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1939-1940 Bulletin

BULLETIN OF THE
UNIVERSITY OF DAYTON
DAYTON, OHIO

CATALOGUE
1939 - 1940

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BULLETIN
OF THE
UNIVERSITY OF DAYTON
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General Information

THE EDUCATIONAL AIMS OF THE UNIVERSITY OF DAYTON

The University of Dayton proposes as general objective the complete and harmonious development of all the capacities of man's nature—religious, moral, intellectual, aesthetic, social, and physical. Participation in the widely-varied college activities leads the student to exercise all these powers of soul and body. Moral instruction and adequate campus discipline emphasize the importance of personality and character formation, while a comprehensive academic program furnishes ample fields of study to the individual student. Thus college becomes not only a preparation for life, but a vigorous part of life itself.

The particular objectives are:

To give the student a liberal education by training in the natural and social sciences, language, and literature.

To prepare for prospective careers in business, art, music; for the professions of teaching and engineering; for professional schools of law, medicine, and dentistry; and for graduate study with research in special fields.

To establish, in all divisions, a strong sense of social responsibility; to foster leadership both by the theory and the practice of sound principles of religion, philosophy, sociology, economics, and political science.

CALENDAR

1939

Sept. 18—Monday. Registration: Freshman Classes.
Sept. 19—Tuesday. Registration: Sophomore Classes. Freshman Program.
Sept. 20—Wednesday. Registration: Junior and Senior Classes. Freshman Program.
Sept. 21—Thursday. Mass in honor of the Holy Ghost. Classes begin at 9:00 a. m.
Sept. 25-30—Registration period for Evening and Saturday Morning Classes.
Oct. 9, 10, 11—Annual Retreat.
Nov. 1—Wednesday. All Saints. No Classes.
Nov. 18—Saturday. Mid-semester Reports.
Nov. 29—Wednesday. Thanksgiving recess begins at noon.
Dec. 3—Sunday. Return of campus students at 11:50 p. m.
Dec. 4—Monday. Classes resume at 8:00 a. m.
Dec. 8—Friday. Immaculate Conception. No classes.
Dec. 16—Saturday. Christmas recess begins at noon.

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Jan. 2—Tuesday. Return of campus students at 11:50 p. m.
Jan. 3—Wednesday. Classes resume at 8:00 a. m.
Jan. 22—Monday. Chaminade Day.
Jan. 29—Monday. Semester examinations until Friday, February 2, noon, included. Semester Reports.
Feb. 5—Monday. Registration: Freshman Classes.
Feb. 5-10—Registration period for Evening and Saturday Morning Classes.
Feb. 6—Tuesday. Registration: Sophomore Classes.
Feb. 7—Ash Wednesday. Registration of Junior and Senior Classes.
Feb. 8—Thursday. Classes resume at 8:00 a. m.
Mar. 20—Wednesday. Easter recess begins at noon.
Mar. 25—Monday. Return of campus students at 11:50 p. m.
Mar. 26—Tuesday. Classes resume at 8:00 a. m.
Apr. 6—Saturday. Mid-semester Reports.
May 2—Thursday. Ascension. No classes.
May 6—Monday. Dr. D. G. Reilly Oratorical Contest.
May 29—Wednesday. Semester Examinations.
May 30—Memorial Day. No Classes.
May 31—Friday. Semester Examinations.
June 1—Saturday. Semester Examinations.
June 3-4—Monday and Tuesday. Semester Examinations.
June 9—Sunday. Baccalaureate Services. Commencement Exercises. Semester Reports.

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THE UNIVERSITY

The provisions of this bulletin are to be considered directive in character, and not as an irrevocable contract between the student and the University. Furthermore, the University reserves the right to change any provision or requirement of this bulletin.

Historical Note

In 1849 a group of educators left their native country, France, and set out for America for the sole purpose of establishing an institution of learning. After an eventful trip, they arrived at Dayton, Ohio. These men belonged to the religious organization known as the Society of Mary which was founded by Rev. Father William Chaminade. It did not take this small band long to find a suitable site for their project. In 1850 they purchased the Dewberry Farm, comprising 120 acres, from Mr. John Stuart, and at once opened a school in the farm house that was located on the property. From these humble beginnings the school grew rapidly under the able guidance of Bro. Maximin Zehler. Urgent needs for money made it necessary to sell part of the property which at one time comprised 160 acres. At present the campus extends over an area of 56 acres.

In 1878 the Institute was incorporated and in 1882 it was empowered, by an act of the General Assembly of the State of Ohio, to confer degrees. From the beginning the school was known as Saint Mary's Institute, but after 1912 it was called St. Mary's College and continued to be so designated till 1920, when it took the name of the University of Dayton.

Realizing the demand for higher education the University established night classes in 1920, and in 1923 offered courses during the summer months. Both of the projects were opened to men and women, and from the very beginning were well attended. Until 1935 the day school was composed strictly of men, but from this date on all of the facilities of full-time students were offered to women.

The University offers courses in Arts, Science, Engineering, Business, Education, Pre-Medicine and Pre-Law.

Besides these, journalistic, forensic and athletic programs are sponsored by the University under supervision of the faculty.

Accrediting

The University of Dayton is officially recognized by the following accrediting agencies:

1.—The North Central Association of Colleges and Secondary Schools.

2.—The Ohio Association of Colleges.

3.—The Pre-Medic course is accredited by the American Medical Association.

Campus and Buildings

The University campus which covers an area of fifty-six acres, has for its center the beautiful chapel of the Immaculate Conception. The quiet and beauty of the surroundings are conducive to serious study; at the same time the location is favorably situated so as to afford access to the social and business life of the city.

The buildings devoted to academic work are: St. Mary's Hall, including Administration, Business and Science; Chaminade Hall, including Arts; St. Joseph's Hall, including Civil, Electrical and Mechanical Engineering; Chemistry Building, including Chemical Engineering; and the Albert Emanuel Library.

Other buildings are: Alumni Hall, Zehler Hall, Power House and Stadium. The University operates a cafeteria and book store.

Libraries

The Albert Emanuel Library, the general library of the campus, was erected in 1928 through the generosity of Victor C. Emanuel, an Alumnus of the University, who dedicated this building as a monument to the honor of his father. This library of 40,000 volumes is equipped with all modern facilities to supplement the regular class work of the student.

In addition to the general library, various departmental libraries are found in different buildings, including Engineering Library, St. Joseph Hall; Chemistry and Chemical Engineering Library, Chemistry Building; Pre-Medic Library, Physics Library, St. Mary Hall.

Laboratories

Adequately equipped laboratories are available for experimental work in the different departments.

The Biology, Botany, Zoology, Physics, Mineralogy and Geology laboratories are located in St. Mary Hall. Civil, Electrical and Mechanical laboratories are in St. Joseph Hall; and the Chemical and Chemical Engineering laboratories are in the Chemistry building.

Curriculum

The University comprises the undergraduate Colleges of Arts and Sciences and Engineering. The College of Arts and Science includes a Division of Arts and Letters, a Division of Science, and a Division of Business Administration. The Division of Arts and Letters includes Pre-Legal and Teacher Training Courses; the Division of Science, Pre-Medicine and Pre-Dental Courses.

COLLEGE OF ARTS AND SCIENCE

A—Division of Arts and Letters

I Language and Literature Group

*1. Department of English.
2. Department of Classical Languages.
*3. Department of Modern Languages
   a. French.
   b. German.
   c. Spanish.

II History and Social Science Group

*4. Department of History.
*5. Department of Sociology.
*6. Department of Political Science.
*7. Department of Economics.

III Philosophy and Education Group

*8. Department of Philosophy.
*9. Department of Psychology.
*10. Department of Education.
11. Department of Religion.

B—Division of Science

IV Science and Mathematics Group

*12. Department of Biology.
*13. Department of Chemistry.
*14. Department of Mathematics.
*15. Department of Physics.
16. Department of Earth Science.
17. Department of Military Science.

C—Division of Business Administration

V Business Group

*18. Department of Accounting.
*19. Department of Economics.
*20. Department of Business Organization.

COLLEGE OF ENGINEERING

*21. Department of Chemical Engineering.
*22. Department of Civil Engineering.
*23. Departnmet of Electrical Engineering.
*24. Department of Mechanical Engineering.

* Indicates departments in which a major is offered.

Religion

Four credit hours of religion are required of Catholic students for each of the freshman and sophomore years. Advanced courses in religion are elective in junior and senior years. All of the religion courses are open to Non-Catholics. A course in Character Building is especially designed for them. Besides the regular Sunday services and daily Mass for campus students, there is a weekly Chapel Service for Catholic students usually on Thursdays consisting of Holy Mass and sermon. There is a variety of devotions during the noon hour and evenings. There is also a short annual retreat. Catholic students are required to assist at the weekly Chapel Service and to make the annual retreat. Non-Catholics are welcome to assist at all devotions.

Military Science

Military Training is given under the direction of officers of the U. S. Army. All male students who are physically fit and have not previously completed the basic course or its equivalent, follow Military Science in the freshman and sophomore years. Continuation is optional for juniors and seniors. While the final object of the military training is to qualify graduates of the course as Reserve Officers in the United States Army, the immediate object is to develop the physique by rational and regular exercises; to instill into the mind that obedience to command that comes to the well-drilled and disciplined individual and so implant in the growing youth respect for authority which is essential to a good citizen.

Health Service

A thorough physical examination is part of the registration procedure of every student. Records are kept by the department of physical education and Military Science. When deemed advisable, students and parents or guardians are given copies. A follow-up is made at regular intervals. An infirmary is maintained with a registered nurse in attendance. The services of outstanding physicians and the care in the three local hospitals is available to students.

Requirements for Degrees

For the degree of Bachelor of Arts or Bachelor of Science, one hundred and twenty-eight credit hours are required. These must be distributed over eight semesters in point of time. A student must carry on an average sixteen credit hours per semester.

A credit hour denotes a course taken one hour a week as a class period or two or three hours a week as a laboratory period for one semester.

One major and two minors are required. One of the minors should be related to the major. The pre-requisites for any major or minor must be satisfied ordinarily in the first two years. In some cases Sophomore courses may be counted towards a major or minor. Any major or minor consists of certain required and elective courses as described under the respective divisions and departments. A comprehensive examination in the major field may also be required.

For the degree of Bachelor of Science in Business Administration, one of the groups with a major either in Accounting, Economics or Business Organization must be completed.

For the degree of Bachelor of Chemical, Electrical, Mechanical or Civil Engineering, one of the prescribed courses in any of these departments must be completed. See page ?? for specific requirements.

One year of residence or thirty semester hours—ordinarily the senior year—is a requirement for any degree.

In addition to the above requirements for graduation and a degree, the number of quality points must at least equal the number of credit hours which the student has attempted at the University; or, he must have a point average of 1.0. A point average of 1.5 is required in the major field.

Degrees will be conferred "With First Honors" to students who have earned a cumulative quality point average of 2.5. For this mention, the last four semesters of work counted towards the degree must have been done at the University. Work done elsewhere and counted towards the degree must have been of like quality to that done at the University.

Grades and Reports

At mid-semester and at the end of a semester, a report of every student in each of his classes is given to the registrar by the instructor in the official marks. Copies of these reports are sent to the parents or guardians and given to the deans and students. At mid-semester these marks are merely tentative and represent the progress made by the student. The final academic standing is determined only at the end of the semester.

The official marks with their meanings and quality point value are as follows:

A - Excellent	3 points*
B - Good	2 points
C - Average	1 point
D - Poor, but Passing	0 point
E - Conditioned	0 point
F - Failed	0 point
I - Incomplete	0 point

*for each semester hour allowed for the course.

For good standing at any time the number of quality points must at least equal the number of credit hours which a student has attempted; or, he must have a point average of 1.0.

Further information regarding the grading system is contained in the book of Rules and Regulations.

Awards and Honors

Awards and honors for scholarship are announced at the Annual Commencement and are published in the Catalog of Awards.

Excellence in any particular class or study is determined by the cumulative point hour ratio of the number of credit hours prescribed for that class or study for the period fixed for the particular award or honor.

A cumulative point hour ratio of at least 2.0 is required for any award or honor.

A mention of First Honors is given to students for any particular year who have attained a cumulative point hour ratio of 2.5. A mention of Second Honors is given to students who have attained a cumulative point hour ratio of 2.0.

An Award of Excellence in Christian Doctrine, is given to a Junior who has followed the course for three years, donated by Wm. H. Holters of Covington, Ky.

An Award of Excellence in Mechanical Engineering, in the Senior Class, donated by Martin C. Kuntz, '12, Dayton, Ohio.

An Award of Excellence in Civil Engineering, in the Senior Class, donated by Harry F. Finke, '02, Dayton, Ohio.

An Award of Excellence in Electrical Engineering, in the Senior Class, donated by Joseph G. Wagner, '23.

Two Awards of Excellence in Chemical Engineering in the Senior and Junior Classes, known as the Mrs. Albert Emanuel Gold Medals for General Excellence, donated by Victor Emanuel, '15, of New York City.

An Award of Excellence in the Junior Mechanical Engineering Class donated by the University of Dayton.

An Award of Excellence in Civil Engineering in the Junior Class donated by Mrs. J. Edward Sweetman in memory of Mr. J. Edward Sweetman.

An Award of Excellence in Electrical Engineering, in the Junior Class, donated by Anthony Horvath and Elmer Stegert.

An Award of Excellence in the Senior Business Class donated by the University of Dayton.

Dr. D. G. Reilly, a former college physician, established an Oratory Endowment Fund of $1,000.00, the annual proceeds of which realize three prizes—of $30.00, $20.00 and $10.00 in cash—to be awarded to the three most successful participants in the annual Oratorical Contest. All full-time students are eligible to compete.

The Rev. Charles Polichek, former pastor of the Holy Name Church, Dayton, Ohio, is the donor of a cash prize of $30.00 in gold, to be awarded to the two Senior honor students in Philosophy. The first prize is $20.00 and the second is $10.00.

The Mr. and Mrs. Thomas Ryan Award of Excellence in English in the Senior Arts Class.

The Rev. Dennis M. Halpin, pastor of Holy Angels Church, Dayton, Ohio, is the donor of an Award to the

Excellence Junior student in History, who has followed the course for three years.

The Class of 1926 is the perpetual donor of an Award to a member of the graduating class for Excellence in Scholarship and Athletics throughout the four years of his college course.

Extra-Curricular Activities

Extra-curricular activities are encouraged and are under the direction of the faculty. Catholic students affiliate themselves to some religious activity group for the purpose of taking practical interest and for being trained for leadership in religion. To stimulate intellectual interest, there are the Honors Society, Seminar Clubs, the Student Chapter of the American Society of Civil Engineers, the Commerce Club, the International Relations Club, the Mathematics Club, the Dramatic Society, the Pre-Medical Society, and the Debating Club. Library and journalistic talent may be developed by writing for the University of Dayton Exponent and the U. of D. News. A regular salaried coach and two assistants with a faculty supervisor are in charge of the different departments of athletics. Both intercollegiate and intramural sports are fostered. There is also a Glee Club, orchestra and band.

The Admission of Students

Any one desiring admission is required to file a written application. An applicant for admission to a freshman class is requested to secure a statement of his high school record. The application for admission and the statement of the high school record are to be on forms supplied by the Registrar of the University. An applicant for advanced standing must have the last institution attended send a transcript of credits together with a statement of honorable dismissal directly to the Registrar. Registration is possible only after all credentials have been received and evaluated and a permit to register has been issued.

The specific high school units required for admission to a freshman class are mentioned in the descriptions of the various divisions of the College of Arts and Sciences and of the College of Engineering.

Students who are desirous of attending the University of Dayton and who can be recommended by their Principals and other reliable persons are invited to correspond with the Registrar regarding their financial problems if unable to meet all the expenses entailed.

EXPENSES

The expenses vary in amount according to the course which the student pursues and the accommodations which he enjoys. The SCHOLASTIC YEAR is divided into two semesters.

The Trustees of the University of Dayton reserve the right at any time to change the regulations of the University, including those concerning fees and manner of payment, and to make such changes in the course of study as they deem advisable.

THE EXPENSES OF EACH COURSE THAT MUST BE PAID UPON REGISTRATION EACH SEMESTER ARE AS FOLLOWS:

	FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.
OFF CAMPUS STUDENTS								
Matriculation	$ 10.00							
Tuition—Fees	127.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50
TOTAL	$137.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50
CAMPUS STUDENTS								
Matriculation	$ 10.00							
Tuition—Fees	127.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50	$127.50
Board, Lodging and Laundry	212.50	212.50	212.50	212.50	212.50	212.50	212.50	212.50
*Room (Deposit)	5.00	.....	5.00	.....	5.00	.....	5.00	.....
TOTAL	$355.00	$340.00	$345.00	$340.00	$345.00	$340.00	$345.00	$340.00
CHEMICAL ENGINEERING (Additional Charges)								
*Uniform Deposit	$ 20.00	.....	$ 20.00	.....	.....	.....	.....	.....
Chemistry	7.50	$ 7.50	7.50	$ 7.50	15.00	$ 15.00	7.50	$ 7.50
Drawing	2.50	2.50	.....	.....	.....	.....	.....	.....
Physics	.....	.....	7.50	7.50	.....	.....	.....	.....
Minerology	.....	.....	2.50	.....	.....	.....	.....	.....
Electrical Engineering	.....	.....	.....	.....	.....	.....	5.00	5.00
Materials Testing	.....	.....	.....	.....	5.00	.....	.....	.....
*Breakage: Chem. and Phys.	15.00	.....	25.00	.....	35.00	.....	15.00	.....
Heat—Power	.....	.....	.....	.....	.....	5.00	.....	.....
Hydraulics	.....	.....	.....	.....	.....	.....	5.00	.....
TOTAL	$ 45.00	$ 10.00	$ 62.50	$ 15.00	$ 55.00	$ 20.00	$32.50	$ 12.50
CIVIL ENGINEERING (Additional Charges)								
*Uniform Deposit	$ 20.00	.....	$ 20.00	.....	.....	.....	.....	.....
Chemistry	7.50	$ 7.50	.....	.....	.....	.....	.....	.....
Drawing	2.50	2.50	.....	.....	.....	.....	.....	.....
Physics	.....	.....	7.50	$ 7.50	.....	.....	.....	.....
Geology	.....	.....	.....	2.50	.....	.....	.....	.....
Surveying	.....	.....	5.00	5.00	.....	.....	.....	.....
Highway Mat. Testing	.....	.....	.....	.....	.....	$ 7.50	.....	.....
*H. M. T. Breakage Fee	.....	.....	.....	.....	.....	5.00	.....	.....
Electrical Engineering	.....	.....	.....	.....	.....	.....	$ 5.00	$ 5.00
Adv. Surveying	.....	.....	.....	.....	$ 2.50	.....	.....	.....
Materials Testing	.....	.....	.....	.....	5.00	.....	.....	.....
Heat—Power	.....	.....	.....	.....	.....	5.00	.....	.....
Hydraulics	.....	.....	.....	.....	.....	5.00	.....	.....
Route Surveying	.....	.....	.....	.....	.....	.....	.....	2.50
Structural Design	.....	.....	.....	.....	2.50	.....	2.50	.....
Sanitary Lab	.....	.....	.....	.....	.....	.....	.....	5.00
*Breakage: Chem. or Phys.	15.00	.....	5.00	.....	.....	.....	.....	.....
TOTAL	$ 45.00	$ 10.00	$ 37.50	$ 15.00	$ 10.00	$ 22.50	$ 7.50	$ 12.50

* Unused deposit is returnable.

