler, Helen .....	Akron
Robinson, Irma V. ....	Akron
Shaffer, Helen .....	Akron
Stevenson, Alta .....	Akron
Wolf, Cecilia .....	Akron
	Sophomores— 7

### FRESHMAN CLASS

Arnold, Lois .....	Akron
Davidson, Ethel .....	Akron
Eckroad, Marie .....	Akron
Elgin, Carletta B. ....	Akron
Frampton, Bertha .....	Akron
Frick, Iva .....	Akron
Garver, Katherine .....	Akron
Kepler, Lois .....	Akron
Magennis, Mary .....	Akron
Magennis, Ruth .....	Akron
Marshall, Mildred .....	Barberton
Morris, Rose .....	Akron
Morton, Mary .....	Barberton
Reynolds, Florence .....	Akron
Schaffner, Dorothy .....	Akron
	Freshmen—15

## SPECIAL

(Not Candidate for Degree)

Krubbfeldt, Mabel .....Akron

## SUMMARY OF STUDENTS IN DAY CLASSES

## BUCHTEL COLLEGE

	Men	Women	Total
Senior Class .....	23	8	31
Junior Class .....	19	7	26
Sophomore Class .....	41	15	56
Freshman Class .....	54	23	77
Specials (entrance requirements completed) .....	6	8	
Specials (entrance requirements not completed) .....	5	5	
Total Specials .....			24
Total Men .....			148
Total Women .....			66
✓ Total Students in Buchtel College .....			214

## COLLEGE OF ENGINEERING

Pre-Juniors .....	13
Sophomores .....	10
Freshmen (Engineering) .....	22
Freshmen (Business Training) .....	6
Specials (not candidates for degree).....	2
Total Students in College of Engineering.....	53

## CURTIS SCHOOL OF HOME ECONOMICS

Seniors .....	5
Juniors .....	3
Sophomores .....	7
Freshmen .....	15
Specials (not candidates for degree).....	1
Total Students in Curtis School.....	31

## EVENING CLASSES

Adam, E. R.  
 Adam, Rhea H.  
 Aldrich, J. F.  
 Alexander, C. P.  
 Alexander, Rosanna B.  
 Anderson, Bessie  
 Arenson, Louis H.  
 Arnold, Carl J.  
 von Arnstein, Stanley  
 Aston, Edwin H.  
 Ayer, Bessie B.  
 Baker, Leah M.  
 Baldwin, Belle  
 Ball, Mrs. E. L.  
 Ball, John M.  
 Barber, Wm. C.  
 Barnes, Clifford E.  
 Barnett, Donald C.  
 Barry, Nellie  
 Baruch, Jacob  
 Baudin, Wilfred A.  
 Bay, J. C.  
 Beard, Mary V.  
 Bechtel, Levi J.  
 Beebe, Leslie F.  
 Beightler, Robert H.  
 Bender, VanKirk  
 Benick, Salomae  
 Bennage, Curtice  
 Bennett, Mrs. George C.  
 Bent, Guy L.  
 Berrey, Francis Emmett  
 Bergenstock, John Konold  
 Biggs, Ina M.  
 Billings, C. F.  
 Billow, Ruth Kathryn  
 Bixby, W. S.  
 Bixler, Ira C.  
 Black, Sterling K.  
 Bleckner, Lillian Gordon  
 Blocksom, George B.  
 Boley, Minnie May  
 Bolliger, Georgette  
 Bolliger, Laura  
 Boswell, Anna Mae  
 Boughner, C. L.  
 Bowman, Riddell P.  
 Boyd, Harry Elmont  
 Breeze, Marshall H.  
 Breen, J. Edgar  
 Brinkerhoff, Augusta  
 Broughton, Orson James  
 Brown, Gertrude  
 Brown, Mrs. Marion G.  
 Bufford, Harold Frederick  
 Burger, Carl J.  
 Burkardt, Adolph F.  
 Burkardt, Stella Hibbs  
 Burt, Guy W.  
 Capron, Nelle G.  
 Caris, Lila  
 Carter, L. C.  
 Carter, Sidney T.  
 Carver, Mrs. Mary  
 Case, Chas. Lloyd  
 Caswell, Earl W.  
 Chalfant, Anna W.  
 Chapin, Mary  
 Charleson, John T.  
 Christian, Harold Frank  
 Clark, J. E. Wesley  
 Clark, Paul M.  
 Close, Elbert  
 Coates, Wm. L.  
 Cole, Hazel Lane  
 Comer, Harry Hunt  
 Conlon, James  
 Conlan, Oliver Close  
 Conway, Fred  
 Copenhaver, Sue E.  
 Crispin, Frederica  
 Critchlow, John E.  
 Croft, Mahlon A.  
 Cullen, Julien  
 Daily, Carl C.  
 Dambach, Mary E.  
 Danniel, Ethel  
 Davies, Earle Lee  
 Davies, Evan T.  
 Davis, Myrtus A.  
 Davis, John Chas.  
 Dean, Anna H.  
 Dempsey, Esther M.  
 Derrig, Dorothea  
 Dewey, Lena  
 Dietrich, Elmer  
 Dougherty, Elizabeth  
 Douglas, Helen A.  
 Douglas, Rosamond L.  
 Drake, Allen  
 Drake, Ernest R.  
 Drake, Wm. F.  
 Drake, Wm. V.  
 Dreese, Mark A.  
 Driesbach, O. C.  
 Drury, E. Fay  
 Duffield, Luther Karl  
 Dunlap, J. Ralph  
 Durling, Paul  
 Eaton, Ida Brown  
 Eberhart, Mark P.  
 Eckert, Homer  
 Ellsworth, Ray C.  
 Ely, Margaret L.  
 Engler, Nicholas A.  
 Ernst, Elmer E.  
 Eysenbach, Doris  
 Faine, C. Glenn  
 Falls, Joseph K.  
 Farver, Ethel  
 Ferguson, Wellington D.  
 Feik, Harry T.  
 Fernsner, Hazel  
 Fouse, Pearl Eva  
 Field, James H.  
 Filer, Samuel A.  
 Foltz, Adalaide L.  
 Foltz, Geo. K.  
 France, Rolla T.  
 Franks, Dean H.  
 Franz, Elizabeth  
 Frase, Alice