(Continued)

	FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.
ELECTRICAL Engineering								
(Additional Charges)								
*Uniform Deposit	$ 20.00		$ 20.00					
Chemistry	7.50	$ 7.50						
Drawing	2.50	2.50						
Physics			7.50	$ 7.50				
Surveying			5.00	5.00				
Electrical Engineering				5.00				
D. C. Machinery						$ 5.00		
M. E. Laboratory							$ 5.00	
A. C. Laboratory					$ 5.00			
Elec. Measurements					5.00	5.00		
*Breakage: Chem. or Phys.	15.00		5.00					
Materials Testing					5.00			
Heat—Power						5.00		
Electronics						5.00		
A. C. Machinery							5.00	$ 10.00
Elect. Design							2.50	2.50
Hydraulics							5.00	
TOTAL	$ 45.00	$ 10.00	$ 37.50	$ 17.50	$ 15.00	$ 20.00	$ 17.50	$ 12.50
MECHANICAL Engineering								
(Additional Charges)								
*Uniform Deposit	$ 20.00		$ 20.00					
Chemistry	7.50	$ 7.50						
Drawing	2.50	2.50						
Physics			7.50	$ 7.50				
Mechanism			2.50					
Surveying			5.00	5.00				
M. E. Lab.					$ 7.50	$ 7.50	$ 7.50	$ 7.50
Electrical Engineering					5.00	5.00		
Materials Testing					5.00			
Heat—Power						5.00		
Hydraulics						5.00		
Metallurgy							5.00	5.00
*Breakage: Chem. or Phys.	15.00		5.00					
TOTAL	$ 45.00	$ 10.00	$ 40.00	$ 12.50	$ 17.50	$ 22.50	$ 12.50	$ 12.50
ARTS AND SCIENCE								
(Additional Charges)								
*Uniform (Deposit)	$ 20.00		$ 20.00					
Biology	7.50	$ 7.50						
Supplies	5.00							
Student Teaching								$ 25.00
TOTAL	$ 32.50	$ 7.50	$ 20.00					$ 25.00
BUSINESS								
(Additional Charges)								
*Uniform (Deposit)	$ 20.00		$ 20.00					
TOTAL	$ 20.00		$ 20.00					
PRE-MEDICS								
(Additional Charges)								
*Uniform (Deposit)	$ 20.00		$ 20.00					
Chemistry	7.50	$ 7.50	7.50	$ 7.50	$ 7.50	$ 7.50	$ 7.50	$ 7.50
Botany and Zoology	7.50	7.50						
Comparative Anatomy			7.50	7.50				
Embryology							7.50	7.50
Histology					7.50	7.50		
Physics			7.50	7.50				
Bacteriology							7.50	7.50
*Supplies	5.00		10.00		5.00		10.00	
*Breakage	15.00		15.00		15.00		15.00	
TOTAL	$ 55.00	$ 15.00	$ 67.50	$ 22.50	$ 35.00	$ 15.00	$ 47.50	$ 22.50

* Unused deposit is returnable.

(Continued)

SUMMARY OF ALL CHARGES

	FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.
OFF CAMPUS STUDENTS								
Chemical Engineering	$182.50	$137.50	$200.00	$142.50	$182.50	$147.50	$160.00	$140.00
Civil Engineering	182.50	137.50	165.00	142.50	137.50	150.00	135.00	140.00
Electrical Engineering	182.50	137.50	165.00	145.00	142.50	147.50	145.00	140.00
Mechanical Engineering	182.50	137.50	167.50	140.00	145.00	150.00	140.00	140.00
Arts and Science	170.00	135.00	147.50	127.50	127.50	127.50	127.50	127.50
Business Department	157.50	127.50	147.50	127.50	127.50	127.50	127.50	127.50
Pre-Medics Department	192.50	142.50	195.00	150.00	162.50	142.50	175.00	150.00
CAMPUS STUDENTS								
Chemical Engineering	$400.00	$350.00	$407.50	$355.00	$400.00	$360.00	$377.50	$352.50
Civil Engineering	400.00	350.00	382.50	355.00	355.00	362.50	352.50	352.50
Electrical Engineering	400.00	350.00	382.50	357.50	360.00	360.00	362.50	352.50
Mechanical Engineering	400.00	350.00	385.00	352.50	362.50	362.50	357.50	352.50
Arts and Science	387.50	347.50	365.00	340.00	345.00	340.00	345.00	340.00
Business Department	375.00	340.00	365.00	340.00	345.00	340.00	345.00	340.00
Pre-Medics Department	410.00	355.00	412.50	362.50	380.00	355.00	392.50	362.50

Remarks

Students asking to pay in installments are required to pay also a moderate carrying charge.

Repairs of all kinds extra.

Books and stationery can be purchased at the University Book Store.

The University will not hold itself responsible for any money or valuables unless these are deposited with the Treasurer.

All drafts and checks should be made payable to the University of Dayton.

No student will be registered for a new semester unless the account for the previous year is settled.

Transcript of credits and honors of graduation will be denied students whose bills have not been paid.

Refunds made during the first four weeks of classes will be made on the basis of 75 percent of the original payment for the courses in question.

After four weeks, no cash refunds shall be allowed.

The University dining hall is closed during the Christmas Holidays. With the permission of the Dean of Men students may lodge in the dormitories for an additional charge of fifty cents a night.

College of Arts and Science

Division of Arts and Letters
Division of Business Administration
Division of Science
Departments of Instruction

DIVISION OF ARTS AND LETTERS

The Division of Arts and Letters has as function to provide the fundamentals of a liberal education. Among the specific ends to be served by a liberal education are the following: To enrich the student's cultural background; to stimulate to intellectual activity; to educate for satisfactory social adjustments; to develop capacities for leadership. Particular emphasis is placed upon a thorough training in philosophy in view of the role philosophical principles play in effective thinking, speaking, writing and living.

In its curriculum, the Division of Arts and Letters aims to give special preparation for various fields of professional activity such as education, art, music, law, journalism, social service, foreign service, personnel administration and the like. It also prepares students for work on the graduate level.

For admission to the Division, a student must be a graduate of an accredited high school, with a total of not less than 15 units. The student should offer the following units: English, 3 or 4; social science, 2; mathematics, 2; science, 2; foreign language, 2; other high school units, 3 or 4.

In the lower division courses, that is, in courses corresponding to freshman and sophomore years, an attempt is made to bring the student in contact with the broad fields of the humanities, the social and the natural sciences, to teach him the use of the tools and learning, and to furnish him with the preliminary courses for his major and minors. Junior and senior years are given to satisfying the requirements for a major and two minors.

The requirements for the first two years are met by the following schedule of studies:

Freshman Year

1. Catholic Doctrine (for Catholic students).
2. Character Building (for non-Catholic women).
3. First Year Basic Military.
4. Physical Education (women).
5. English Composition, Public Speaking.
6. History of Civilization.
7. A foreign language: French, German, Spanish, Latin, or Greek.
8. Biology or Chemistry or Mathematics.
9. Freshman Orientation (first semester).

Sophomore Year

1. Apologetics (Catholic students).
2. Second Year Basic Military.
3. A foreign Language.
4. English Literature, American Literature.
5. Psychology.
6. Electives: History, Economics, American Government and Politics, Sociology, Social Problems.

The normal schedule, necessary to fulfill requirements for graduation, is sixteen credit hours per semester; the maximum permitted is eighteen credit hours.

Catholic students are obliged to take the course in religion prescribed for the freshman and sophomore years; the course is elective in junior and senior years. Non-Catholic women take the course in Character Building in their freshman year. Non-Catholic students are free to take the religion courses if they so desire. If the religion course is not elected, another course must be taken in place of it.

Departments offering majors are: Art, Classical Languages, Economics, Education, English, History, Modern Languages, Music, Philosophy, Political Science, Psychology, and Sociology. At the close of the sophomore year, each student selects a field of concentration in one of

these departments, in which he must pass from twenty to twenty-four semester hours in his junior and senior years. He should carry two courses in his major field each semester. Selection of the department and the choice of courses must be approved by the head of the department.

In addition to the major, two minors must be chosen, each carrying twelve credit hours. One minor must be related to the field of concentration; the other is an unrelated minor. Where philosophy is not elected as a major, it must be taken as either the related or unrelated minor.

DIVISION OF SCIENCE

Candidates for the degree of Bachelor of Science may major in Biology, Chemistry, Mathematics, or Physics. Related courses may also be chosen from the curricula of the various departments of the College of Engineering.

Besides satisfying requirements already mentioned on pages 16 and 17, an applicant for a degree must have from 18 to 24 credit hours for the major, 12 credit hours for the related minor, and 12 credit hours for the unrelated minor. Basic courses do not count toward the major or related minor.

PRE-MEDICAL COURSE

The program offered the students of this course meets the requirements for admission to approved medical schools as determined by the Council of Medical Education of the American Medical Association.

Requirements for Admission

For admission to the Pre-Medical Course, students shall have completed a four-year course of at least fifteen units in an accredited high school or other institution of standard secondary school grade. A student must be in the upper two-thirds of his class.

REQUIRED STUDIES	9 units
English	3 units
Language—Latin, Greek, or Modern Foreign Language	2 units
Algebra—To Quadratics	1 unit
Geometry—Plane	1 unit
History	1 unit
Chemistry or Physics	1 unit
Electives	6 units

Pre-medical students are recommended to take a four-year course leading to the degree of Bachelor of Science. Such a course with a major in Chemistry and Biology is outlined on page 24. No student preparing for the study of medicine will be permitted to take less than a three-year course.

Pre-dental students are advised to follow the first three years of the pre-medical curriculum, although two years marked by high scholarships will satisfy the minimum requirements for admission to dental school.

Students interested in laboratory technology can satisfy their preliminary requirements at the University.

Students who have completed a standard course in Nursing at a properly accredited institution will be allowed sixty semester hours credit toward a degree. St. Elizabeth Hospital of Dayton is such an institution. It has been affiliated with the University of Dayton since November, 1938.

FRESHMAN YEAR

FIRST SEMESTER

Subjects			Cr. Hours
Rel.	101	Catholic Doctrine	2
Mil.	101	First Basic	1
Chem.	101	Gen. Chem., Inorg.	5
Eng.	101	English Comp.	3
Or.	101	Freshman Orient.	1
Bio.	103	General Zoology	4
Math.	101	Introductory Math.	2

SECOND SEMESTER

Subjects			Cr. Hours
Rel.	102	Catholic Doctrine	2
Mil.	102	First Basic	1
Bio.	104	General Botany	4
Chem.	102	Qualitative Chem.	4
Eng.	201	English Literature	3
Math.	102	Introductory Math.	2

SOPHOMORE YEAR

FIRST SEMESTER

Subjects			Cr. Hours.
Rel.	201	Apologetics	2
Mil.	201	Second Basic	1
Bio.	201	Comparative Anat.	3
Chem.	201	Organic Chem.	5
Phys.	201	Physics	5
		Mod. Language*	3

SECOND SEMESTER

Subjects			Cr. Hours
Rel.	202	Apologetics	2
Mil.	202	Second Basic	1
Bio.	202	Comparative Anat.	3
Chem.	202	Organic Chem.	5
Phys.	202	Physics	5
		Mod. Language*	3

JUNIOR YEAR

FIRST SEMESTER

Subjects			Cr. Hours.
Mil.	301	First Advanced**	3
Chem.	301	Quant. Chem.	4
Bio.	301	Histology	3
		Mod. Language*	3
Psych.	201	Introduct. Psych.	3
Eng.	304	Theme Writing	2

SECOND SEMESTER

Subjects			Cr. Hours
Mil.	301	First Advanced**	3
Eng.	305	Latin, Greek Der.	2
Chem.	302	Physical Chem.	4
Bio.	302	Histology	3
		Mod. Language*	3
		Scientific Methods.	2
Bio.	303	Physiology	3

SENIOR YEAR

FIRST SEMESTER

Subjects			Cr. Hours.
Mil.	401	Second Advanced**	3
Bio.	401	Bacteriology	3
Chem.	401	Biochemistry	5
Bio.	405	Biophysics	2
Phil.	401	Pr. Human Cond'ct.	2
Bio.	403	Embryology	3

SECOND SEMESTER

Subjects			Cr. Hours
Mil.	402	Second Advanced**	3
Bio.	402	Bacteriology	3
Chem.	402	Biochemistry	5
Bio.	404	Embryology	3
Phil.	405	Medical Ethics	3
Bio.	406	Biophysics	2

*German or French. **Optional.

DIVISION OF BUSINESS ADMINISTRATION

The courses offered in this division are designed to impart the principles of business and to emphasize the practical application of these principles in the various fields of industry, commerce, and finance.

For admission to this Division a student must be a graduate of an accredited high school, with a total of at least fifteen units accepted by the high school towards graduation. One and a half units in algebra must be included.

The degree of Bachelor of Science in Business Administration is conferred on those students who complete the requirements for graduation either in the Department of Accounting, Business Organization, or in Economics.

During the junior and the senior years the students concentrate on satisfying the required major (18 to 24 semester hours) and the two minors (12 semester hours each). One of the minors must be chosen from the three major fields and the other from an unrelated field.

The three Departments are:

Accounting

The courses in this department are designed particularly for those students who wish to enter the professional fields of accountancy or who plan to engage in business careers through the accounting department.

Business Organization

The aim of this department is to provide a broad comprehensive education in business and related subjects rather than a highly specialized training. By the careful selection of electives a student may acquire a knowledge in a number of different fields.

Economics

The purpose of this department is to give a cultural rather than a vocational training. Sufficient emphasis, however, is placed on technical training so as to provide the undergraduate student with the background for advanced work, or to serve him as basic training for service with government or with business organizations requiring analyses of economic problems.

The Major Fields are:

I Accounting
II Business Organization
III Economics

The Minor Fields are:

I Accounting
II Business Organization
III Economics
IV Modern Languages
V Philosophy
VI History and Social Sciences
VII Education
VIII Advanced Military Science

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

FRESHMAN YEAR

FIRST SEMESTER				SECOND SEMESTER			
Subjects			**Cr. Hours**	**Subjects**			**Cr. Hours**
Rel.	101	Cath. Doctrine..	2	Rel.	102	Cath. Doctrine..	2
Mil.	101	First Basic	1	Mil.	102	First Basic	1
Phys. Ed.	101	Physical Ed.....	1	Phys. Ed.	102	Physical Educ...	1
Bus. Org.	101	Intro. to Bus.....	3	Biol.	105	Health	1
Acct.	101	Acct. & Lab.....	4	Math.	103	College Algeb'a	3
Eco.	102	Eco. Geography	2	Acct.	102	Acct. & Lab.....	4
Eng.	101	Composition	3	Eco.	103	Eur. Eco. Hist.	3
Electives:			3	Eng.		Pub. Speaking..	3

SOPHOMORE YEAR

FIRST SEMESTER				SECOND SEMESTER			
Subjects			**Cr. Hours**	**Subjects**			**Cr. Hours**
Rel.	201	Apologetics	2	Rel.	202	Apologetics	2
Mil.	201	Second Basic	1	Mil.	202	Second Basic	1
Acct.	201	Acct. & Lab.....	4	Acct.	202	Acct. & Lab.....	4
Eco.	201	Economics	3	Eco.	202	Economics	3
Math.	203	Math. of Finance....	2	Math.	204	Math. of Finance..	2
Eco.	203	Am. Eco. Hist.....	2	Eco.	204	Am. Eco. Hist.....	2
Eng.		Amer. Literature....	3	Psych.	201	Intro. Psychology..	3

MAJOR: ACCOUNTING

JUNIOR YEAR

FIRST SEMESTER				SECOND SEMESTER			
Subjects			**Cr. Hours**	**Subjects**			**Cr. Hours**
Acct.	301	Advanced Acct.	3	Acct.	302	Advanced Acct.	3
Acct.	303	Cost Acct.	3	Acct.	304	Cost Acct.	3
Bus. Org.	301	Corp. Finance...	3	Eng.	408	Bus. English	3
Bus. Org.	302	Business Law....	3	Bus. Org.	303	Business Law...	3
Electives:			3	Electives:			3

SENIOR YEAR

FIRST SEMESTER				SECOND SEMESTER			
Subjects			**Cr. Hours**	**Subjects**			**Cr. Hours**
Acct.	401	Auditing	3	Acct.	402	C. P. A. Prob.....	3
Acct.	403	Fed. Inc. Tax....	3	Acct.	406	Soc. Sec. Acct...	2
Eco.	406	Money & Bank.	3	Eco.	407	Money & Bank.	3
Bus. Org.	409	Statistics	3	Bus. Org.	401	Investments	3
Electives:			3	Electives:			3

MAJOR: BUSINESS ORGANIZATION

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Bus. Org. 301 Corp. Finance	3	Eco. 305 Transportation	3
Bus. Org. 302 Business Law	3	Bus. Org. 303 Business Law	3
Bus. Org. 304 Advertising	3	Bus. Org. 308 Sales Man'em't.	3
Bus. Org. 306 Marketing	3	Eng. 408 Bus. English	3
Electives:	3	Electives:	3

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Bus. Org. 408 Adv. Marketing	3	Bus. Org. 401 Investments	3
Bus. Org. 409 Statistics	3	Bus. Org. 410 Personnel Ad.	3
Eco. 405 Bus. Cycles	3	Eco. 403 Pub. Finance	3
Eco. 406 Money & Bank.	3	Eco. 407 Money & Bank.	3
Electives:	3	Electives:	3

MAJOR: ECONOMICS

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Bus. Org. 301 Corp. Finance	3	Eco. 304 Population	3
Eco. 303 Labor Prob.	3	Eco. 305 Transportation	3
Eco. 306 Cur. Eco. Prob.	3	Eco. 307 Cur. Eco. Prob.	3
Eco. 308 Insurance	3	Eng. 408 Bus. English	3
Electives:	3	Electives:	3

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Eco. 401 Hist. Eco. Th'g't	3	Eco. 402 Eco. Theory	3
Eco. 405 Bus. Cycles	3	Eco. 403 Pub. Finance	3
Eco. 406 Money & Bank.	3	Eco. 407 Money & Bank.	3
Bus. Org. 409 Statistics	3	Bus. Org. 410 Personnel Ad.	3
Electives:	3	Electives:	3

DEPARTMENT OF EDUCATION

The Department of Education recognizes the fact that good schools are the result not so much of good methods as good teachers, teachers who are thoroughly prepared and well grounded in the subject-matter to be taught and who possess the intellectual and moral qualifications worthy of their profession. It also subscribes to the thesis that while good teachers must be born with the innate qualities essential to success in the classroom yet that such persons, even the most highly gifted and endowed, can be immeasurably improved by suitable professional training. Hence only students who have given evidence of possessing the proper intellectual and moral qualifications are admitted to work in this Department.

The courses in education aim at (1) general culture—enabling the student to enrich and enhance his own life by giving him a better understanding of himself, his thoughts, feelings, attitudes, ideals, standards of value, and his conduct; (2) professional preparation—providing the training that will enable the student to understand and make practical application of the principles of psychology and the methods and techniques of good teaching so that he may be able to conduct classes intelligently and efficiently.

According to State requirements candidates for admission to the Department of Education must hold a certificate of graduation from a first-grade high school. The units required are the same as those demanded for entrance to the Division of Arts and Letters.

To be qualified for the degree of Bachelor of Science in Education, the student must have obtained one hundred and twenty-eight semester hours of credit among which are included from seventeen to nineteen hours of professional work.

To meet the professional requirements in the State of Ohio, the following courses must be taken:

Educational Psychology .....2 or 3 semester hours
(Prerequisite: General Psychology)
Principles of Teaching or Education.....2 or 3 semester hours
Administration, Organization, Management.....2 or 3 semester hours
Methods of Teaching..... 2 semester hours
Electives (chosen from the list below) enough when added to the course above to total..... 14 semester hours

History of Education..... 3
Introduction to Teaching.....2 or 3
Tests and Measurements.....2 or 3
Educational Sociology .....2 or 3
Ohio School Law..... 2
Student Teaching (number of hours determined by the attainment and proficiency of the student) .....3 to 5 semester hours

Total professional requirements.....17 to 19 semester hours

Students should prepare to teach in four academic fields. Any major or minor constitutes a teaching field. The State prescribes 18 semester hours for a major and 15 for a minor. Methods courses in any teaching field may be counted in computing major and minors.

Following are the academic teaching fields: Mathematics, English, History, Social Science, Biological Science, Physical Science (Physics and Chemistry), Earth Science, Latin, Modern Languages.

The following subjects in Education will be offered during the year 1939-1940:

First Semester

Ed. 101 Survey of Education.....Day
Ed. 301 School Management .....Day and Evening
Ed. 309 Principles of Teaching.....Day and Evening
Ed. 305 General History of Education.....Day
Ed. 405 The Teaching of Literature in the Secondary Schools .....Day
Ed. 409 The Teaching of High School Mathematics....Day
Ed. 401 Educational Psychology .....Day and Evening
Ed. 415 Individual Education Research for Seniors....Day

Second Semester

Ed. 302 Principles of Education.....Day
Ed. 306 Survey of American Education.....Day
Ed. 412 Measurement in Education.....Day and Evening
Ed. 421-521 Educational Sociology .....Day and Evening
Ed. 414 Practice Teaching in Secondary Education....Day
Ed. 416 Individual Education Research for Seniors....Day
Ed. 406 The Teaching of Social Studies in Junior and Senior High Schools.....Day
Ed. 408 The Teaching of Romance Languages.....Day
Ed. 422-522 Problem Children in School.....Day and Evening

Elementary Teaching Curriculum

A summary of the requirements by fields leading to the Bachelor of Science in Education degree together with a certificate to teach in the elementary schools follows.

Fields

Art	6	
English	15	
Health and Physical Education	6	
Music	6	
Practical Arts	3	
Professional Subjects	24	
Science	8	
Social Studies	24	
Total of all fields		92
Electives		12
Institutional Requirements		24-36
Graduation (8 semesters, 15-17 hours)		128-136

Students expecting to teach in the elementary schools should consult the following program. Free and pertinent electives may be selected in each semester.

FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subjects		**Cr. Hours**	**Subjects**		**Cr. Hours**
Art 101	Drawing	2	Eng. 102	English Composition	3
Ed. 101	Survey of Education	2	Mus. 102	Music Literature and Appreciation	2
Eng. 101	English Expression	3	Sc. 102	Introduc. to Science	4
H. 101	Personal and Community Hygiene	2			
Sci. 101	Introduc. to Science	4			

SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subjects		**Cr. Hours**	**Subjects**		**Cr. Hours**
Mus. 201	Introduc. to Music	2	I. A. 202	General Crafts	3
Psych. 201	Intro. Psychology	3	Mus. 202	Music in Elementary Schools	2
Art 201	Prin. of Design	2			

JUNIOR YEAR
(To be offered in 1940-1941)

FIRST SEMESTER			SECOND SEMESTER		
Subjects		**Cr. Hours**	**Subjects**		**Cr. Hours**
Ed. 303	Improvement of Instruction in Reading and Literature	3	Ed. 302	Principles of Educ.	2
Eng. 301	Story Telling	3	Eng. 302	Literature in the Elementary Grades	3
H. 301	Construction and Teaching Health Program	2			
Ed. 301	School Management	2			

SENIOR YEAR
(To be offered in 1941-1942)

FIRST SEMESTER			SECOND SEMESTER		
Subjects		**Cr. Hours**	**Subjects**		**Cr. Hours**
Eng. 401	Voice and Diction	2	Ed. 404	Improvement of Instruction in the Social Studies	3
Psych. 401	Education'l Psych.	3	Ed. 414	Student Teaching	5
Ed. 403	Improvement of Instruction in Arithmetic	3	Art 402	Art in the Elementary School	2

DEPARTMENT OF ART

During 1937-1938 the University of Dayton and the Dayton Art Institute evolved a reciprocal working arrangement whereby students enrolled in the University of Dayton may complete requirements for the degrees of Bachelor of Science in Education (Art Supervision), and Bachelor of Fine Arts. The Liberal Arts program for both of these degrees must be completed at the University of Dayton. All professional Art subjects are taught at the School of the Dayton Art Institute.

Classes are also arranged to provide an opportunity for those students choosing a minor in Art.

All prescribed courses in the field of Art as required for certificates other than professional Art, are taught at the University by instructors of the Dayton Art Institute.

Students desiring the degree of Bachelor of Fine Arts, as also those desiring advanced standing in Fine Arts, must have their work evaluated by the Dean of the Dayton Art Institute.

BACHELOR OF SCIENCE IN EDUCATION
ART SUPERVISION

Students who wish to receive the degree of Bachelor of Science in Education with a major in Art must have obtained 135 credit hours. Sixty-seven credit hours must be in Art or subjects allied with Art; twenty in Education; and the balance in Liberal Arts subjects.

A teaching minor in Art may be obtained by completing twenty-four credit hours in Art, twenty in Education, and the balance in Liberal Arts subjects.

The following schedule is recommended:

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
English Composition	3	English Literature	3
Social Science	3	Public Speaking	3
Physical Education	1	Physical Education	1
Introduction to Education	2	Social Science	3
Art	8	Art	8

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Psychology	3	Educational Psychology	3
History of Art	3	History of Art	3
Physical Education	1	Physical Education	1
Art	10	Art	9

JUNIOR AND SENIOR YEARS

Art ..... Thirty credit hours
Professional, including Art Appreciation, Art in the Elementary Schools, Methods of Teaching, Practice Teaching ..... Fifteen credit hours
Liberal Arts ..... Twenty-two credit hours

Students pursuing the curriculum for the degree of Bachelor of Science in Education, Arts Supervision, must arrange their schedules each semester with the advice and approval of the dean of the Dayton Art Institute, and the Head of the Department of Education of the University of Dayton.

BACHELOR OF FINE ARTS

The candidate for the degree Bachelor of Fine Arts must have obtained a minimum of one hundred and thirty-five credit hours, of which one hundred and five must be in Art or allied subjects and the balance selected from subjects in the Division of Arts and Letters.

The following schedule is recommended:

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
English Composition	3	English Literature	3
Social Science	3	Public Speaking	3
Physical Education	1	Physical Education	1
Art	10	Art	10

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Subjects	**Cr. Hours**	**Subjects**	**Cr. Hours**
Social Science	3	Psychology	3
History of Art	3	History of Art	3
Physical Education	1	Physical Education	1
Art	10	Art	10

JUNIOR AND SENIOR YEARS

Art ..... **Sixty-five credit hours**

Art Appreciation ..... **Two credit hours**

DEPARTMENTS OF INSTRUCTION

ACCOUNTING (Acct.)

101-102. Elementary Accounting. The purpose of the course is to acquaint the student with the primary function of accounting and to introduce him to the entire cycle of bookkeeping procedure. Under supervision the student is required to demonstrate his ability to work out several practice sets. This is a prerequisite to all other courses in Accounting.

Three class periods and one laboratory period a week. Eight credit hours.

201-202. Principles of Accounting. The accounting work of the sophomore year is a logical continuation and development of the theory and practice introduced in the freshman year. The course includes in part: Accounting for corporations; voucher systems; general principles of valuation; depreciation; surplus reserves; and liquidation of corporations.

Three class periods and one laboratory period a week. Eight credit hours.

203. Principles of Accounting for Engineers. Elementary principles are stressed which are fundamental to a sound introduction to factory cost accounting systems.

Three class periods a week. Three credit hours.

301-302. Advanced Accounting. Additional training in the preparation, analysis, and interpretation of statements; accounting procedure in connection with special types of business and with corporate reorganizations and dissolutions including the accounts and reports of receivers and trustees.

Three class periods a week. Six credit hours.

303-304. Cost Accounting. This course treats in a general manner the theory and practice of industrial cost accounting as a means of control of business enterprises. Special studies and reports of cost accounting systems are also considered.

Three class periods a week. Six credit hours.

401. Auditing. A review of accounting with particular attention given to the theory and practice of auditing as applied to cash, receivables, inventories, etc. Practice in the auditing of special business types, and the preparation of auditor's reports.

Three class periods a week. Three credit hours.

402. C. P. A. Problems. The application of the principles of accounting to specific problems as set forth in the examination of the Ohio State Board of Accountancy.

Three class periods a week. Three credit hours.

403. Federal Income Tax Accounting. An interpretation of the current Revenue Act, including income, capital stock, excess profits, estate, gift and excise taxes. Preparation of individual, partnership, and corporation income tax returns.

Three class periods a week. Three credit hours.

404. Governmental Accounting. A study of accounting of all governmental divisions with particular emphasis on administrative problems. The procedures and forms recommended by the National Committee on Municipal Accounting are examined.

Two class periods a week. (Not offered in 1939-1940.) Two credit hours.

405. Accounting Systems. Application of accounting principles to specialized types of business enterprises such as banks, manufacturing concerns, radio dealers, wholesale and retail businesses, etc.

Two class periods a week. Two credit hours.

406. Social Security Accounting. A study of the accounting principles and procedure involved in recording the record of wages paid, taxes withheld, and contributions paid under the Federal Social Security Act, the Railroad Retirement Act, and the State Unemployment Compensation Act.

Two class periods a week. Two credit hours.

ART (A)

101. Drawing. The purpose of the course is to develop the student's power in graphic expression. Work is done in a variety of media and modes of expression.
Two class periods a week. Two credit hours.

201. Principles of Design. The principles of order underlying good design are explained. Ability to apply them in creative problems is developed. The appreciation of design in its many applications in all fields of art is discussed.
Two class periods a week. Two credit hours.

202. General Crafts. This course affords opportunity to learn general crafts which the student will meet in the elementary schools.
Three class periods a week. Three credit hours.

203. History of Art I. A study of the history of primitive, Egyptian, Chaldean, Greek and Roman architecture, painting, sculpture and the minor arts. Illustrated lectures, readings, reports and quizzes.
Three class periods a week. Three credit hours.

204. History of Art II. A study of the history of Medieval, Renaissance and Modern architecture, painting and sculpture as it was developed in Italy, Spain, France, Germany, England and the Low Countries. Illustrated lectures, readings, reports and quizzes.
Three class periods a week. Three credit hours.

401. Art in the Elementary School. This course presents methods of teaching arts. Practice includes creative art expression, organizing the subject matter, and lesson planning for elementary majors.
Two class periods a week. Two credit hours.

BIOLOGY (Bio.)

101-102. General Biology. A study of the more important plant and animal forms, designed to fit the facts and theories of biology into the broader picture of human life and human affairs.
Two class periods and one laboratory period a week.
Six credit hours.

103. General Zoology. A course for beginners, insisting on general principles. Lectures are given on the classification, structure, physiology, development, and life histories of the invertebrates and vertebrates.

Three class periods and one laboratory period a week.
Four credit hours.

104. General Botany. An introductory course stressing classification, morphology, physiology, reproduction, ecology and distribution of plants. Typical specimens are studied microscopically and macroscopically.

Three class periods and one laboratory period a week.
Four credit hours.

105. Health. A course having for object the development of proper health attitudes.

One class period a week. One credit hour.

201-202. Comparative Anatomy. A study of the similarities and differences in the anatomy of the different organ systems of the various vertebrate groups. Embryology, histology, and morphology play an important role in this comparative study. Physiology is introduced where it is deemed advisable.

Two class periods and one laboratory period a week.
Six credit hours.

301-302. Histology. A study of the microscopic structure and the vital activities of animal cells, followed by a discussion of their development into tissues, organs, and systems. Vertebrates in general and mammals in particular are studied.

Two class periods and one laboratory period a week.
Six credit hours.

303. Human Physiology. A course showing that the human body is a living mechanism. Sufficient anatomy and histology are introduced to give at least an elementary knowledge of the structures of the organs and organ systems. A study of the function of these different systems follows.

Three class periods a week. Three credit hours.

401-402. General Bacteriology. The history, morphology, physiology, classification, and cultivation of bacteria are studied. Their relation to medicine, to sanitary science, and to agriculture is also stressed.

Two class periods and one laboratory period a week.
Six credit hours.

403-404. Embryology. The course gives the student a clear understanding of the early stages of development of the invertebrates and the vertebrates. It pays special attention to the study of the development of the chick and particularly to that of the pig.

Two class periods and one laboratory period a week. Six credit hours.

405-406. Biophysics. The course applies physical and chemical principles to the following biologic problems: Stress and strain in biologic systems, surface tension, osmosis, membranes, colloids, cells, dynamics of cell division and growth, bio-hydraulics, heat production, calorimetry, sound production and reception, electrical phenomena in cells and tissues, diatherms, artificial fevers, effects of radiant energy on biologic materials, spectographic methods of investigation, treatment of tumors with x-rays, and production of vitamins.

Two class periods a week. Four credit hours.

BUSINESS ORGANIZATION (Bus. Org.)

101. Introduction to Business. A course designed to acquaint the beginning student with the function and practices of modern business, and to prepare him for specialized and advanced courses.

Three class periods a week. Three credit hours.

201-202. Mathematics of Finance. (See Mathematics 203-204.)

Two class periods a week. Four credit hours.

301. Corporation Finance. A study of the processes whereby large corporations are financed, and of the varieties of stocks and bonds issued in connection therewith. Consideration given to the regulation of the sale or issuance of securities by government agencies; to the elements of investment analysis; to stock exchanges, receiverships, and corporate reorganizations.

Three class periods a week. Three credit hours.

302-303. Business Law. A survey course covering contracts; agency; negotiable instruments; partnerships; corporations; insurance; personal and real property; suretyship and bankruptcy.

Three class periods a week. Six credit hours.

304. Advertising. Nature and function of commercial advertising. The coordination of advertising with other marketing efforts. The preparation of layouts and the writing of copy.

Three class periods a week. Three credit hours.

305. Advertising Practice. A laboratory course stressing technique of advertising layout for newspapers, periodicals, magazine covers, folders, booklets, etc. Examples of modern methods of reproduction to be analyzed and critically evaluated by the student. Significance of typography and media with stress on color problems. Trends in the styling of packages, letter-heads, and calling cards.

Three laboratory periods a week. (Not given in 1939-1940.) Three credit hours.

306. Marketing. The general principles and practices underlying the processes of marketing; the assembling, grading, storing, and distributing functions; the function of the jobber, the wholesaler, the retailer, and other middlemen.

Three class periods a week. Three credit hours.

307. Retail Merchandising. A study of the merchandising problems, policies, and procedures of retail stores of various types.

Three class periods a week. (Not given in 1939-1940.) Three credit hours.

308. Salesmanship and Sales Management. The principles underlying the practice of salesmanship from the point of view of the buyer and seller. A study of the problems, practices, and policies of sales management.

Three class periods a week. Three credit hours.

401. Investments. This course is a study of investment finance both from the point of view of the large and

the small investor. It includes the principles of investments together with an analysis of the following types of securities: Government bonds, municipal bonds, railroad, public utility, and industrial securities.

Three class periods a week. Three credit hours.

402. Public Finance and Taxation. (See Economics 403.)

Three class periods a week. Three credit hours.

404. Business Cycles. (See Economics 405.)

Three class periods a week. Three credit hours.

405-406. Money, Credit and Banking. (See Economics 406-407.)

Three class periods a week. Six credit hours.

407. Credits and Collections. Principles of mercantile credit. Organization of the credit department, sources of credit information, statement analysis, determination of credit limits, credit insurance, and credit procedure.

Two class periods a week. Two credit hours.

408. Advanced Marketing. Technique of marketing research. An analysis of current problems and literature relating to the field of marketing.

Three class periods a week. Three credit hours.

409. Business Statistics. (See Mathematics 403.)

Three class periods a week. Three credit hours.

410. Personnel Administration. (See Psychology 403.)

Three class periods a week. Three credit hours.

CHEMISTRY (Chem.)

101. Inorganic Chemistry. A comprehensive treatment of the fundamentals of inorganic chemistry covering the non-metals and metals, with an introduction to chemical calculations. For students of Arts and Science.

Three class periods and two laboratory periods a week. Five credit hours.

103. Inorganic Chemistry. Similar to Chemistry 101, but with emphasis on engineering applications.

Four class periods and one laboratory period a week.
Five credit hours.

104. Qualitative Analysis. A theoretical and mathematical discussion of solubility product and equilibrium as influencing analyses. The laboratory practice includes the separation and identification of the common anions and cations and the analysis of alloys, minerals, and industrial products.

Two class periods and two laboratory periods a week.
Four credit hours.

201-202. Organic Chemistry. A study of the aliphatic, aromatic, and heterocyclic compounds including the laboratory preparation of typical members of these series and the methods of identifying simple organic groups and radicals. A course primarily for Pre-Medical, Pre-Dental, and Home Economics students.

Three class periods and two laboratory periods a week.
Ten credit hours.

203-204. Quantitative Analysis. (Long course: For students planning to engage in technical or scientific work.) Theory and laboratory technique of modern gravimetric and volumetric methods, with stoichiometrical calculations and the application of the mass action law and solubility product to quantitative analysis.

Two class periods and two laboratory periods a week.
Eight credit hours.

301. Quantitative Analysis. (Short course: Less comprehensive than 203-204.) For Pre-Medical and Pre-Dental students and those interested in Dietetics and Clinical Technology.

Two class periods and two laboratory periods a week.
Four credit hours.

302. Physical Chemistry. (Short course: For Pre-Medical and Pre-Dental students.) Discussion of the properties and laws of matter in its different states and in solution; chemical equilibrium; thermochemistry; electrochemistry; reaction kinetics; phase rule. The

laboratory work includes physico-chemical methods and their application.

Two class periods and two laboratory periods a week.
Four credit hours.

303-304. Physical Chemistry. (Long course: For students who wish to follow a scientific or engineering career.) More comprehensive than Chemistry 302, with emphasis on industrial applications.

Two class periods and one and a half laboratory periods a week.
Seven credit hours.

305-306. Organic Chemistry. A more intensive course than Chemistry 201-202, for students who are planning for a scientifc or engineering career.

Three class periods and three laboratory periods a week.
Twelve credit hours.

401-402. Biochemistry. The subject matter acquaints Pre-Medical and Pre-Dental students and Clinical Technologists with the practical application of chemical methods to medicine and dentistry. It treats the chemistry and metabolism of carbohydrates, proteins, and lipoids; the chemistry of digestion; absorption, assimilation, and excretion. The laboratory work includes quantitative methods of blood and urine analyses.

Three class periods and two laboratory periods a week.
Ten credit hours.

Electives for science students who are majoring in chemistry and who wish to seek employment in this field:

410. Chemical Seminar.

407. Plant Inspection Visits.

302-401. Industrial Chemistry.

403. Technical Analysis.

412. Advanced Organic Analysis.

For detailed description of courses see Chemical Engineering section, page 101, 102.

CLASSICAL LANGUAGES

LATIN (Lat.)