Frese, Laurence A.  
Frey, Edwin Frederick  
Fricker, Marian D.  
Friedman, Fannie  
Friedman, Ike  
Fritsch, Henry  
From, Owen C.  
Fuller, William Arthur  
Fullington, Amy C.  
Funk, John A., Jr.  
Gable, Norris LeRoy  
Gerken, Richard Thomas  
Gessler, Myra  
Gilbo, Raymond W.  
Glass, C.  
Goodhart, Essie M.  
Goodman, Rose Esther  
Goodwin, William George  
Gredys, Louis Abraham  
Greene, Andrew T.  
Greenfield, Leo  
Griffiths, Catherine  
Grismer, Berdelle  
Gudikunst, Earl  
Haas, Mrs. Jessie  
Hackenberger, Richard Earl  
Haenes, Walter  
Hale, Andrew  
Hamilton, Samuel Lawrence  
Hammon, Edwin S.  
Hanna, Chester Earl  
Hanson, A. S.  
Hardy, Lance  
Harrington, Ira W.  
Harrington, Leonard H.  
Harlow, Rose  
Hartenstein, Margaret  
Harvey, Harry C.  
Hasford, C. Boyd  
Hauenstein, Eugene H.  
Hauenstein, Henry H.  
Hensel, Elva Chloe  
Hensel, Minnie V.  
Herman, Freda E.  
Herman, Virna M.  
Hickman, Leland M.  
Hicks, Walter S.  
Higgins, H. P.  
Hill, Arthur C.  
Hillock, J. E.  
Hiltabiddle, L. A.  
Hirleman, C. L.  
Hirleman, Grace  
Hoffman, Arnold  
Hoffman, Clyde  
Holman, David G.  
Hoover, Raymond C.  
Horsfield, Arthur  
Horvath, Samuel  
Hosfield, Lee C.  
Hugerford, Courtland  
Hunsicker, Oscar  
Huntley, Vesta A.  
Ingell, Nelson C.  
Ingram, Ronald  
Jennings, C. M.  
John, R. O.  
Johnson, Ideson Burdette  
Johnson, Chas. P.  
Johnson, Julius  
Johnson, Clarence M.  
Johnson, Rose J.  
Johnson, Violet  
Jones, Hester  
Judson, Ralph S.  
Kater, Minnie Anna  
Keane, L. A.  
Keeney, Harriette  
Keller, E. B.  
Kempel, E. J.  
Kempel, Florence  
Kennedy, Dorothy  
Kennedy, Ruth E.  
Kenney, J. C.  
Kerr, James M.  
Kirn, Russell W.  
Kirtley, Lorin E.  
Kissane, Hugh H.  
Kittelberger, Fred W.  
Kittredge, John W.  
Kline, Ralph O.  
Knowlton, John  
Kramer, John  
Kraus, John  
Kroeger, Katherine  
La Due, Willet  
Landis, Ruth  
Lapp, Claytis  
Larsen, John  
Lasher, Margaret  
Lawler, Ellen  
Leas, Lucy  
Leech, James  
Lehman, H. Russell  
Lehman, Wm.  
Leisk, Ralph  
Leonhiser, Wilomie  
Loomis, Ray C.  
Long, Harry  
Lubbering, A. F.  
McAdoo, S. E.  
McBride, F. L.  
McClenathan, Curtis  
McClenathan, Robt.  
McCoin, A. T.  
McConnel, Robt.  
McDonough, Loretta  
McDonough, Isabelle  
McDowell, Blanche  
McGarry, Mary E.  
McGee, Naomi  
McGonigal, Chas.  
McNeil, C. C.  
Magee, M. C.  
Magnell, Ellis  
Mahoney, James  
Malcomb, Austin  
Manelik, Frank  
Markle, C. A.  
Markel, Verna  
Martin, Arthur  
Masion, G.  
Massey, Omar  
May, Dean F.  
May, Evelyn  
May, Josephine  
Medors, Floyd  
Mertzweiler, Leo  
Mertzweiler, Mary Anne  
Metzler, A. W.  
Meyer, Ernest  
Michel, Louis  
Miller, J. E.