101. Cicero, Virgil, and Latin Composition. Cicero is studied as a humanist and as an orator in Pro Archia Pro Marcello, and Virgil as the exponent of Latin pastoral poetry in the Eclogues. Exercises in Latin Prose Composition.

Three class period a week. Three credit hours.

102. Cicero, Virgil and Latin Composition. Cicero is studied as an essayist in De Amicitia and De Senectute and Virgil as a didactic poet in the Georgics. Exercises in Latin Prose Composition.

Three class periods a week. Three credit hours.

201. Livy. The History of the Second Punic War, Book XXI and XXII. Latin Prose Composition and original themes.

Two class periods a week. Two credit hours.

202. Cicero and Pliny. The men and the world of the times of Cicero and of Pliny are revealed by their letters.

Two class periods a week. Two credit hours.

203. Latin Literature. The history of Roman Literature from the origins to the Augustan Age.

One class period a week. One credit hour.

204. Latin Literature. The history of Roman Literature in the Augustan and the Post-Augustan Periods.

One class period a week. One credit hour.

301. Quintillian and Horace. A study of the literary precepts and criticism of these two authors as seen in Quintillian's Institutiones Oratoriae, Book XI and Horace's Ars Poetica.

Three class periods a week. Three credit hours.

302. Tacitus and Horace. The study of Tacitus' Agricola with particular attention paid to his compactness

of expression. A study of selected odes of Horace illustrative of his various types and meters in lyric poetry.
Three class periods a week. Three credit hours.

401. Cicero and Horace. Cicero is studied as a philosopher in his De Officiis. Horace is studied as the best exponent of Latin satire.
Three class periods a week. Three credit hours.

402. Seneca and Horace. A study of the ethical aspects of the Stoic school of Philosophy as revealed in Seneca's Moral Epistles and Essays. The study of Horace's philosophy and literary views as seen in his Epistles.
Three class periods a week. Three credit hours.

GREEK (Gr.)

101-102. Elementary Greek. Pronunciation and inflections with exercises. Epitome of the New Testament by N. J. Stoffel, C.S.C. White's Grammar (first forty lessons).
Three class periods a week. Six credit hours.

201-202. Intermediate Greek. White's Grammar. (Lessons forty to eighty.) Study of the Principles of Syntax. Xenophon's Anabasis.
Three class periods a week. Six credit hours.

301-302. Third Year Greek. Kaegi's Grammar with Advanced Exercises. Eutropius by St. John Chrysostom. St. Mark's Gospel, arranged by Kleist. Iliad of Homer.
Three class periods a week. Six credit hours.

401-402. Fourth Year Greek. Exercises in Greek Composition. Greek Literature. Selections from Dramas and philosophical works.
Three class periods a week. Six credit hours.

EARTH SCIENCE (Er. Sc.)

101-102. Geology. The course is intended principally for students seeking general culture. It covers dynamic, structural, and historical geology, and gives a brief outline of economic geology.

Two class periods a week. Four credit hours.

103. Economic Geography. This course shows the influences exerted by topography, climate, geographical position, soil, and other natural resources upon the various types of activity by means of which man gains his living. It further shows the influence of geographical factors on the various forms of agricultural industry, on the extractive and manufacturing industries, and on the problems involved in transportation and commerce.

Two class periods a week. Two credit hours.

104. Physical Geography. A study of physical phenomena that occur on the earth's surface.

Two class periods a week. Two credit hours.

201. Mineralogy. This course gives a broad knowledge of mineralogy. The lectures treat of crystallography, the chemical and physical properties of minerals, their occurence and formation, and also the technical as well as rock-forming minerals.

Determinative Mineralogy. Determination of most important minerals by blow-pipe analysis, spot tests, microchemical tests, and the optical characteristics.

Two class periods and one laboratory period a week.
Three credit hours.

202. Geology. This intensive course comprises physical (dynamic and structural) and historical geology. Large collections of models, rocks, fossils, charts, maps, and lantern slides illustrate the lectures.

Two class periods and one laboratory period a week.
Three credit hours.

203. Historical Geology. The chronological arrangement of the events of earth history and its organisms. (Not given in 1939-1940.)

Two class periods a week. Two credit hours.

204. Physiography of the United States. Physiographic processes and their effects are studied in relation to the geologic development of the sections of the United States.

Two class periods a week. Two credit hours.

301. Petrology. Description of the origin and geologic history of rocks. (Not given in 1939-1940.)

Two class periods a week. Two credit hours.

401-402. Economic Geology. A thorough study of the mineral raw materials. Oil, coal, and ores are especially treated; their occurrence in nature, their extraction, and their application are outlined. (Not given in 1939-1940.)

Two class periods a week. Four credit hours.

ECONOMICS (Eco.)

101. Introduction to Economics. A survey course covering the fundamental concepts, principles, and problems of modern economic society. Special attention is given to prices, money, banking, international trade, and taxation.

Three class periods a week. Three credit hours.

102. Economic Geography. (See Earth Science 103.) 103.)

Two class periods a week. Two credit hours.

103. European Economic History. (See History 103.)

Three class periods a week. Three credit hours.

201-202. Principles of Economics. A course designed to cover the entire field of economics with special emphasis placed upon the principles of production, distribution, and consumption of wealth, together with an analysis of the industrial action of men as regarding land, labor, banking and credit, interest, value, and wages.

Three class periods a week. Six credit hours.

203-204. American Economic History. (See History 203-204.)
Two class periods a week. Four credit hours.

301. Reconstruction of the Social Order. (See Religion 401.)
Two class periods a week. Two credit hours.

302. Communism. (See Religion 402.)
Two class periods a week. Two credit hours.

303. Labor Problems. (See Sociology 302.)
Three class periods a week. Three credit hours.

304. Population. (See Sociology 303.)
Three class periods a week. Three credit hours.

305. Transportation. The development of the different means of transportation in the United States, organization and consolidation of railroads, and theories of rates. This course is treated from the standpoint of making use of the transportation facilities.
Three class periods a week. Three credit hours.

306-307. Current Economic Problems. An advanced course covering contemporary problems. Special emphasis on: The problem of security; economic changes since 1929; the Roosevelt Recovery Program; economic planning.
Three class periods a week. Six credit hours.

308. Principles of Insurance. A study of the theory and practice of insurance, and the mathematical basis of insurance with special reference in the Life, Fire, and Casualty fields.
Three class periods a week. Three credit hours.

401. History of Economic Thought. A survey to familiarize the student with the background and development of the Classical Political Economy; the early critics of the Classical Economists and the recent attempts to reconstruct the science.
Three class periods a week. Three credit hours.

402. Economic Theory. A critical and analytical study of the theories of value, interest, wages, rent and profits.
Three class periods a week. Three credit hours.

403. Public Finance and Taxation. A survey of governmental expenditure, borrowing, indebtedness, and revenue. The theory of taxation; constitutional, distributive, and administrative effects of taxation; and the American fiscal systems.

Three class periods a week. Three credit hours.

405. Business Cycles. Characteristics and economic consequences of business cycles; analysis of business cycle theories; examination of proposals for eliminating or controlling the cycle.

Three class periods a week. Three credit hours.

406-407. Money, Credit, and Banking. Nature and function of money; the importance of credit; relation of money and credit to prices, bank deposits and loans; national banking systems; federal reserve system; comparative banking systems; and recent developments.

Three class periods a week. Six credit hours.

EDUCATION (Educ.)

101. Survey of Education. A consideration of the field of Education, its problems and possibilities, with a view of orienting the beginning student with the profession of teaching and of enabling him to make a choice of some phase for special study.

Two class periods a week. Two credit hours.

301. School Management. The purpose of this course is to show the teacher how to organize and control the classroom in the light of social aims and demands, and in conformity with the psychological aspects of the problems of school management.

Two class periods a week. Two credit hours.

302. Principles of Education. A study of the fundamental concepts that underlie the purpose and practices of education; the historical background in relation to the present systems; the pupil; how society educates; the program of studies.

Two class periods a week. Two credit hours.

303. Improvement of Instruction in Reading and Literature. Selection of the content of the courses of study; determination of grade placement; selection of efficient methods and materials; selection of procedures in measuring pupil accomplishment.

Three class periods a week. (To be offered in 1940-1941.) Three credit hours.

305. General History of Education. Theory and practice of education from the Greeks to the present time, with constant reference to modern education. Education in relation to the social development of each period—ancient, medieval, modern.

Two class periods a week. Two credit hours.

306. Survey of American Education. The evolution of the American school system from colonial days to the present; various modifying forces that have influenced American education, and the contributions of leading educators.

Two class periods a week. Two credit hours.

307. Improvement of Instruction in Language, Spelling, and Writing.

Three class periods a week. (To be offered in 1940-1941.) Three credit hours.

309. Principles of Teaching. The aims of education; the development of various conceptions of educational values; the origin and present status of certain controverted questions of educational theory.

Two class periods a week. Two credit hours.

401. Educational Psychology. This is an introduction to the science of education. An application is made of the methods and results of experimental psychology to the problems of training children.

Three class periods a week. Three credit hours.

403. Improvement of Instruction in Arithmetic.

Three class periods a week. (To be offered in 1941-1942.) Three credit hours.

404. Improvement of Instruction in the Social Studies.
Three class periods a week. (To be offered in 1941-1942.)
Three credit hours.

405. The Teaching of English and Literature in the Secondary Schools. Principles for the selection of literature for senior high school pupils considered critically; illustrative studies in the treatment of selective pieces; study of types of composition work for high schools, with illustrative practice in writing.
Two class periods a week. Two credit hours.

406. The Teaching of Social Studies in Junior and Senior High Schools. Development of instruction in these subjects in high school programs; aims and values of instruction; problems connected with the teaching of these subjects; the relation between history and civics teaching, modern courses of study. Special attention will be given to the organization of material for teaching purposes.
Two class periods a week. Two credit hours.

408. The Teaching of Romance Languages. A study of the aims and methods of teaching romance languages, of the various types of examinations, selection of texts, use of realia, etc.
Two class periods a week. Two credit hours.

409. The Teaching of High School Mathematics. Topics: The objectives of high school mathematics; sequence of subject matter; correlation of subject matter; methods of teaching; analysis of courses of study and text books; materials and equipment; current tendencies in high school mathematics.
Two class periods a week. Two credit hours.

411. The Teaching of Science. A discussion of the social basis for instruction in science; development of a philosophy for the teaching of science that conforms with modern progressive educational philosophy; selection of objectives on the basis of defensible criteria; determination of a technique for developing an integrated science curriculum and a review of the pertinent research alluding to science teaching.
Two class periods a week. (To be offered in 1940-1941.)
Two credit hours.

412. Measurement in Education. Interpretation of measurement in education; criteria for the selection of tests; new type tests; their construction, giving, scoring.

Three class periods a week. Three credit hours.

414. Practice Teaching in Secondary Education. Demonstrated success in the classroom is required of every student who becomes a candidate for the Bachelor's degree in Education. Practice Teaching is open only to seniors. The course is operated as follows:

The student is placed in a cooperating high school, as convenient as possible to the student's residence. A minimum of 90 clock hours of actual teaching is required for five hours of credit.

In the high school the student-teacher is directly responsible to his supervising teacher and to the principal, under the ordinary regulations of the school.

General and individual conferences are held which the student teachers must attend; special assignments are made and reports of school work discussed.

Three to five credit hours.

415-416. Individual Education Research for Senior Students. Students with definite problems will carry on research under the direction of the instructor in whose field the problem lies.

Four credit hours.

421. Educational Sociology. A study of the sociological facts and principles essential to the background of every teacher. An analysis of the sociological objectives of education in modern education.

Three class periods a week. Three credit hours.

422. The Philosophy of Education. A study of the fundamental principles and theories which serve to determine the educational process. The aim of this course is to provide a norm for the evaluation of the theories of modern educators.

Three class periods a week. (To be offered in 1940-1941.) Three credit hours.

423-523. Problem Children in School. This course deals with the mental hygiene of school children with emphasis on diagnosing these problems and discovering and applying remedial measures.

Three class periods a week. Three credit hours.

ENGLISH (Eng.)

I. RHETORIC AND COMPOSITION

000. Basic English.

100. English Expression. A basic course open to all students but required of all those who plan to teach in elementary schools. The course is designed to develop proficiency in spelling, vocabulary, sentence structure, and punctuation.

Three class periods a week. Three credit hours.

101. English Composition. In this course the principles of composition are presented so that the students can apply them to regular themes.

Three class periods and one laboratory period a week. Three credit hours.

304. Theme Writing. An intensive study of the technique of preparing a documented paper. Vocabulary drills are also used.

Two class periods a week. Two credit hours.

305. Latin and Greek Derivatives. The study of Greek and Latin roots which form the foundation of medical terms. Designed primarily for pre-medical students.

Two class periods a week. Two credit hours.

306. Technique of Poetry. A study of the technique of poetry to enable the student to appreciate this form of writing. Practice in writing of poetry is included.

Three class periods a week. Three credit hours.

307. The Essay. This course comprises the history, nature, structure, and style of the essay.

Three class periods a week. (Not offered in 1940-1941.) Three credit hours.

310. The Technique of the Novel. A study of plot, characterization, background, point of view, conduct of the narrative, analysis of novels.

Three class periods a week. (Not offered in 1940-1941.) Three credit hours.

312. The Short Story. A study of the technique of the short story together with methods of writing the short story.

Three class periods a week. Three credit hours.

316. Advanced Composition. This course offers a study and an application of principles underlying effective composition in various types of writing. Special encouragement is given to individual creative expression.

Three class periods a week. Three credit hours.

407. History of the English Language. A study of the development of the English Language from the earliest days up to the present time.

Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

408. Business English. This course covers practically the entire field of business correspondence. The principles of the modern business letter writing are explained, illustrated and applied to various types of letters used in commercial houses.

Three class periods a week. Three credit hours.

II. LITERATURE

201. English Literature. A survey of English literature from its earliest beginnings to the present.

Three class periods a week. Three credit hours.

202. American Literature. A survey of American literature from the Colonial Period to the present.

Three class periods a week. Three credit hours.

203. Literature. A brief survey course which treats of the principal British and American poets and essayists. This course is designed especially for engineering students.

Three class periods a week. Three credit hours.

301. Story Telling. The technique of story telling is first given. Practice is given in selecting and arranging literature and stories suited to the several school levels.
Three class periods a week. (To be offered in 1940-1941.)
Three credit hours.

302. Literature in the Grades. A survey of children's literature and a study of motivation in the field of reading. Practice in the organization and presentation of type units, including dramatization and other vitalizing exercises.
Three class periods a week. (To be offered in 1940-1941.)
Three credit hours.

311. History of the Novel. A study of the English novel from its beginning to the present time.
Three class periods a week. Three credit hours.

401. Contemporary Poetry. This course includes both American and English poets. The poems are read and from time to time symposiums on the various poets are held with the students presenting papers about the poets and their works.
Three class periods a week. Three credit hours.

402. The Drama. A survey course beginning with the Greeks and coming down to the present time. Reading of plays and assignments on specific topic are required.
Three class periods a week. Three credit hours.

403. Introductory Course to Shakespeare. This course offers a detailed study of the life and works of Shakespeare together with a study of his contemporaries.
Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

404. Tragedies of Shakespeare. A comprehensive study of the tragedies with special emphasis on a selected few. All of the tragedies must be read.
Three class periods a week. Three credit hours.

405. The Comedies of Shakespeare. A comprehensive study of the Comedies with emphasis on a few. All of the Comedies will be read.
Three class periods a week. Three credit hours.

406. Histories of Shakespeare. A comprehensive study of the Histories with emphasis on a few. All of the Histories must be read.
Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

409. American Drama. A survey course treating the drama in America from its beginning to the present day. Readings and assignments will be required.
Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

410. Literary Criticism. A study of the fundamental principles of literature and style. Practical application is made in the form of specific assignments.
Three class periods a week. Three credit hours.

411. Anglo Saxon. An introductory course in Anglo Saxon.
Three class periods a week. Three credit hours.

412. Chaucer. Based primarily on the Canterbury Tales. The life and times of Chaucer are fully treated.
Three class periods a week. Three credit hours.

III. JOURNALISM

208. Introduction to Journalism. Non-technical survey of journalism; journalistic style; words and phrases; the structure of the news story; gathering news; types of news story; the reporter; the city editor; other desk positions.
Three class periods a week. Three credit hours.

209. Copyreading. Primarily for sophomores. A course of laboratory exercises in the newspaper deskman's problems.
Three class periods a week. Three credit hours.

301. Reporting. A course in realistic treatment of reporting; laboratory work accompanies the course.
Three class periods a week. Three credit hours.

302. Feature Writing. A study of the types, style, and subjects of feature articles for the editorial page of the daily editions.
Two class periods a week. Two credit hours.

303. History of Journalism. A course in the evolution of the press in the United States.

Two class periods a week. Two credit hours.

IV. SPEECH

102. Public Speaking. The aim of this course is to acquaint the students with the basic principles of speech through both lectures and actual practice before the class.

Three class periods a week. Three credit hours.

205. Argumentation. Principles and practice of argumentation, with insistence on the making of briefs. Required of those students who wish to take up law.

Three class periods a week. Three credit hours.

206. Panel Discussion and Parliamentary Law. The prime object of this course is to give the students opportunity of applying Parliamentary Law in a practical way.

Three class periods a week. Three credit hours.

207. Dramatic Interpretation. A study of the principles of expression and their application to the interpretation of dramatic selections of prose and poetry. Not open to Freshmen.

Two class periods a week. Two credit hours.

210. Play Production. A study of the principles of the stage production of plays. Students take part in dramatic presentation. A detailed study is made of acting, coaching, casting, stage-setting and make-up. Not open to Freshmen.

Two class periods a week. Two credit hours.

317. Teaching of Speech. A study of the methods and of the problems confronting the teacher of speech, with some attention to the cure of the more common forms of speech disorders.

Two class periods a week. Two credit hours.

318. Radio Speech. A study of the problems of radio broadcasting and the use of the Public Address sys-

tem, attention being given to voice training, resonance, composition and production. Open to Juniors and Seniors.
Two class periods a week. Two credit hours.

401. Voice and Diction. The course is arranged to take care of the individual differences of each student with regard to voice difficulties. Stress also will be laid upon articulation, enunciation, pronunciation, with a view to aiding each student to speak effectively.
Two class periods a week. Two credit hours.

HISTORY (Hist.)

Twenty to twenty-four credit hours are required for major in the field of history. Prerequisite courses are 101-102 and 201-202. In junior and in senior years the elective courses are:

1) either courses 301-302 and 401-402 in American history or 303-304 and 403-404 in European history.

2) courses either in the general field of history or in the special field of history chosen by the student for concentrated study.

3) courses in the field of a related minor—economics, sociology, psychology, or political science. Twelve credit hours are required for a related minor.

101-102. History of Civilization. A preliminary chronological survey of world history, followed by a detailed study of the religious, cultural, economic, social, and political achievements of mankind.
Three class periods a week. Six credit hours.

103. European Economic History. The development of European economic life from ancient times to the present with particular emphasis on medieval economic concepts, the Commercial and Industrial Revolutions, and the present economic status of Europe.
Three class periods a week. Three credit hours.

201-202. Modern European History. A survey of modern European history from the sixteenth century to 1870.

Three class periods a week. Six credit hours.

203-204. American Economic History. An intensive study of the development of agriculture, industry, commerce, transportation, and finance against the general background of American political and social history.

Two class periods a week. (Not offered in 1939-1940.) Four credit hours.

301-302. American History. An interpretative analysis of the leading events in American history with special attention to the backgrounds of current economic and constitutional problems.