Miller, Burt  
 Miller, Frank B.  
 Miller, Gilbert  
 Miller, H. G.  
 Miller, L. P.  
 Mills, Margaret Ann  
 Minnick, George H.  
 Mitchell, M. Wm.  
 Mohlenpah, Frederick  
 Moody, Chas.  
 Morris, R. C.  
 Mountford, Roy  
 Mulson, Addie  
 Nank, Wm.  
 Naylor, Grace  
 Neuheld, Leo  
 Nugent, John  
 Nevling, Ada  
 Nichols, Chas.  
 Olin, Grace G.  
 Olin, S. Estella  
 Omansky, Esther  
 Orr, L. P.  
 Parry, Ward H.  
 Pearson, H. E.  
 Pearson, Lucile  
 Pearson, J. L.  
 Pendleton, Walter  
 Perkins, David H.  
 Petric, Edw. L.  
 Petrine, Robert  
 Pifer, Mrs. Geo.  
 Pleasants, Elizabeth  
 Poe, Helen  
 Pollock, Gladys  
 Poole, Howard  
 Porosky, Margaret  
 Possehl, Arthur  
 Prickett, Chas.  
 Proehl, Bessie  
 Purdy, H. C.  
 Quick, Frank  
 Quick, Adolphus  
 Quinn, Francis Martin  
 Ramsey, Robt.  
 Ranck, Sadie  
 Rannels, Edwin  
 Reaven, Samuel  
 Ream, Wm. J.  
 Reise, Wayne  
 Reinke, Mina  
 Reip, Blaine  
 Reynolds, Ralph  
 Rinn, Edw.  
 Rivkin, Rose  
 Rockwell, Bennett  
 Roderick, Mord.  
 Rogers, Anna  
 Rogillio, J. B. R.  
 von Rohden, John  
 Rohrer, Perlee  
 Rook, Ethel  
 Rook, Margaret  
 Roosma, A. H.  
 Rosenberger, George  
 Roskuski, Chas.  
 Roth, Eva  
 Ruttman, Eron  
 Ryan, Carl  
 Saddler, Edith  
 Salyerds, John  
 Sanzenbacher, Elizabeth  
 Sayers, Chas.  
 Schell, Minnie  
 Schleuniger, Frank  
 Schmidt, Martin  
 Schoeninger Bertha  
 Schotz, Charlotte  
 Schumacher, Fred  
 Schrank, Elmer  
 Segel, Louis  
 Seibert, Shirley  
 Shackett, Lillian  
 Shapiro, Louis  
 Schuman, Hubert  
 Smith, Harry A.  
 Smith, E. Vergon  
 Snyder, Helen Martha  
 Spence, Chester  
 Spielberger, Sarah  
 Sprague, Stella  
 Stahl, John  
 Stanger, Chas.  
 Steel, Harry  
 Stevens, Maude  
 Stoffer, Sylvia  
 Stough, Fannie  
 Stowers, Douglas  
 Strome, A. R.  
 Stump, Geo.  
 Sturtevant, Ruth P.  
 Sullivan, D. Allen  
 Sullivan, Joy  
 Sullivan, Katherine  
 Schweinfuss, J. J.  
 Scott, Anita  
 Searer, H. J.  
 Seiberling, Irene  
 Seydell, Morris  
 Shea, Jos. B.  
 Sheehy, Leland  
 Shields, Bertha  
 Silverstein, Samuel  
 Sirdefield, Myrtle  
 Slaybaugh, J. F.  
 Smetts, Ada  
 Smith, Leo  
 Snyder, Arthur  
 Snyder, LeRoy  
 Snyder, Oliver  
 Sobien, Andrew  
 Sullivan, Margaret  
 Sutton, Kenneth  
 Schwartzlander, Roy L.  
 Tanner, Maude C.  
 Tate, Anna  
 Teeuwen, Wm.  
 Thee, Elsworth  
 Theiss, Theodore  
 Theuerholz, A. W.  
 Thomas, Earle  
 Tipton, R. J.  
 Tobin, Dorothy  
 Tolles, F.  
 Toomey, Pierce  
 Treiber, Harry  
 Tritschler, Amelia  
 Trumbaur, Byron  
 Turner, Herbert  
 Uhl, Lloyd A.  
 Upson, Mrs. Ralph  
 Vandorsall, Howard J.