Three class periods a week. (Not offered in 1939-1940.) Six credit hours.

303-304. European History since 1870. A study of imperialism, international alliances and rivalries, the World War, peace problems, dictatorships, and the new Europe.

Three class periods a week. Six credit hours.

305-306. History of England. A survey of early and medieval English history, and a detailed study of English activities from Tudor times to the present day.

Three class periods a week. Six credit hours.

307. Ancient History. A study of ancient times to the fall of Rome.

Three class periods a week. Three credit hours.

308. Medieval History. A study of the Middle Ages from the decline of the Roman Empire to the development of the Renaissance movement, emphasizing the political, economic, social, cultural, and religious institutions which characterized the formation of western civilization.

Three class periods a week. Three credit hours.

401-402. Seminar in Recent American History. For students majoring in American history. A discussion of

American political, constitutional, economic, and social problems since the Civil War.
Three class periods a week. Six credit hours.

403-404. Seminar in Contemporary European History. For students majoring in European history. A discussion of current trends in European history.
Three class periods a week. Six credit hours.

405-406. Latin American History. A survey of the European background, the native culture, the conquest and settlement, and the wars of independence; a further study of the development of the Hispanic American republics and their relations, especially those with the United States.
Two class periods a week. Four credit hours.

407-408. Great American Political Personalities. A study of the ideas, policies, and achievements of important political figures in American history from 1789 to 1939.
Two class periods a week. Four credit hours.

409b. Methods of Teaching the Social Studies in Secondary Schools. (See Education 406.)
Two class periods a week. Two credit hours.

412. History of Ohio. A survey of the history of Ohio from its settlement and early development to the present day.
Two class periods a week. Two credit hours.

MATHEMATICS (Math.)

000. Elementary Algebra. This course in the elements of algebra is offered to Freshmen who do not maintain a satisfactory standing in Algebra 101 during the first part of the semester.
No credit.

101. Freshman Mathematics. A correlation of algebra, trigonometry, and analytic geometry, purposed to prepare the pre-medical student for applications encountered in his subsequent college curriculum.
Two class periods a week. Two credit hours.

103. College Algebra. (Short Course.) A review of elementary algebra. Ratio, proportion, variation, progressions, complex numbers, theory of algebraic equations, permutations, combinations, probability, determinants, infinite series, and partial fractions.
Three class periods a week. Three credit hours.

105. Trigonometry. Trigonometric functions, fundamental relations, trigonometrical equations and identities, solution of triangles. DeMoivre's theorem and elements of spherical trigonometry.
Three class periods a week. Three credit hours.

106. Analytical Geometry. Rectangular and polar coordinates with applications, detailed study of the line and conic sections, general equation of the second degree; higher plane curves, coordinate method in three dimensions involving a brief study of the plane, line, and quadric surfaces.
Four class periods a week. Four credit hours.

107-108. College Algebra. A review of elementary algebra. Linear equations, systems of linear equations, functions and their graphs, exponents and radicals, quadratic equations, quadratic equations in two unknowns, ratio, proportion and variation, progressions, complex numbers, theory of equations, permutations, combinations, probability, determinants, infinite series, and partial fractions.
Three class periods a week. Six credit hours.

201. Differential and Integral Calculus. Development and use of the formulae of differentiation and integration, applications of differentiation and integration, maxima and minima, rates, differential equations, successive differentiation and integration, infinite series, and expansion of functions.
Five class periods a week. Five credit hours.

202. Differential and Integral Calculus. Properties of plane curves, applications to geometry and mechanics, integration of special classes of functions; functions of two or more variables; differentiation and integration, further applications to geometry and mechanics.
Three class periods a week. Three credit hours.

203-204. Mathematics of Finance. This course covers the essential problems in which the business man is mostly concerned: Interest, logarithms, ordinary annuities, amortization and sinking funds, valuation of bonds, and mathematics of life insurance.

Two class periods a week. Four credit hours.

301. Differential Equations. Differential equations of the first order and first degree, first-order equations of degree higher than the first, linear equations with constant coefficients, applications and miscellaneous equations of order higher than the first.

Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

302. Advanced Calculus. General methods of integration, reduction formulae, double in integrals, triple integrals, partial differentiation, maxima and minima, line integrals, and Green's theorem.

Three class periods a week. Three credit hours.

410. College Geometry. Synthetic study for advanced students of plane geometry, supplementary to high-school geometry. Properties of the triangle, quadrangle, quadrilateral, poles and polars, and inversion. Excellent background values for high school and college teachers.

Three class periods a week. Three credit hours.

403. Business Statistics. A survey course to familiarize the student with the methods of collecting, presenting, analyzing, and interpreting statistical data. Graphic presentaton, curves, semilogarithmic charts, statistical maps, frequency distribution, time series, and construction of index numbers. Simple and multiple correlation and forecasting.

Three class periods a week. Three credit hours.

404. Statistical Methods. Frequency distributions, central tendency, dispersion, percentiles, probability curve and elementary theory of errors, theory of curve fitting and least squares, correlation table and coefficients of correlation.

Two class periods a week. Two credit hours.

405. Social Statistics. Gathering and presenting data, averages, dispersion, index numbers, time series, and correlation.

Two class periods and one laboratory period a week. Three credit hours.

MILITARY SCIENCE (Mil. Sc.)

Organization

Students enrolled in Military Science and Tactics are organized into a unit of the Reserve Officers' Training Corps. The unit is organized into a battalion of Infantry with a Band Company. The battalion is commanded by a Cadet Major. Subordinate organizations are commanded by cadet captains and lieutenants. All cadet officers are members of the senior or second year advanced class. Cadet first sergeants and sergeants are members of the junior or first advanced class. Cadet corporals are appointed from the sophomore or second year basic class.

Objectives of the Course

The immediate object of the military training course is to awaken in the student an appreciation of the obligations of citizenship, to prepare him to discharge his duties as a citizen, and to qualify him as a leader of men.

The general object of the military training course is to qualify graduates as Reserve Officers in the United States Army.

101-102. First Year Basic. Fifty percent practical and fifty percent theoretical. The course includes infantry drill of the squad, platoon, and company; national defense and the R.O.T.C.; obligations of citizenship; military history and policy; military courtesy and discipline; sanitation and first aid; military organization; map reading; and rifle markmanship.

Three class periods a week. Two credit hours.

201-202. Second Year Basic. Fifty percent practical and fifty percent theoretical. The course includes continuation of first year's infantry drill, stressing duties of non-commissioned officers; the fundamentals of leadership; automatic rifle and characteristics of infantry weapons; musketry; scouting and patrolling; and combat principles of the rifle squad and section.

Three class periods a week. Two credit hours.

301-302. First Year Advanced. Forty percent practical and sixty percent theoretical. The course comprises infantry drill, including the battalion; aerial photograph reading; machine gun and howitzer company weapons; pistol markmanship; rifle markmanship; company administration; care and operation of motor vehicles; defense against chemical warfare; combat principles of the rifle and machine gun platoons, and howitzer company squads.

Five class periods a week. Six credit hours.

401-402. Second Year Advanced. Thirty percent practical and seventy percent theoretical. The course comprises infantry drill; leadership; methods of instruction; military history and policy; military law; property emergency procurement and funds; mechanization; infantry communications; combat intelligence; tanks and anti tank defense; defense against aircraft; combat principles to include the rifle and machine gun companies and howitzer platoon; and regulations of the Organized Reserve Corps.

Five class periods a week. Six credit hours.

MODERN LANGUAGES

FRENCH (Fr.)

101-102. Elementary Course. Pronunciation, grammar, reading of simple texts, dictation, conversation, and written exercises.

Three class periods a week. Six credit hours.

201-202. Intermediate Course. Grammar review and syntax. Composition and conversation. Selections from contemporary authors.

Three class periods a week. Six credit hours.

301-302. French Literature to the Eighteenth Century. A survey covering the chief literary movements, outstanding authors and works of this period.
Three class periods a week. Six credit hours.

303. Scientific French. A reading course intended to familiarize students with the more technical vocabulary used in scientific writings.
Three class periods a week. Six credit hours.

304. Practical Phonetics. Prerequisite: Two years of college French. Theory of French sounds. Study of stress, quantity, rhythm, and articulation.
Three class periods a week. Three credit hours.

401-402. French Literature during the Eighteenth and Nineteenth Centuries. A survey covering the chief literary movements, outstanding authors and works of this period.
Three class periods a week. Six credit hours.

403-404. Contemporary French Literature. From 1914 to the present day.
Three class periods a week. (Not offered in 1939-1940.) Six credit hours.

405. French Civilization. Literature reflecting the history of France and the evolution of her arts and sciences. The trend of French thought of the present day as seen through her men of letters.
Three class periods a week. Three credit hours.

409c. Methods of Teaching French. (See Education 409c.) Prerequisite: Three years of college French and a general knowledge of the history of the language.
Two class periods a week. Two credit hours.

GERMAN (Ger.)

101-102. Elementary German. Essentials of German grammar. Practice in easy reading. Drills in dictation and conversation. Translation of simple English into German.
Three class periods a week. Six credit hours.

201-202. Intermediate German. Grammar review. Exercises in composition and conversation. Study of four works of moderate length (Zschokke: Der zerbrochene Krug; Gerstaecker: Germelshausen; Heyse: L'Arriabbiata; Wichert: Als Verlobte empfehlen sich.) Short poems.

Three class periods a week. Six credit hours.

301-302. German Literature to 1832. A survey of the history of German literature from the earliest times to the death of Goethe. A study of the movements, outstanding authors and their principal works.

Three class periods a week. (Not offered in 1939-1940.) Six credit hours.

303. Scientific German. A reading course intended to familiarize students with the more technical vocabulary used in scientific subjects.

Three class periods a week. Three credit hours.

401-402. German Literature since Goethe. A study of the literary movements, outstanding authors and works, following on the classical period.

Three class periods a week. Six credit hours.

403-404. Classical Drama. A study of the dramatic works of Lessing, Schiller, and Goethe.

Three class periods a week. Six credit hours.

SPANISH (Span.)

101-102. Elementary Spanish. Elements of grammar including exercises in reading, translation, dictation, and conversation.

Three class periods a week. Six credit hours.

201-202. Intermediate Spanish. Grammar review. Exercises in composition and conversation. Selected readings from modern authors (Alarcon, Dario, Perez, Galdos, Palma, Pereda, Blasco Ibanez, Palacio Valdes, Valera, etc.)

Three class periods a week. Six credit hours.

301-302. Spanish Literature. A survey of Spanish literature with special emphasis on the productions of the Golden Age and the contemporary period.

Three class periods a week. Six credit hours.

303-304. Spanish Literature of the Nineteenth Century. An outline of the principal movements, the chief authors and their works.

Three class periods a week. Six credit hours.

401-402. Spanish-American Literature. A study of the literary movements and the principal authors of the colonial, revolutionary, and modern periods.

Three class periods a week. (Not offered in 1939-1940.) Six credit hours.

403-404. The Spanish Drama. The first semester is devoted to the dramatists of the Golden Age and the second to those of modern times.

Three class periods a week. (Not offered in 1939-1940.) Six credit hours.

MUSIC (Mus.)

Candidates for the degree of Bachelor of Arts may elect music as their major study. A maximum of thirty-six semester hours will be accepted for credit. Of these, twelve hours may be in applied music. The number of credit hours in applied music must be matched by an equal number of credit hours in theoretical music. A maximum of twenty-four hours in theoretical subjects will be allowed independent of Applied Music. Courses in Applied Music must be carried concurrently with, or be preceded by an equal number of hours in theoretical courses.

102. Music Literature and Appreciation. A study of the masterpieces of music with special reference to the listener. Its aim is to develop a deeper understanding and an intelligent discrimination of music.

Two class periods a week. Two credit hours.

201. Introduction to Music. Theoretical foundations to give the student a fundamental knowledge of the prob-

lems of notation, and to develop skills in sight-singing and ear training.

Two class periods a week. Two credit hours.

202. Music in the Elementary Grades. This course assists the grade teacher in understanding the music problems in the rural and elementary schools; materials, and methods of presentation.

Two class periods a week. Two credit hours.

301. History of Music I. A study of the development of instruments, of scales, of forms, sacred and secular, from the earliest records of the Seventeenth Century; the Classical Period; the seventeenth and eighteenth centuries. A course designed to furnish the historical background necessary for every intelligent musician and music lover.

Two class periods a week. Two credit hours.

302. History of Music II. The Romantic Period; nineteenth century; contemporary music.

Two class periods a week. Two credit hours.

101-102. Harmony. Formation of scales and intervals, positions and progressions of triads, and dominant seventh chords and their inversions; simple modulations; voice leading; melodic embellishments. Prerequisite: Knowledge of the fundamentals of music.

Three class periods a week. Six credit hours.

Applied Music

Piano, Voice, Violin, Wind Instruments. Credit is allowed at the rate of one credit per hour lesson a week. A maximum of twelve hours in applied subjects may be used toward the Bachelor of Arts Degree. A theoretical music course must be carried concurrently and successfully completed.

Musical Organizations

Credit in applied music may be earned in Band, Orchestra, and Glee Club or Chorus by students enrolled in theoretical music courses. Credit will be allowed at the rate of ½ credit hour per semester for each organization.

Maximum four credits in all organizations. Pre-requisite: Permission of the director.

Applied Music Fees

Piano—one hour lesson or two half-hour lessons per week $60.00

Violin—one hour lesson or two half-hour lessons per week $60.00

Voice—one hour lesson per week $75.00

Band and Orchestra instruments—prices on request.

ORIENTATION

101. Freshman Orientation. A series of lectures having for its aim to make it possible for freshmen to orient himself to his new educational environment.

One class period a week. One credit hour.

PHYSICAL EDUCATION (Phys. Ed.)

(Health and Physical Education)

101-102. Physical Education. A course for freshmen women, contributing to the complete education of the individual through the psychomotor or large muscle activities, promoting organic vigor, teaching recreative skills and adjusting one to the problems of the world and the temperaments of his contemporaries.

Two class periods a week. Two credit hours.

301. Construction and Teaching of Health Program. A discussion of the organization and presentation of health materials adapted to the various age levels.

Two class periods a week. (To be offered in 1940-1941.) Two credit hours.

302. Theory of Play and Minor Sports. A discussion of the various theories and philosophies of play; the development of play interests in both sexes at different

age levels; and the selection of games or play activities.
Two class periods a week. Two credit hours.

PHILOSOPHY (Phil.)

301-302. A Survey of Philosophy. A course covering broadly the entire field of philosophy of being, of matter, of the mind, of God; theories of knowledge; logic and ethics.
Three class periods a week. Three credit hours.

311. Rational Psychology. The Human soul: Its origin, nature and faculties, destiny. Union of the soul with the body. Prerequisite: Psychology 201, Introductory Psychology.
Three class periods a week. Three credit hours.

312. Logic and Epistemology. I. The idea, judgment, reasoning; method. II. Truth, certitude; theories of knowledge.
Three class periods a week. Three credit hours.

313. Scientific Methodogy. Survey of logic; induction, deduction, observation, verification, discovery, statistical methods, organization of knowledge.
Two class periods a week. Two credit hours.

321. History of Ancient Philosophy. Oriental, Grecian, and Roman Philosophy; Patristic Philosophy. Required, Philosophy major.
Two class periods a week. Two credit hours.

322. History of Medieval Philosophy. The rise, development, decline and revival of Scholastic Philosophy; its relation to philosophic thought in the West and in the East. Required, Philosophy major.
Two class periods a week. Two credit hours.

401. The Story of Philosophy. A survey of philosophers and philosophical systems, with particular emphasis on developmental features. Also contemporary philosophical trends. Required, Philosophy minor only.
Two class periods a week. Two credit hours.

402. Problems of Reality. Being, becoming, unity, truth, goodness, substance and accidents, the four causes; the ultimate constituency of matter; the extent of the universe, teleology, entropy; the existence, nature and work of God. Required, Philosophy minor only.

Three class periods a week. Three credit hours.

411. Ethics. Human acts: Nature, ends, norms, morality, properties and consequences, modifiers. Man's threefold relation: God, self, neighbor. Society, the family, the profession, the state, international society.

Three class periods a week. Three credit hours.

421. Modern and Contemporary Philosophy. Philosophic thought from the seventeenth century to the present time, with particular emphasis on current philosophical systems and trends. Required, Philosophy major.

Two class periods a week. Two credit hours.

422. Cosmology and Ontology. I. The external world: Origin, ultimate constituency of matter, extent of the universe, teleology, entropy. II. Theories of reality: Being, becoming, unity, truth, goodness; the categories and causes. Required, Philosophy major.

Three class periods a week. Three credit hours.

432. Theodicy. The existence of God; His essence, Attributes, Immanent and transient activities. Required, Philosophy major.

Two class periods a week. Two credit hours.

441. The Essence of Thomism. Program of St. Thomas, "Being" in his metaphysics, in theodicy, in logic psychology, ethics; intellectualism of St. Thomas; Faith and reason.

Two class periods a week. Two credit hours.

442. Contemporary American Philosophy. Character, relative importance, trends of the philosophic thought of representative American writers.

Two class periods a week. Two credit hours.

451. Seminar in Types of Philosophic Thought. The solution of typical philosophic problems in the different

schools of thought: Method, problem of knowledge and existence, problem of truth, relation of body and mind, good and evil.

Two class periods a week. Two credit hours.

452. Readings in ethical systems. Supervised reading, discussion of written reports, on representative attempts at the elaboration of ethical systems.

Two class periods a week. Two credit hours.

462. A representative Modern Philosophy. Historical setting, philosophical system, criticism in the light of the scholastic synthesis and method.

Two class periods a week. (Not offered in 1939-1940.) Two credit hours.

482. Medical Ethics. Problems of medical practice: Professional rights and duties, religion and ethics, problems of birth and death, problems of marriage and the family, sex problems, problems arising in social, civic, and economic life.

Three class periods a week. Three credit hours.

491. Ethics. Same material as in course 411. More summary treatment.

Two class periods a week. Two credit hours.

492. Philosophic Problems. Typical problems of individual and social life chosen to show how their solution presupposes a philosophic training; elaboration of a reading program for life after graduation.

Two class periods a week. Two credit hours.

RELATED SUBJECTS IN OTHER DEPARTMENTS

Psy. 201. Introductory Psychology.

Three class periods a week. Three credit hours.

Pol. Sc. 414. Political Philosophy.

Three class periods a week. Three credit hours.

Educ. 403. The Philosophy of Education.

Three class periods a week. Three credit hours.

Art 311. Principles of Aesthetics.
Three class periods a week. Three credit hours.

PHYSICS (Phys.)

201-202. Introduction to Physics. This course, suitable for students of arts or medicine, covers the fields of mechanics, heat, sound, electricity, magnetism, and light.
Three class periods and two laboratory periods a week.
Ten credit hours.

203-204. General Physics. This course is intended for students preparing to major in physics or engineering. The laboratory work involves careful determinations and precise measurements based on the fundamental laws of physics.
Four class periods and one and a half laboratory periods a week.
Eleven credit hours.

205. (E. E. 202.) Elements of Electrical Circuits and Apparatus. Prerequisites: Math. 202 and Phys. 203-204. A general survey course presenting the basic theory of magnetic and electrical circuits and their application to D. C. and A. C. machinery.
Three class periods and one laboratory period a week.
Four credit hours.

303. (M. E. 301.) Thermodynamics. The study of isothermal and adiabatic processes of gases; various cycles of heat engines; property of steam; entropy; applications of thermodynamics; flow of liquids.
Three class periods a week. Three credit hours.

305. Physical Optics. Dispersion, interference, diffraction, polarization, magneto optics, and spectroscopy.
Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

306. Molecular Physics and Heat. A lecture course giving the mathematical treatment of the theory.
Three class periods a week. Three credit hours.

307. (E. E. 303.) Electrical Measurements—Direct Current. Prerequisite: E. E. 202. A lecture and lab-

oratory course in the measurement of electrical quantities: Resistance, electromotive force, current, power; magnetic measurements; calibration of meters.

Three class periods and one laboratory period a week.
Four credit hours.

308. (E. E. 304.) Electrical Measurements—Alternating Current. Prerequisites: E. E. 303 and 305. Measurements of self and mutual inductances, capacity, frequency, power factor; determination and analysis of wave forms; basic radio frequency measurements.

Three class periods and one laboratory period a week.
Four credit hours.

309. (E. E. 305.) A. C. Theory. Prerequisite: E. E. 202. Vector and complex quantities applied to alternating currents. Power when current and voltage are sinusoidal or non-sinusoidal, single or polyphase, in circuits containing R.C.L. in series and parallel. Electric filters, harmonics, resistance and capacity of a transmission line.

Three class periods and one laboratory period a week.
Four credit hours.

401. (E. E. 310.) Radio. Prerequisite: E. E. 305. Physical analysis of principles involved in radio apparatus and circuit performances.

Three class periods a week. Three credit hours.

402. (E. E. 312.) Electronics. Prerequisite: E. E. 305. Theory, construction, and characteristics of vacuum tubes, thyratrons, phototubes, and the technical application of these electronic devices and circuits.

Two class periods and one laboratory period a week.
Three credit hours.

403-404. Introduction to Modern Physics. Kinetic theory of gases, the electron, thermionics, photo-electricity, X-rays, spectra, atomic structure, radioactivity, geophysics, and allied topics.

Three class periods a week. Three credit hours.

405. Theoretical Mechanics. Statics and dynamics of particles and rigid bodies.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

406. (E. E. 408.) Illumination and Photometry. The nature of light and the mechanics of vision; incandescent lamps; gaseous tube lamps; the human eye; photometry.
Three class periods a week. Three credit hours.

POLITICAL SCIENCE (Pol. Sc.)

The major must include, Political Science 301, 302, 303, 304; 402 and 414. The related minor may be taken from the group of Social Sciences.

301-302. American Government and Politics. A study of the fundamental principles and operations of our government, national, state and local, analytically treated.
Three class periods a week. Six credit hours.

303. American Diplomacy. An intensive study of the foreign relations of the United States from the Treaty with France in 1778 to the present time.
Three class periods a week. (To be offered in 1939-1940.) Three credit hours.

304-305. Comparative Government of Europe. An analysis of the democratic and totalitarian forms of government in Europe.
Three class periods a week. Three credit hours.

306. Introduction to International Law. A study of the historical and juridical basis of the rules governing the relations between the nations of the world.
Three class periods a week. Three credit hours.

401. International Politics. A realistic study of the phenomena characterizing the struggle for power as practiced by the states comprising the so-called Western State System.
Three class periods a week. (To be offered in 1939-1940.) Three credit hours.

402. Comparative Political Parties. This course deals with the party systems of the various contemporary world government.
Three class periods a week. Three credit hours.

414. Political Philosophy. This course deals with the notions of the origin of the state and the most important theories advanced in support of certain forms of government.

Three class periods a week. Three credit hours.

PSYCHOLOGY (Psych.)

Psychology 201 is required in Sophomore year for all students majoring in psychology. Such students should elect in Junior and in Senior years:

a) The required courses 301, 302, 308, 309, 401.

b) For balance of courses for major—advise with head of department.

c) The related minor should be either in philosophy or sociology.

201. Introductory Psychology. A survey of the field of psychology directed toward understanding the integrated personality and the factors involved in its development: Psychological methods; general characteristics, origin and development of behavior; reactions to frustration, adjustment and its development; learning; perception; attention and set; thought; volition; socialization; language factors; conditions for efficiency. Personality: its nature and measurement. This course is pre-requisite for all other courses in the department of education.

Three class periods a week. Three credit hours.

301. Logic. (See Philosophy 311.)

Two class periods a week. Two credit hours.

302. Introductory Statistics. Frequency distributions, central tendency, disperson, percentiles, probability curve and elementary theory of errors, theory of curve fitting and least squares, correlation table and coefficients of correlation.

Two class periods a week. Two credit hours.

304. Adolescent Psychology. Physiological, intellectual, moral and emotional development of the adolescent; understanding of educational and social problems; development of character.

Two class periods a week. Two credit hours.

305. Mental Hygiene. History; nature of functional diseases; hereditary and environmental factors; adjustment of child in home, in school; causes of emotional maladjustment; the balanced personality; role of character; methods of analysis and field techniques.

Two class periods a week. Two credit hours.

306. Child Psychology. Methods and objectives; physical, motor and mental growth, motivation; social developments: Language, play, group life; child guidance: Mental hygiene, personality development; child and family; child and school.

Two class periods a week. Two credit hours.

307. Applied Psychology. Motivation; learning and memory; increasing human efficiency; personality improvement. Psychology of: Selling and advertising; personnel administration; public speech; music and art; morale; propaganda and public opinion; psychiatry and mental hygiene; education; child, family and school.

Two class periods a week. Two credit hours.

308. Experimental Psychology I.

Lectures. Detailed study of sensory processes; General problem of sensation: Conditions, types, theories; nature, origin and function of images; perception of space, time and movement; theory of perception.

Laboratory. Typical individual and group experiments in sensation, perception, reaction-time and attention.

One class period and two laboratory periods a week. Three credit hours.

309. Experimental Psychology II.

Lectures. Detailed study of learning and thought activities; memory; association; work and fatigue; the affective states.

Laboratory. Typical individual and group experiments on learning; memory, association, work and fatigue.

One class period and two laboratory periods a week. Three credit hours.

401. Educational Psychology. (See Education 401.)

Three class periods a week. Three credit hours.

402. Tests and Measurements. (See Education 412.)

Three class periods a week. Three credit hours.

403. Personnel Administration. The basic principles and techniques and their application to major business functions and fields of economic relationship, integrated around the new personnel administration and the concept of personnel work as including all problems involving the efficiency of the human factor as they arise in all phases of a business or industry.

Three class periods a week. Three credit hours.

402. Dynamic Psychology. An analysis of the factors motivating human conduct; their integration, the conflict and adjustment mechanisms; relation to a balanced personality.

Two class periods a week. Two credit hours.

407. Psychology of Personality and Character. An integrative approach, history, development, structure, analysis, understanding of personality; character; analysis and history of concept, nature, relation to personality, organization; fundamental principles of education.

Two class periods a week. Two credit hours.

408. Social Psychology. Detailed analysis of process by which interaction between individual and society produces the socialized human being; Its resultant: Personality differentiation. Its causes, effect of situations on social behavior: Leadership, propaganda, censorship, fashion, fads, booms, mob and crowd phenomena.

Two class periods a week. Two credit hours.

409. History of Psychology. The development of psychology from earliest times; emphasis on origin and growth of modern trends in psychological thought, development of modern techniques.

Two class periods a week. Two credit hours.

RELIGION (Rel.)

101-102. Catholic Doctrine. Faith; God, essence and attributes; the Blessed Trinity. God, the Creator; purpose and order of creation; origin of life and species; our first parents; angels. God the Redeemer; Incarnation and Redemption. God the Sanctifier; grace and the sacraments. God the Awarder; the last things. Required of all Catholic students.

Two class periods a week. Four credit hours.

201-202. Apologetics. Existence of God; human soul; natural religion. Revelation; historical value of New Testament; divinity of Christ. Foundation of the Church; characteristics of Church; government of Church. Required of all Catholic students.

Two class periods a week. Four credit hours.

301. Life of Christ. A survey of the life and teachings of Christ from the New Testament with particular application to the moral and social problems of today as they concern Catholic, Protestant, Jewish and pagan thought. Optional for all students.

Two class periods a week. Two credit hours.

302. Christian Marriage. Detailed study of the encyclical "Casti Connubii"; marriage a divine institution; the ends of matrimony, children, fidelity, the sacrament and the vices opposed to each; impediments; remedies to be applied. Optional for all students.

Two class periods a week. Two credit hours.

401. Reconstruction of the Social Order. Detailed study of the encyclical "Quadragesimo Anno"; the role of the Church, the state, employers and workers in social reconstruction; right of property; capital and labor; the proletariate; a just wage; corporative order; capitalism; socialism; moral renovation. Optional for all students.

Two class periods a week. Two credit hours.

402. Atheistic Communism. Detailed study of the encyclical "Divini Redemptoris"; communist doctrine and method; consequences in Russia, Mexico, Spain, U. S. A.; Catholic doctrine and remedies. Optional for all students.

Two class periods a week. Two credit hours.

403. Christian Education. Detailed study of the encyclical "Dinini Illius Magistri"; nature and importance of education, rights of Church, family, and state in education; history of education in U. S. A. and state aid. Optional for all students.

Two class periods a week. Two credit hours.

103-104. Character Building. Survey of the natural virtues with emphasis on adjusting student thinking to the cultural values of ideals of character. Optional for all students.

Two class periods a week. Four credit hours.

SCIENCE (Sc.)

101-102. Introduction to Science. An introductory course in science in which "man, his way of life, his needs and his opportunities is the selective factor to which physics, chemistry, biology, geology, and geography contribute." (State Department of Education.) The course is especially adapted to the needs of students preparing to teach in the elementary schools.

Four class periods a week. Eight credit hours.

SOCIOLOGY (Soc.)

1. Twenty to twenty-four hours in upper division courses are required for a major in Sociology.
2. Students majoring in Sociology are advised to take Principles of Economics and Introductory Psychology.
3. The related minor may be selected from the Departments of Psychology, Economics, History or Political Science.

201. General Sociology. The basic course in the principles of sociology. Biological, environmental, psychological and cultural factors in social life; social processes; social institutions; social control.
Three class periods a week. Three credit hours.

202. Social Problems. Contemporary social problems arising from economic, physical, mental and cultural factors.
Three class periods a week. Three credit hours.

203. Sociology for Nurses. A short course in principles and problems with special application to the nursing profession.
One class period a week. One credit hour.

301. Marriage and the Family. The Christian concept of marriage; legal aspects; preparation for marriage; biological aspects; family finances; intra-family relationships; education for parenthood; family disorganization; the home.
Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

302. Labor Problems. Problems of insecurity, income, sub-standard workers, and industrial conflict; attempts to solve these problems by labor, employer and State. For majors in economics.
Three class periods a week. Three credit hours.

303. Population. Reproduction, morbidity and mortality; population increase and structure; relation of population to resources; world population problems.
Three class periods a week. Three credit hours.

304. National and Racial Minorities. Minority peoples in the United States; Indians and Negroes; Old and New Immigration; immigration policies; racial and cultural conflicts; contributions of minority groups to American natural life.
Three class periods a week. Three credit hours.

307. Criminology. Crime and the criminal; factors underlying crime; police system and techniques; judicial procedure; penology; probation and parole.
Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

308. Anthropology. Primitive life; social organization; law and ethics; literature and mythology; language, art and religion.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

309. Urban Sociology. Special problems related to city life; city and regional planning; housing; public health and safety; education; recreation.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

310. Rural Sociology. Influence of environment on rural life; population and population migration; health, cultural, educational and recreational facilities.

Three class periods a week. Three credit hours.

312. Poverty and Dependency. Nature, extent and causes of poverty and dependency; classes of dependents; institutions and methods of treatment; programs of prevention.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

350. Introduction to Social Work. A survey of the field of social work, its objectives, development and techniques; social agencies; their functions and methods.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

351. Contemporary Social Work. A more thorough examination of public and private agencies engaged in social service. Representative workers are invited to discuss their techniques; field trips to agencies are arranged.

Three class periods a week. (Not offered in 1939-1940.)
Three credit hours.

401. Social Research. Principles of scientific method; the historical method; case work; the survey. Instruments of research: Interview, schedule, questionnaire; statistical procedures.

Three class periods (Including laboratory) a week.
Three credit hours.

402. Educational Sociology. (See Educ. 421.)

Three class periods a week. Three credit hours.

403. History of Social Thought. Social thought in early civilization; Greek, Roman and medieval contributions; modern and contemporary sociological theory.

Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

404. Social Institutions. Structure, functions and problems of the family, school, state and church; evaluation of their contributions.

Three class periods a week. (Not offered in 1939-1940.) Three credit hours.

405. Social Statistics. (See Math. 405.)

Three class periods (Including laboratory) a week. Three credit hours.

408. Social Psychology. (See Psych. 408.)

Two class periods a week. Two credit hours.

409. Social Control. Personality forming processes in relation to social organization; means of social control; breakdown of social control as a factor in social problems.

Three class periods a week. Three credit hours.

425. Seminar. For senior majors in sociology. Discussion of literature and problems in the field of sociology and social work.

One discussion period a week each semester. Two credit hours.

450. Principles of Social Case Work. An introduction to the basic principles and processes of social case work; social diagnosis and treatment; case material forms the basis of discussion.

Three class periods a week. Three credit hours.

451. Family Case Work. Application of the principles of social case work to the problems of the family.

Three class periods a week. Three credit hours.

College of Engineering

Department of Chemical Engineering
Department of Civil Engineering
Department of Electrical Engineering
Department of Mechanical Engineering

GENERAL STATEMENT

The courses are prescribed throughout. No effort is spared to acquaint the student thoroughly with the fundamental principles and to give him a good insight into the theoretical analysis of emergency problems. While emphasis is laid on fundamental theory, continued attention is paid to the solution of practical problems for the purpose of imbedding principles and illustrating the lines of their general industrial application.

Lectures and recitations are accompanied throughout by quantitative work in well equipped laboratories.

The contributions which the engineering profession has made during past decades have had a marked influence on the social, industrial, and economical interests of civilization. This has brought about a shifting emphasis in the various phases of engineering education, leading to a broader vision of these responsibilities, and preparing the engineer to take his proper place to bring about a better adjustment of these technical advances to modern society.

Engineering education today which fails to take this broader viewpoint of the engineers' place in our modern age is failing in one of its most important objectives.

REQUIREMENTS FOR ADMISSION

For admission to the Freshman Engineering Class students must present fifteen entrance units from the following prescribed and elective subjects:

PRESCRIBED SUBJECTS	8 units
English	3
Algebra	1½
Geometry, Plane and Solid*	1½
Physics or Chemistry	1
Social Science	1

*Students lacking Solid Geometry may be admitted and be required to earn credit in it during the first semester.

ELECTIVE SUBJECTS ..... 7 units

English 1

Foreign Language 2

Natural Science (Biology, Botany, Chemistry, General Science, Physiography, Physics, Physiology, Zoology), in each subject ..... 1 or 1½

Social Science (History, Civics, Economics, Sociology) in each ..... 1 or 1½

Vocational Work (Drawing, Manual Training, Shop work, Commercial subjects) not more than ..... 2 units

The following students will be admitted without examination:

a) Graduates from accredited high schools and preparatory schools if they have all the required units and are not in the lower third of the high school class.
The following schools shall be considered as accredited:

> Those classed as Grade A in the State of Ohio, or accredited by the North Central Association or by other similar associations or accredited by their own State Universities.

b) Graduates from non-accredited high schools and secondary schools if they have all the required units and are in the upper third of the high school class.

c) Those that have New York Regents or College Entrance Board credits in required subjects with a grade of 75% or better.

All Freshmen are required to take, during Freshman Week, certain objective examinations. These include intelligence tests, placement tests in mathematics and English, and high school achievement tests.

GRADES AND SCHOLARSHIP

Grades are based on daily work, tests, mid-semester and semester examinations. Class periods are of fifty minutes duration; laboratory periods, from two to three hours.

Grades, with their meaning and quality points, are as follows:

A. Excellent .....3 quality points
B. Good .....2 quality points
C. Average .....1 quality point
D. Poor, but passing.....0 quality point
F. Failed .....0 quality point
I. Incomplete .....0 quality point

A grade of I may be given at the discretion of the instructor to any student who, for reasons beyond his control, has not completed some portion of the work of the term, provided, however, that the rest of the work has been of satisfactory grade. The I must be removed within four weeks from the close of the semester, or be changed to an F.

The credit hours of each course denote the number of class periods and laboratory periods devoted to the course each week during one semester. The grades of A and B and C entitle the student to three and two and one quality points, respectively, for each credit hour. The quality point average is found by dividing the total number of quality points obtained by the total number of credit hours carried by the student.

A student whose quality point average for any semester is below 0.60 shall be temporarily suspended from the College of Engineering. He may secure permission from the Dean to repeat the semester corresponding to the one in which he failed, but he must pursue the courses for which his grade was below C. If the student, after repeating the semester, again falls below 0.60, he must withdraw from the College of Engineering.

A student is placed on probation when his semester report is unsatisfactory, that is, contains an F or a quality point average below 1.0. If a student, after being placed

on probation for any two semesters, again has an unsatisfactory report, he must withdraw from the College of Engineering.

An F indicates failure in a course due to poor scholastic work, or to absence without justification from ten percent of the required class and laboratory periods. This course must be repeated at the next opportunity. Should the student again receive an F for the same course he must withdraw from the College of Engineering.

A student desiring to do summer session work should confer with the Dean. Credit for such work is not accepted in some cases.

DEGREES

The degrees Bachelor of Chemical, Civil, Electrical, and Mechanical Engineering are conferred at Commencement if the following requirements have been fulfilled:

1) All prescribed courses outlined in the respective curricula must have been passed with a grade D or better;

2) The cumulative quality point average must be at least 1.0;

3) The student must have attended the College of Engineering in the University of Dayton during his Senior year, and have carried at least thirty credit hours;

4) The student must not be obligated to the University financially.

Degrees "With First Honors" are awarded to students who have earned a cumulative quality point average of 2.5 for the entire curriculum; "With Second Honors," to students who have earned a cumulative quality point average of 2.0.

CHEMICAL ENGINEERING

The course of Chemical Engineering has for its main objective the training of men for technical and executive positions in the chemical industries.

The various phases of general and analytical chemistry are studied coordinately with mathematics, physics, and mechanics; these constitute a basis for the topics of the last two years which are devoted more specifically to problems of chemical engineering equipment, control, and design. The flow of fluids, thermodynamics, theory of unit operations, and analytical control are studied in the third and fourth years. Cooperatively with the Departments of Civil, Mechanical, and Electrical Engineering, the subjects of heat-power, metallurgy, materials testing, and the principles of electrical engineering are offered and prescribed. Courses in economics, contracts and specifications, and ethics are intended to round out the whole plan of training, allowing for a choice of electives in the senior year.