Vart, Toney	Whitlatch, Harry
Vernon, Harry	Whitney, Alfred
Vly, Lattimore	Wilcox, Elizabeth
Voll, George	Wilcox, Raymond E.
Voris, Marion	Willford, E. J.
Wachner, Malvin	Williams, Ed. C.
Wadsworth, Sherlock H.	Williams, Laura
Wagaman, V. C.	Williamson, Chas.
Walsh, Chas. J.	Wilson, Chas.
Wanamaker, Gertrude	Wiseman, Z. B.
Warner, Jeanette	Witwer, P. R.
Watkins, H. H.	Wolf, Corda
Watson, R.	Wolf, Wm. B.
Watters, Wm.	Wondrack, Anthony
Weaver, Ivan N.	Woodruff, Lovell
Weber, A. L.	Woods, Alice C.
Weber, S. Earl	Woodward, John C.
Weeks, Gladys P.	Work, Ray A.
Weltner, Dora	Yost, Harvey W.
Wenger, Eunice	Zahnder, John
Wertz, Grace	Zellers, Raymond J.
Wessell, C.	Zettle, Helen J.
Weyrick, Emma	Zook, Abner D.
Wheelan, Elizabeth	Zook, David Blough.
White, W. Bayard	

Total .....	467
Students regularly enrolled in University taking evening courses, deduct .....	20
Total Evening Students .....	447

SUMMARY OF ALL STUDENTS IN UNIVERSITY

	Men	Women	Total
Total Seniors .....	23	13	36
Total Juniors .....	19	10	29
Total Pre-Juniors .....	13		13
Total Sophomores .....	51	22	73
Total Freshmen .....	82	38	120
Specials (candidates for degree) .....	3	4	7
Specials (not candidates for degree).....	13	7	20
Total Men .....			204
Total Women .....			94
Total in Day Classes .....			298
Total in Evening Classes .....		447	
(On the basis that five evening students are equivalent to one full-time student).....			89
Total Full-time Students in University.....			387

SUMMARY OF GEOGRAPHICAL DISTRIBUTION  
OF STUDENTS

(Exclusive of Evening Classes)

Akron .....	249
Summit County outside of Akron .....	13
Ohio outside of Summit County.....	27
Other States .....	9

298

DEGREES CONFERRED

BUCHTEL COLLEGE

Class of 1916

BACHELOR OF PHILOSOPHY

Allen, Ann E. ....	Akron
Cooper, William V. ....	Akron
Dresher, Elizabeth .....	Akron
Dwyer, Helen G. ....	Akron
Glock, Clementine M. ....	Akron
Hull, Lois .....	Akron
Johnson, Ralph W. ....	Akron
Mignin, A. Louise .....	Stryker
Miller, Rhea Kathryn .....	Akron
Pfahl, Eva .....	Akron
Sickler, Clement .....	Barberton
Strandborg, Carl .....	New Lyme

BACHELOR OF SCIENCE

Chisnell, Carl .....	Akron
Crawford, Porter J. ....	Seville
Crisp, Park P. ....	Akron
Frick, Carl E. ....	Akron
Grismer, Karl .....	Akron
Hardman, Bert .....	Akron
Rohner, Eva M. ....	Akron
Smith, Willson .....	Akron
Sours, Harold .....	Barberton
Taylor, George I. ....	Akron
Warner, Raymond .....	Barberton
Yackee, Burt .....	Barberton

CURTIS SCHOOL OF HOME ECONOMICS

BACHELOR OF SCIENCE

Phoehl, Bessie .....	Akron
Willson, Irene .....	Akron

PUBLIC ADDRESSES

January 11	A. W. Burnett—"Real Estate and mortgages."
January 18	Judge E. W. Stuart—"Akron 45 Years Ago."

- February 11 Dr. G. Hopkins, Vice-President National Underwriters Society—"Insurance."
- February 18 T. E. Smith, Editor India Rubber Review—"Trade Journals."
- February 25 Prof. A. R. Hatton—Western Reserve University
- February 29 Miss Alice Standish—State Organizer for Woman Suffrage.
- March 7 Miss Emily Gilbert—Social Center Work.
- March 14 Hon. E. R. Bathrick—"Legislative Procedure."
- March 28 J. Ed. Good—"The College Man."
- April 4 Mr. Ross M. Leggett, Chemist with Neel-Armstrong Co.—"Experiences in Mexico."
- April 11 Mr. Henry Oldys, National Lecturer for the Audubon Societies of America—"Birds, Bird Songs and Bird Protection."
- June 11 Rev. Franklyn Cole Sherman, St. Paul's—Baccalaureate Sermon.
- June 14 Miss Ida M. Tarbell—"The Free Mind" (Commencement Address)
- June 14 Mr. J. Cameron McClean—"Celtic Folk Songs" (before the Alumni Association)
- October 6 Dr. H. S. MacAyeal, Akron—"The Yellow Peril and the White Peril, in Japan."
- October 13 Mr. Glenn Swenson, Panama — "The Student's Viewpoint."
- October 20 Mrs. Additon, Portland, Ore. (W. C. T. U.) "The Challenge of Our Social and Political Needs."
- October 27 Prof. Bulger, University—"The German Educational System and German Efficiency."
- November 3 Dr. W. K. Stalnaker (Goodyear Co.)—"Our Year Books."
- November 10 Miss Eveline Thomson, New York—"The Constantinople College for Women."
- November 17 Dr. H. W. Kellogg, Akron—"Why Go to College?"
- November 24 President Kolbe—"Intercollegiate Associations."
- December 8 Dr. R. W. E. Cole—"The Organization of Public Health Work."
- December 15 W. Kee Maxwell, The Akron Evening Times—"Humor of the Press."

### PRIZES AND HONORS

The Alumni Board of Trustees appropriates annually \$100.00 from the Alumni Prize Fund for an Alumni speaker, under the auspices of the Alumni Association; also a cash prize of \$50.00 to be awarded to that member of the graduating class who attains the highest average standing during the four year course. The prize for 1916 was divided between Miss Rhea Kathryn Miller and Miss Eva Pfahl.

## THE OLIVER C. ASHTON PRIZES

*Awarded for excellence in declamation*

1915-1916

In the Junior Class: First prize to Dewey Lidyard; second prize to Marguerite Place.

In the Sophomore Class: First prize to Honora Tobin; second prize to William E. Hugi.

1916-1917

In the Senior Class: First prize to Esther E. Olin; second prize to William E. Hugi.

*The Tomlinson Prizes on the Municipal University*

First Prize: Josephine Cushman; second prize, Grace Lienhard.

*Phi Sigma Alpha*

(An honorary society for the purpose of encouraging high scholarship. Three students are chosen for membership from each senior class). In 1916 two were chosen for having the highest grades for three and one-half years, since the work was of the same grade.

1916

Eva Pfahl, Rhea Kathryn Miller, Raymond Warner, George I. Taylor.