CURRICULUM LEADING TO BACHELOR OF CHEMICAL ENGINEERING

FRESHMAN YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	101-102	p. 87	Catholic Doctrine*	2	0	2	0
Mil.	101-102	p. 71	Military Science	1	0	1	0
Math.	107-108	p. 69	College Algebra	3	0	3	0
Math.	105	p. 69	Trigonometry	3	0	....	....
Chem.	103	p. 49	Inorganic Chemistry	4	1	....	....
G. E.	101	p. 118	Engineering Drawing	1	2	....	....
Eng.	101	p. 61	English Composition	3	0	....	....
Eng.	102	p. 65	Public Speaking	....	....	3	0
G. E.	105	p. 118	Engineering Survey	1	0	....	....
Math.	106	p. 69	Analytic Geometry	....	....	4	0
Chem.	104	p. 50	Qualitative Analysis	....	....	2	2
G. E.	102	p. 118	Descriptive Geometry	....	....	1	2
			Total credits	18	3	16	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

SOPHOMORE YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	201-202	p. 87	Apologetics*	2	0	2	0
Mil.	201-202	p. 72	Military Science	1	0	1	0
Math.	201-202	p. 69	Calculus	5	0	3	0
Phys.	203-204	p. 81	Physics	4	1½	4	1½
Chem.	203-204	p. 50	Quantitative Analysis	2	2	2	2
Er. Sc.	201	p. 54	Mineralogy	2	1	....	....
Eng.	201	p. 62	Literature	....	....	3	0
G. E.	202	p. 118	Applied Mechanics	....	....	3	0
			Total credits	16	4½	18	3½

JUNIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
G. E.	301	p. 118	Applied Mechanics	3	0	....	....
M. E.	301	p. 115	Thermodynamics	3	0	....	....
G. E.	303	p. 118	Strength of Materials	4	0	....	....
G. E.	305	p. 119	Materials Testing	0	1	....	....
Chem.	303-304	p. 51	Physical Chemistry	2	1½	2	1½
Chem.	305-306	p. 51	Organic Chemistry	3	3	3	3
Ch. E.	302	p. 101	Industrial Chemistry	....	....	3	0
Phil.	313	p. 78	Philosophy	....	....	2	0
M. E.	302	p. 115	Heat Power	....	....	2	1
			Total credits	15	5½	14	5½

SENIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
G. E.	401	p. 119	Hydraulics	3	1	....	....
Ch. E.	401	p. 101	Industrial Chemistry	3	0	....	....
Ch. E.	403	p. 101	Technical Analysis	0	3	....	....
E. E.	301-302	p. 109	Electrical Engineering	2	1	2	1
Ch. E.	405-406	p. 101	Unit Operations	3	0	3	0
Ch. E.	412	p. 102	Advanced Organic Analysis	....	....	0	3
Ch. E.	408	p. 101	Plant Design	....	....	0	1
Ch. E.	410	p. 101	Seminar	....	....	1	0
G. E.	402	p. 119	Contracts and Specifications	....	....	2	0
Phil.	492	p. 80	Philosophy	....	....	2	0
		p. 120	Electives	3	0	3	0
			Total credits	14	5	13	5

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

CHEMICAL ENGINEERING (Ch. E.)

302-401. Industrial Chemistry. The important chemical and allied manufacturing processes are studied. Utilization of waste products and the economical phases of the chemical industry are also stressed. Prerequisite: Junior standing. Text: Riegel, Industrial Chemistry.

Three class periods a week, second semester of Junior year, and first semester of Senior year. Six credit hours.

403. Technical Analysis. This course provides training in the analytical methods needed for plant control and treats of examination of such products as solid, liquid, and gaseous fuels, lubricants, ferrous and non-ferrous alloys, saponifiable oils, etc. Prerequisites: Chem. 203-204, 303-304, 305-306. Texts: Library references.

Three laboratory periods a week. Three credit hours.

405-406. Unit Operations. This course which deals with the unit operations of chemical processes includes, in lectures and discussions, the theory and application of fluid flow, heat flow, and methods of separation of mixtures. The solution of problems forms an important part of the course. Prerequisites: Chem. 303-304 and 305-306, and M. E. 301. Text: Walker, Lewis, McAdams, and Gilliland, Principles of Chemical Engineering.

Three class periods a week. Six credit hours.

407. Plant Inspection Visits. Under Faculty guidance the students make occasional plant inspection visits so as to become acquainted with the unit processes and plant equipment in actual operation.

408. Plant Design. The needed information on equipment and its correlation, initial costs, materials of construction, and maintenance, is presented as a preliminary to the solution of individually assigned problems in plant design. Periodic progress reports and discussions gradually lead to the blue-print stage.

One credit hour.

410. Seminar. Students are assigned a variety of topics which are individually developed and orally presented in weekly seminar meetings. The papers are informally discussed. Students become familiarized with

the current trends and journal literature.
One class period a week for Junior and Senior years.
One credit hour.

412. Advanced Organic Analysis. Here a series of experimental problems are presented and carried out involving organic combustions, hydrogenations, and estimation of functional groups. This work affords opportunities for originality and also literature research. Prerequisite: Senior standing.
Three laboratory periods a week. Three credit hours.

CIVIL ENGINEERING

The Civil Engineering Curriculum is so designed as to bring about the proper correlation between the courses in mathematics, sciences and the human ties, and those of engineering and technology.

The courses in engineering and technology are classified in the following divisions: (a) Transportation systems, including highways, railways, waterways and pipe lines; (b) sanitary works, including water supply, sewerage systems and sewage disposal; (c) structural projects, including bridges, buildings, tunnels, foundations, dams and locks; (d) hydraulic projects, including river and harbor work, flood control, irrigation and drainage; (e) related fields, such as surveying, construction, city engineering and city management.

CURRICULUM LEADING TO BACHELOR OF CIVIL ENGINEERING

FRESHMAN YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	101-102	p. 87	Catholic Doctrine*	2	0	2	0
Mil.	101-102	p. 71	Military Science	1	0	1	0
Math.	107-108	p. 69	College Algebra	3	0	3	0
Math.	105	p. 69	Trigonometry	3	0	....	....
Chem.	103	p. 49	Inorganic Chemistry	4	1	2	2
G. E.	101	p. 118	Engineering Drawing	1	2	....	....
Eng.	101	p. 61	English Composition	3	0	....	....
Eng.	102	p. 65	Public Speaking	....	....	3	0
G. E.	105	p. 118	Engineering Survey	1	0	....	....
Math.	106	p. 69	Analytic Geometry	....	....	4	0
Chem.	104	p. 50	Qualitative Analysis	....	....	2	2
G. E.	102	p. 118	Descriptive Geometry	....	....	1	2
			Total credits	18	3	16	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

SOPHOMORE YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	201-202	p. 87	Apologetics*	2	0	2	0
Mil.	201-202	p. 72	Military Science	1	0	1	0
Eng.	201	p. 62	Literature	3	0	....	....
Math.	201-202	p. 69	Calculus	5	0	3	0
Phys.	203-204	p. 81	Physics	4	1½	4	1½
C. E.	201-202	p. 105	Surveying	2	1	2	1
Er. Sc.	202	p. 54	Geology	....	....	2	1
G. E.	202	p. 118	Applied Mechanics	....	....	3	0
			Total credits	17	2½	17	3½

JUNIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
G. E.	301	p. 118	Applied Mechanics	3	0	....	....
G. E.	303	p. 118	Strength of Materials	4	0	....	....
G. E.	305	p. 119	Materials Testing	0	1	....	....
M. E.	301	p. 115	Thermodynamics	3	0	....	....
C. E.	301	p. 105	Advanced Surveying	3	1	....	....
C. E.	302	p. 105	Highway Engineering	....	....	2	0
C. E.	304	p. 105	Highway Materials Testing	....	....	0	2
C. E.	306	p. 105	Theory of Structures	....	....	4	1
M. E.	302	p. 115	Heat—Power	....	....	2	1
G. E.	308	p. 119	Hydraulics	....	....	4	1
		p. 120	Electives	3	0	3	0
			Total credits	16	2	15	5

SENIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
C. E.	401-402	p. 105	Structural Design	2	2	2	2
E. E.	301-302	p. 109	Electrical Engineering	2	1	2	1
C. E.	403	p. 106	Water Supply	3	0	....	....
C. E.	405	p. 106	Route Surveying	3	1	....	....
C. E.	407	p. 106	Reinforced Concrete	4	0	....	....
C. E.	408	p. 106	Seminar	....	....	1	0
C. E.	404	p. 106	Sanitary Engineering	....	....	3	1
G. E.	402	p. 119	Contracts and Specifications	....	....	2	0
		p. 120	Electives	3	....	3	0
			Total credits	17	4	13	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

CIVIL ENGINEERING (C. E.)

201-202. Elementary Surveying. Elements of plane and topographic surveying. Prerequisite: Math. 105. Text: Rayner, Elementary Surveying.

Two class periods and one laboratory period a week. Six credit hours.

301. Advanced Surveying. Triangulation; plane table, hydrographic and photographic surveys; astronomical observations for latitude, longitude, time and azimuth. Prerequisite: C. E. 201-202. Text: Breed & Hosmer, Higher Surveying.

Three class periods and one laboratory period a week. Four credit hours.

302. Highway Engineering. Economics, principles of design and methods of construction of the different types of roads and pavements. Prerequisite: C. E. 201-202. Text: Bateman, Highway Engineering.

Two class periods a week. Two credit hours.

304. Highway Materials Testing. Testing of sand, gravel, and cement—concrete; properties of bituminous materials; testing of oils, asphalts and tars; theory and design of bituminous paving mixtures; interpretation of test results; specifications. Corequisite: C. E. 302. Text: Mimeographed Notes.

Two laboratory periods a week. Two credit hours.

306. Theory of Structures. The analytical and graphical methods applied to statistically determinate stresses in buildings and bridges. The use of influence lines is thoroughly treated. Prerequisite: G. E. 303. Text: Shedd & Vawter, Theory of Structures.

Four class periods and one laboratory period a week. Five credit hours.

401-402. Structural Design. This course correlates the theory of structures to engineering practice by the preparation of designs and drawings of a plate girder bridge and a steel building with roof trusses. The theory of the elastic arch is developed. The analyses, drawings, and calculations of a reinforced concrete highway bridge are completed. Prerequisite: C. E. 306. Corequisite:

C. E. 407. Text: Shedd, Structural Design in Steel, also, Mimeographed Notes.

Two class periods and two laboratory periods a week. Eight credit hours.

403. Water Supply. The theory, development and improvement of water supplies for domestic, manufacturing, and fire service. Quality and quantity of surface and underground waters. Demand and consumption. Hydraulics of reservoirs, pipe lines distribution systems and pumping machinery. Prerequisite: G. E. 308. Text: Waterman, Water Supply Engineering.

Three class periods a week. Three credit hours.

404. Sanitary Engineering. Sewerage, sewage disposal and the various methods of sewage treatment, design of small sewerage systems for storm and sanitary flow. Prerequisite: C. E. 403. Text: Metcalf and Eddy, Sewerage and Sewage Disposal.

Three class periods and one laboratory period a week. Four credit hours.

405. Route Surveying. Lectures, field and office work necessary for the location and construction of railroads, highways, pipe lines and other route surveys. Prerequisite: C. E. 201-202. Text: Pickels & Wiley, Route Surveying.

Three class periods and one laboratory period a week. Four credit hours.

407. Reinforced Concrete. Theory and design of reinforced concrete structures, including earth pressure and retaining walls. Design of typical bays of the beam and girder type; flat slab buildings with columns and foundations. Prerequisite: G. E. 303. Text: Sutherland and Clifford, Reinforced Concrete.

Four class periods a week. Four credit hours.

408. Seminar. Practice in oral and written presentation and discussion of papers dealing with historical and general phases of Civil Engineering. Occasional lectures by members of the Dayton Section of the American Society of Civil Engineers. These sessions also serve as meetings of the Student Chapter of which the Sophomores are honorary members and the Juniors and Seniors are regular members. The Chapter sponsors frequent engineering inspection visits.

One class period every two weeks for six semesters. One credit hour.

ELECTRICAL ENGINEERING

The course in Electrical Engineering aims to give a broad knowledge of the theory of electricity and its application in the arts. The instruction is given by lectures, recitations, and laboratory work.

As the modern development of Electrical Engineering has taken place largely along lines dependent on a thorough acquaintance with the theory of electricity, great importance is attached to this study.

The theoretical work is closely linked with an extended course of laboratory exercises. In the laboratories, general physical measurements are first taken up, followed by general testing, and electrical engineering where distinct engineering problems are encountered. The work is so arranged as to develop in the students habits of observation, precision, initiative, and industry.

The electrical measurements laboratory, the electrical testing laboratories, the photometric laboratory, and the radio laboratory are all furnished with an abundance and a large variety of equipment to which the students have access.

Dayton is the home of the Dayton Power and Light Company with its large central station and numerous sub-stations. It is also the home of many electrical and mechanical industries of world-wide reputation. The students therefore have abundant opportunities for visits of inspection to see at close range the latest engineering applications.

COLLEGE OF ENGINEERING

FRESHMAN YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	101-102	p. 87	Catholic Doctrine*	2	0	2	0
Mil.	101-102	p. 71	Military Science	1	0	1	0
Math.	107-108	p. 69	College Algebra	3	0	3	0
Math.	105	p. 69	Trigonometry	3	0	....	....
Chem.	103	p. 49	Inorganic Chemistry	4	1	....	....
G. E.	101	p. 118	Engineering Drawing	1	2	....	....
Eng.	101	p. 61	English Composition	....	....	3	0
Eng.	102	p. 65	Public Speaking	3	0	....	....
G. E.	105	p. 118	Engineering Survey	1	0	....	....
Math.	106	p. 69	Analytic Geometry	....	....	4	0
Chem.	104	p. 50	Qualitative Analysis	....	....	2	2
G. E.	102	p. 118	Descriptive Geometry	....	....	1	2
			Total credits	18	3	16	4

SOPHOMORE YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	201-202	p. 87	Apologetics*	2	0	2	0
Mil.	201-202	p. 72	Military Science	1	0	1	0
Eng.	201	p. 62	Literature	3	0	....	....
Math.	201-202	p. 69	Calculus	5	0	3	0
Phys.	203-204	p. 81	Physics	4	1½	4	1½
C. E.	201-202	p. 105	Surveying	2	1	2	1
G. E.	202	p. 118	Applied Mechanics	....	....	3	0
E. E.	202	p. 109	Elements of Elec. Eng.	....	....	3	1
			Total credits	17	2½	18	3½

JUNIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
G. E.	301	p. 118	Applied Mechanics	3	0	....	....
M. E.	301	p. 115	Thermodynamics	3	0	....	....
G. E.	303	p. 118	Strength of Materials	4	0	....	....
G. E.	305	p. 119	Materials Testing	0	1	....	....
E. E.	305	p. 110	A. C. Circuits	3	1	....	....
E. E.	303-304	p. 109	Electrical Measurements	3	1	3	1
M. E.	304	p. 115	Heat Power	....	....	2	1
E. E.	306-308	p. 110	Direct Current Machinery	....	....	2	1
E. E.	312	p. 111	Electronics	....	....	2	1
		p. 120	Elective, technical	....	....	3	0
Phil.	313	p. 78	Philosophy	....	....	2	0
			Total credits	16	3	14	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

SENIOR YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
E. E.	401-402	p. 111	Alternating Current Mach	3	0	3	0
E. E.	403-404	p. 111	A. C. Mach. Laboratory	0	1	0	2
E. E.	405-406	p. 111	Electrical Design	2	1	2	1
M. E.	307	p. 116	Mechanical Eng. Lab	0	1	....	....
G. E.	401	p. 119	Hydraulics	3	1	....	....
Eco.	101	p. 55	Economics	3	0	....	....
E. E.	410	p. 112	Seminar	....	....	1	0
G. E.	402	p. 119	Contracts and Spec.	....	....	2	0
Phil.	492	p. 80	Philosophy	....	....	2	0
		p. 120	Elective, Technical	3	0	3	0
		p. 120	Elective, Non-Technical	....	....	3	0
			Total credits	14	4	16	3

ELECTRICAL ENGINEERING (E. E.)

202. Elements of Electrical Engineering. A general survey course presenting the basic theories of magnetic and electric circuits and their application to D. C. and A. C. Machinery. Corequisite: Math. 202 and Physics 204. Text: Gray and Wallace, Principles and Practice of Electrical Engineering.

Three class periods and one laboratory period a week.
Four credit hours.

301-302. Electrical Engineering. A course of lectures and laboratory exercises designed to familiarize the student with the elements of technical measurements and with the characteristics and operation of the ordinary types of electrical machines. A course for non-electrical engineering students. Prerequisite: Math. 202 and Physics 204. Text: Gray and Wallace, Principles and Practice of Electrical Engineering.

Two class periods and one laboratory period a week.
Six credit hours.

303. Electrical Measurements. Direct Current. A lecture and laboratory course in the measurement of electrical quantities: resistance, electromotive force, current, power; magnetic measurements; calibration of meters. Prerequisite: E. E. 202. Text: Laws, Electrical Measurements.

Three class periods and one laboratory period a week.
Four credit hours.

304. Electrical Measurements. Alternating Current. Measurements of self and mutual inductances, capacity, frequency, power factor, power; determination and analysis of wave forms; basic radio frequency measurements. Prerequisite: E. E. 303 and 305. Text: Laws, Electrical Measurements.

Three class periods and one laboratory period a week. Four credit hours.

305. Alternating Current Circuits. Vector and complex quantities applied to alternating currents. Power, when current and voltage are sinusoidal or non-sinusoidal, single or polyphase, in circuits containing resistance, inductance, and capacitance, in series and parallel. Electric filters, harmonics, unbalanced three phase circuits, resistance and capacity of a transmission line; transmission line performances. Prerequisite: E. E. 202. Text: Kerchner and Corcoran, Alternating Current Circuits.

Three class periods and one laboratory period a week. Four credit hours.

306. Direct Current Machinery. The theory, construction and characteristics of series, shunt, compound and diverter pole generators; the theory of commutation and of armature reaction; parallel operation of generators; characteristics of motors; methods of speed control; also a discussion of the principles that underlie generator and motor testing. Prerequisite: E. E. 202. Text: Bull, Direct Current Machinery.

Two class periods a week. Two credit hours.

308. Electrical Laboratory. The work in the laboratory includes the study of the characteristic curves of direct-current machines; the determination of armature reaction; efficiency, regulation and heat tests; torque of motors; various methods of operating generators and motors and their auxiliary control apparatus. Corequisite: E. E. 306. Text: Dennison, Electrical Laboratory Experiments.

One laboratory period a week. One credit hour.

309. Wire Communication. The theory and construction of telephone apparatus and the application thereof to the more common circuits used in local and long distance sub-stations and central offices, and private

branch exchanges. Construction and operation of the Automatic Switchboard systems. Prerequisite: E. E. 202 and 305.

Three class periods a week. Three credit hours.

310. Radio Engineering. Physical analysis of principles involved in radio apparatus and circuit performance. Prerequisite: E. E. 305. Text: Terman, Radio Engineering.

Three class periods a week. Three credit hours.

312. Electronics. Theory, construction and characteristics of vacuum tubes, thyratrons, phototubes, and the technical application of these electronic devices and circuits. Prerequisite: E. E. 305. Text: Eastman, Fundamentals of Vacuum Tubes.

Two class periods and one laboratory period a week. Three credit hours.

401-402. Alternating Current Machinery. A study of the construction, principles of operation and behavior of single and polyphase generators and motors, the transformers, the synchronous motor, the rotary converter and vacuum tube and mercury arc rectifiers. Prerequisite: E. E. 304, 305. Text: Puchstein and Lloyd, Alternating Current Machines.

Three class periods a week. Six credit hours.

403-404. Alternating Current Machinery Laboratory. The work includes the study of alternators, synchronous motors, rotary converters, transformers, frequency changers, single phase and polyphase motors, rectifiers, oscillographs, high voltage phenomena and the determination of the dielectric strength of insulating materials. Prerequisite: E. E. 401-402. Text: Dennison, Electrical Laboratory Experiments.

One laboratory period a week, first semester. Three credit hours.
Two laboratory periods a week, second semester.