## BUCHTEL COLLEGE ALUMNI ASSOCIATION

*Organized July, 1874**Incorporated October 19, 1899**OFFICERS FOR 1915-1916*

President, C. C. McNEIL, '09.....Akron  
 Vice Presidents, CHARLES JAHANT, '09 .....Akron  
                   MAUDE HERNDON, '01.....Akron  
 Secretary, MRS. CECIL McNEIL, '10.....Akron  
 Treasurer, K. D. SMITH, '13.....Akron

*ALUMNI BOARD OF TRUSTEES**Officers*

C. C. McNEIL, '09 .....President ex-officio  
 MRS. C. C. McNEIL, '10.....Secretary ex-officio  
 K. D. SMITH, '13.....Treasurer ex-officio

*Term Expiring June, 1917*

MRS. E. F. VORIS, '77.....	Akron
HOWARD ROHAN, '10.....	Akron
ARDEN E. HARDGROVE, '11.....	Akron
ETHEL DAVIES, '12.....	Barberton

*Term Expiring June, 1918*

F. S. GOEHRING, '08.....	Akron
CARL M. MYERS, '08.....	Akron
MRS. H. E. SIMMONS, '06.....	Akron
BERNICE CARTER, '15.....	Akron

*Term Expiring June, 1919*

MRS. SUSIE C. COLE, '73.....	Akron
LEROY BARNETT, '14.....	Akron
EVA ROHNER, '16.....	Akron
ROBERT WILSON, '14.....	Akron

Annual meeting of the Association during Commencement.

Stated meetings of the Alumni Board of Trustees: the Thursday evening of the week following Commencement week, the third Thursday evening of November, February and May.

**SUMMARY OF ALUMNI**

*NUMBER OF GRADUATES*

Men .....	286
Women .....	245
Total .....	531

*Geographical Distribution*

Deceased .....	50
Unknown .....	4
In California .....	13
In Colorado .....	4
In Connecticut .....	1
In Florida .....	1
In Idaho .....	3
In Illinois .....	9
In Indiana .....	13
In Iowa .....	3
In Massachusetts .....	10
In Michigan .....	12
In Minnesota .....	1
In Mississippi .....	1
In Missouri .....	3
In Montana .....	1
In Nebraska .....	2

In N. Carolina .....	1
In N. Dakota .....	1
In New Jersey .....	2
In New Mexico .....	1
In New York .....	28
In Ohio .....	329
In Oklahoma .....	1
In Oregon .....	2
In Pennsylvania .....	20
In Tennessee .....	1
In Texas .....	1
In Utah .....	1
In Vermont .....	3
In Washington .....	2
In Wisconsin .....	1
In Wyoming .....	1
In Alaska .....	1
In Panama .....	2
In France .....	1
In Georgia .....	1

*Occupations of Alumni*

Actors .....	2
Architects .....	1
Artists .....	1
Authors .....	3
Bankers .....	4
Charity Organization Work .....	1
Chemists .....	22
Clergymen .....	11
Clerical Work .....	18
Commercial Work .....	37
Contractors .....	1
Decorators .....	1
Engineers .....	12
Farmers .....	9
Forestry .....	1
Government Employ .....	4
Insurance and Real Estate .....	9
Lawyers .....	40
Librarians .....	2
Living at Home .....	39
Lyceum Bureau Work .....	1
Manufacturers .....	4
Married .....	81
Merchants .....	4
Musicians .....	4
Newspaper Work .....	5
Nurses .....	4
Physicians .....	18
Promoters .....	4
Public Service .....	1

R. R. Agents .....	1
Salesmen .....	8
Secretarial Work .....	11
Students .....	12
Teachers and Professors .....	95
Unknown .....	9
Dietitians .....	1

### FINANCIAL REPORT FOR 1916

*Current Income and Expense for January 1 to December 31, 1916.*

#### INCOME

Tax Levy .....	\$57,713.08	
Students' Fees .....	10,635.14	
Interest on Endowment .....	3,935.00	
Rents .....	778.30	
Miscellaneous .....	206.63	
Total Income .....		\$73,268.15

#### EXPENSE

<i>Personal Service</i>		
Administration .....	\$ 7,701.02	
Instruction .....	39,473.29	
Bureau City Tests .....	2,137.00	
Labor .....	4,040.41	
Special Legal Service .....	75.00	\$53,426.72
Supplies .....		5,995.44
Contractual Services .....		3,465.62
Membership in Societies .....		35.00
Maintenance .....		2,543.64
Annuities .....		1,915.65
Outlays .....		7,015.19
Total Expense .....		\$74,397.26

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