405-406. Electrical Design. In this course the student is required to complete an original design of each of the following types of electro-magnetic machinery: A lifting electro-magnet; a direct current generator or synchronous motor; an induction motor; a transformer. Prerequisite: E. E. 306. Corequisite: 401. Text: Still,

Elements of Electrical Design.

Two class periods and one laboratory period a week. Six credit hours.

408. Illuminating Engineering. The nature of light and the mechanism of vision; the proper utilization of luminaries for seeing comfort, speed and accuracy. Incandescent lamps; gaseous tube lamps; illumination and light; the human eye; photometry. Shades and reflectors. Illumination calculations and lighting layouts. Prerequisite: E. E. 202. Text: Barrows, Light, Photometry and Illuminating Engineering.

Three class periods a week. Three credit hours.

410. Seminar. Several times a month the students and department instructor meet for the purpose of considering the more important articles appearing in the current electrical and technical journals. The reading is followed by a general discussion. Occasional lectures are given by engineers in active practice upon subjects with which they are especially familiar.

One credit hour.

411. Inspection Visits. Visits of inspection are made to various power and industrial plants in and about Dayton. Occasionally a more extended trip is made to some large industrial center. Formal reports on such inspection trips are required.

413. Power Transmission and Distribution. The study of high voltage lines; inductive disturbance and line protection; design and calculation of circuits for distribution systems, regulating apparatus; the installation and operation of low and high voltage networks. Prerequisite: E. E. 305. Text: Seelye, Electrical Distribution Engineering; Woodruff, Principles of Electric Power Transmission.

Three class periods a week. Three credit hours.

MECHANICAL ENGINEERING

The curriculum of Mechanical Engineering is designed to give the student knowledge of the fundamental principles of science and the applications of these principles to the problems that arise in the broad field of this branch of engineering.

The basic studies in mathematics and the sciences are pursued in the first two years and the departmental subjects are taken up in the last two years. Mechanism, however, is given in the Sophomore year.

The course of studies comprises lectures, recitations and discussions, laboratory practice, and inspection visits. In the descriptions of the various subjects as presented by this Department it is to be understood that the subject matter outlined is rather suggestive than inclusive.

Every attempt is made to impress the student with the responsibilities that rest upon the Mechanical Engineer in the active field, whether he be engaged as designer, builder, operator, organizer, manager, administrator, or executive.

CURRICULUM LEADING TO BACHELOR OF MECHANICAL ENGINEERING

FRESHMAN YEAR

				1st Semester		2nd Semester	
				Lect.	Lab.	Lect.	Lab.
Rel.	101-102	p. 87	Catholic Doctrine*	2	0	2	0
Mil.	101-102	p. 71	Military Science	1	0	1	0
Math.	107-108	p. 69	College Algebra	3	0	3	0
Math.	105	p. 69	Trigonometry	3	0	....	....
Chem.	103	p. 49	Inorganic Chemistry	4	1	2	2
G. E.	101	p. 118	Engineering Drawing	1	2	....	....
Eng.	101	p. 61	English Composition	....	....	3	0
Eng.	102	p. 65	Public Speaking	3	0	....	....
G. E.	105	p. 118	Engineering Survey	1	0	....	....
Math.	106	p. 69	Analytic Geometry	....	....	4	0
Chem.	104	p. 50	Qualitative Analysis	....	....	2	2
G. E.	102	p. 118	Descriptive Geometry	....	....	1	2
			Total credits	18	3	16	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

SOPHOMORE YEAR

				1st Semester Lect.	1st Semester Lab.	2nd Semester Lect.	2nd Semester Lab.
Rel.	201-202	p. 87	Apologetics*	2	0	2	0
Mil.	201-202	p. 72	Military Science	1	0	1	0
Math.	201-202	p. 69	Calculus	5	0	3	0
Phys.	203-204	p. 81	Physics	4	1½	4	1½
C. E.	201-202	p. 105	Surveying	2	1	2	1
Eng.	201	p. 62	Literature	3	0	....	....
G. E.	202	p. 118	Applied Mechanics	....	....	3	0
M. E.	202	p. 115	Mechanism	....	....	1	1
			Total credits	17	2½	16	3½

JUNIOR YEAR

				1st Semester Lect.	1st Semester Lab.	2nd Semester Lect.	2nd Semester Lab.
G. E.	301	p. 118	Applied Mechanics	3	0	....	....
G. E.	303	p. 118	Strength of Materials	4	0	....	....
G. E.	305	p. 119	Materials Testing	0	1	....	....
M. E.	301	p. 115	Thermodynamics	3	0	....	....
M. E.	303	p. 115	Tool Engineering	2	2	....	....
M. E.	305-306	p. 115	M. E. Laboratory	0	2	0	2
E. E.	301-302	p. 109	Electrical Engineering	2	1	2	1
M. E.	302	p. 115	Heat—Power	....	....	2	1
M. E.	304	p. 115	Applied Thermodynamics	....	....	3	0
G. E.	308	p. 119	Hydraulics	....	....	4	1
		p. 120	Electives	....	....	3	0
			Total credits	14	6	14	5

SENIOR YEAR

				1st Semester Lect.	1st Semester Lab.	2nd Semester Lect.	2nd Semester Lab.
M. E.	401	p. 116	Applied Thermodynamics	3	0	....	....
M. E.	405	p. 116	M. E. Laboratory	0	2	....	....
M. E.	409	p. 117	Advanced Kinematics and Kinetics of Machines	3	1	....	....
M. E.	403	p. 116	Heating and Air Cond.	2	2	....	....
M. E.	407-408	p. 116	Machine Design	1	1	1	1
M. E.	402	p. 116	Internal Combustion Eng.	....	....	3	1
M. E.	412	p. 117	Metallurgy	....	....	2	2
M. E.	414	p. 117	Seminar	....	....	1	0
Phil.	491-492	p. 80	Philosophy	2	0	2	0
G. E.	402	p. 119	Contracts and Spec.	....	....	2	0
		p. 120	Electives	3	0	3	0
			Total credits	14	6	14	4

*Students not taking Religion shall elect the equivalent number of hours from non-engineering electives.

MECHANICAL ENGINEERING (M.E.)

202. Mechanism. Displacement, velocity, and acceleration; instant centers; slider crank mechanisms, cam mechanisms; toothed gearing; gear trains; flexible connectors; miscellaneous mechanisms. Corequisites: Math. 201, Phys. 203.

One class period and one problem period a week. Two credit hours.

301. Thermodynamics. The general laws of thermodynamics as applied to gases, saturated and superheated vapors; temperature-entropy diagrams; isothermal and adiabatic processes; compressors and steam engines; internal combustion engine cycles; flow of fluids. Prerequisites: Math. 202, Phys. 204. Text: Ebaugh, Enginneering Thermodynamics.

Three class periods a week. Three credit hours.

302. Heat-Power. The steam power plant, fuels and stokers, boilers and auxiliaries, condensers, chimney and draft equipment; steam engines and turbines; piping and insulation; water supply and purification; coal and ash handling machinery. Prerequisite: M. E. 301. Text: MacNaughton, Elementary Steam Power Engineering.

Two class periods and one laboratory period a week.
Three credit hours.

303. Tool Engineering. A study of the various tools that permit mass production. Attention is given to cost of production and to the market of the product. Design problems are given. Text: Stanley, Punches and Dies: Dowd and Curtis, Jigs and Fixtures.

Two class periods and two design periods a week.
Four credit hours.

304. Applied Thermodynamics. Availability; entropy; differential heat equations for perfect gases; method of reporting engine performance; laws of heat transmission; heat through walls; radiators. Prerequisite: M. E. 301. Text: Greene, Heat Engineering.

Three class periods a week. Three credit hours.

305-306. Mechanical Engineering Laboratory. Measurement of pressure, temperature, volume; planimeters; indicators; dynamometers; calorific determination of fuels; flue gas analysis; air flow; lubricants. Detailed

reports of experiments performed. Text: Shoop and Tuve, Mechanical Engineering Laboratory Practice.

Two laboratory periods a week. Four credit hours.

307. Mechanical Engineering Laboratory. A shorter course than M. E. 305-306 designed for Electrical Engineering Students.

One laboratory period a week. One credit hour.

401 Applied Thermodynamics. Thermodynamic principles applied to steam engines, multiple expansion engines, steam nozzles, injectors, steam turbines, air compressors, cooling towers, and refrigerators. Prerequisite: M. E. 304. Text: Greene, Heat Engineering.

Three class periods a week. Three credit hours.

402. Internal Combustion Engines. A critical study of the Otto and Diesel cycles is made involving researches in fuels, combustion, detonation, knock testing, engine performance, exhaust gases, and engine vibration. Prerequisite: M. E. 401. Text: Streeter and Lichty, Internal Combustion Engines.

Three class periods and one laboratory period a week. Four credit hours.

403. Heating and Air Conditioning. The mechanical problem of heating and air conditioning a room is studied from the thermodynamic viewpoint. The effect of conditioned air upon occupants receives attention. Prerequisite: M. E. 401. Text: Greene, Heating, Ventilation, and Air Conditioning.

Two class periods and two laboratory periods a week. Four credit hours.

405. Mechanical Engineering Laboratory. Complete tests are made on a power plant, steam engine, refrigerator, and an internal combustion engine. Prerequisite: M. E. 305-306. Text: Shoop and Tuve, Mechanical Engineering Laboratory Practice.

Two laboratory periods a week. Two credit hours.

407-408. Machine Design. Special instruction is given in the use of Halsey's Handbook. Selected chapters of greatest importance are chosen. Original design com-

pletes the course. Prerequisite: G. E. 202 and 301. Text: Halsey, Handbook for Machine Designers, Shop Men and Draftsmen.

One class period and two hours of design a week.
Four credit hours.

409. Advanced Kinematics and Kinetics of Machines. This course treats of criterion of constraint, velocity images, velocity polygons, acceleration, Coriolis' Law, inertia forces of machine parts, critical vibrations. Prerequisite: Senior standing. Text: Dent and Harper, Kinematics and Kinetics of Machinery.

Three class periods and one laboratory period a week.
Four credit hours.

412. Metallurgy. This course covers the theory and practice of iron and steel manufacture. Metallographic work is included.

Two class periods and two laboratory periods a week.
Four credit hours.

413. Balancing of Engines. This course applies advanced theories to the balancing of engines. Prerequisite: Senior standing. Text: Dent and Harper, Kinematics and Kinetics of Machinery.

One class period and one laboratory period a week.
Two credit hours.

414. Seminar.

One hour a week. One credit hour.

415. Inspection Visits. Visits of inspection are made to various power plants and industries in the City of Dayton and surroundings. Occasionally a more extended trip is made to some large industrial center. Formal reports on such inspection trips are required.

416. Vibrations in Mechanisms. A study of critical vibrations experienced in mechanisms. Prerequisite: Senior standing. Text: Den Hartog, Mechanical Vibrations.

One class period and one laboratory period a week.
Two credit hours.

GENERAL ENGINEERING (G. E.)

101. Engineering Drawing. Freehand drawing; use of instruments; orthographic, isometric, and oblique projections; auxiliary views; revolution; sections; dimensioning; elementary machine drawing; sketching; tracing. Text: Giesecke, Mitchell and Spencer, Technical Drawing.

One class period and two laboratory periods a week. Three credit hours.

102. Descriptive Geometry. A class-room course supplemented by drafting rom exercises in the theory of projections; graphical representations and relations of points, lines, and planes; intersections and developments with applications. Text: Smith, Practical Descriptive Geometry.

One class period and two laboratory periods a week. Three credit hours.

105. Engineering Survey. An orientation course designed to give the freshman student a general view of the engineering profession. It discusses engineering education, methods of study, and engineering curricula; historical background, achievements, and social and economic effects of engineering.

One class period a week. One credit hour.

202-301. Applied Mechanics. A study of the fundamental principles of mechanics; force systems, equilibrium states, friction, center of gravity, moment of inertia of areas, rectilinear and curvilinear motions, rotary motion, moment of inertia of mass, work and energy, plane motion, impulse and momentum. Prerequisite: Math. 201. Corequisite: Math. 202. Text: Poorman, Applied Mechanics.

Three class periods a week. Six credit hours.

303. Strength of Materials. This course includes stresses and strains due to tension, compression, shear and torsion; riveted and welded joints; shear and bending moment diagrams of beams; strength and deflection of beams; columns; fatigue; impact. Prerequisite: G. E. 202. Corequisite: G. E. 301. Text: Seely, Resistance of Materials.

Four class periods a week. Four credit hours.

305. Materials Testing. A laboratory course to acquaint the student with ASTM Standards in the physical tests of steel, cast iron, wood, alloy metals, aggregates and cement; the elements of the water-cement ratio law for the making of concrete are covered. Corequisite: G. E. 303. Text: Mimeographed Notes.

One laboratory period a week. One credit hour.

308. Hydraulics. A basic course in the principles of hydraulics dealing with the pressures exerted by or upon water at rest, the motions of water and the pressures exerted by or upon water in motion; measurement of the flow of water through the application of gauges, meters, Pitot tubes, Venturi meters, and weirs; loss of head; path, energy and impulse of jets. Problems and laboratory exercises reinforce the student's knowledge of fundamental principles. Prerequisite: G. E. 301. Text: Russell, Hydraulics.

Four class periods and one laboratory period a week.
Five credit hours.

401. Hydraulics. A course similar to G. E. 308, but shorter. Prerequisite: G. E. 301. Text: Schoder & Dawson, Hydraulics.

Three class periods and one laboratory period a week.
Four credit hours.

402. Contracts and Specifications. Lectures and assigned readings covering the essential elements of contracts, specifications and professional ethics; legal relations, rights and responsibilities of the engineer. Prerequisite: Senior standing. Text: Meade, Contracts, Specifications and Engineering Relations.

Two class periods a week. Two credit hours.

NON-TECHNICAL ELECTIVES FOR JUNIORS AND SENIORS

					1st Semester		2nd Semester	
					Lect.	Lab.	Lect.	Lab.
Mil.	301-302	p.	72	Military Science	3	0	3	0
Mil.	401-402	p.	72	Military Science	3	0	3	0
Ger.	101-102	p.	73	Elementary German	3	0	3	0
Ger.	201-202	p.	74	Intermediate German	3	0	3	0
Ger.	303	p.	74	Scientific German	3	0	....	....
Pol.Sc.	301-302	p.	83	American Government	3	0	3	0
Acct.	203	p.	43	Accounting	....	....	3	0
Eco.	101	p.	55	Economics	3	0	....	....
Soc.	301-302	p.	90	Sociology	3	0	3	0
Phil.	313	p.	78	Scientific Methods	....	....	2	0
Phil.	491	p.	80	Ethics	2	0	....	....
Phil.	492	p.	80	Philosophical Problems	....	....	2	0
Math.	301	p.	70	Differential Equations	3	0	....	....
Math.	302	p.	70	Advanced Calculus	....	....	3	0
Er.Sc.	202	p.	54	Geology	....	....	2	0

TECHNICAL ELECTIVES FOR JUNIORS AND SENIORS

E. E.	413	p.	112	Power Transmission and Distribution	3	0	....	....
E. E.	408	p.	112	Illuminating Engineering	....	....	3	0
E. E.	309	p.	110	Wire Communication	3	0	....	....
E. E.	310	p.	111	Radio Engineering	....	....	3	0
M. E.	412	p.	117	Metallurgy (for non-Mechanicals)	....	....	2	2
M. E.	413	p.	117	Balancing of Engines	1	1	....	....
M. E.	416	p.	117	Vibrations in Mechanisms	....	....	1	1

Seniors are strongly advised to elect Economics and Accounting. German is desirable, and is recommended to Chemical and Civil Engineering students.

DEGREES

Awarded at the Commencement, June 5, 1938

BACHELOR OF ARTS

E. Raymond Arn, Dayton, Ohio
Edward C. Banker, Akron, Ohio
*Robert E. Borchers, Dayton, Ohio
Victor P. Broering, Maria Stein, Ohio
*George M. Early, Dayton, Ohio
Major H. Gott, Cincinnati, Ohio
*Daniel J. Hobbs, Dayton, Ohio
John G. McLaughlin, Middletown, Ohio
Harriet D. Morris, Dayton, Ohio
*William P. O'Connor, Chicago, Illinois
Joseph B. Quatman, Lima, Ohio
Katherine Rice, Dayton, Ohio
Melvyn A. Scott, Dayton, Ohio
William J. Sachs, Dayton, Ohio
Warren E. Slifer, Germantown, Ohio
Adolph J. Tscherne, Toledo, Ohio
Ralph Werner, Dayton, Ohio
*Paul A. Wick, Pittsburgh, Pa.
Joseph S. Zotkiewicz, Dayton, Ohio

BACHELOR OF SCIENCE

Mary T. Braun, Dayton, Ohio
George B. CaJacob, Lima, Ohio
Bernard A. Carlen, Detroit, Mich.
Angelo S. Farruggio, Chicago, Illinois
Benjamin M. Harlan, Dayton, Ohio
George M. Hittle, Jr., Dayton, Ohio
Siegmond L. Kahn, Dayton, Ohio
Louise E. Lehmkuhl, Dayton, Ohio
Howard E. McKnight, Dayton, Ohio
Marguerite M. Parrish, Dayton, Ohio
Ray N. Paul, Dayton, Ohio
Frank K. Pauzar, Dayton, Ohio
Robert F. Pfister, Fairfield, Ohio
Raoul C. Psaki, Forest Hills, N. Y.
Gerald N. Rubin, Dayton, Ohio
Charles C. Strader, Jr., Dayton, Ohio
Charles J. Thill, Dayton, Ohio
Thomas J. Thomas, Dayton, Ohio
Paul B. Vatterott, St. Louis, Missouri

BACHELOR OF SCIENCE IN EDUCATION

Marie H. Andrew, Dayton, Ohio
Mary C. Fitzgerald, Dayton, Ohio
Myron G. Huelsman, Carthagena, Ohio
*Dwight W. Shannon, Dayton, Ohio
Hazel Stokes, Dayton, Ohio
Martha T. Vlerebome, Dayton, Ohio
Martha J. Welhener, Dayton, Ohio

*With Honors.

Sr. Joan Falkenbach, S.N.D., Dayton, Ohio
Sr. Francis Theresa Morris, S.N.D., Dayton, Ohio
Sr. Mary Celestine Landoll, C.PP.S.,
Salem Heights, Dayton, Ohio
Sr. Mary Engelbertha Totten, C.PP.S.,
Salem Heights, Dayton, Ohio

BACHELOR OF SCIENCE IN BUSINESS

Roy J. Boemer, East St. Louis, Illinois
Eugene G. Brands, Wapakoneta, Ohio
Richard K. Bucher, Dayton, Ohio
*Joseph A. Dell, Fostoria, Ohio
Herbert W. Finke, Dayton, Ohio
Paul K. Genung, Dayton, Ohio
Albert H. Griffin, Dayton, Ohio
Edmund J. Gutzwiller, Jr., Cincinnati, Ohio
Richard C. Hempelman, Dayton, Ohio
David F. Israel, Jr., Dayton, Ohio
Pandely Kamtchy, Dayton, Ohio
Henry F. Kirsch, Gibsonburg, Ohio
James A. Kuenle, Dayton, Ohio
Robert E. Mastandrea, Dayton, Ohio
Manuel D. Mayerson, Dayton, Ohio
Richard J. Mikolajewski, Piqua, Ohio
John P. Reis, Belleville, Illinois
Eugene R. Santaella, Santurce, Puerto Rico
*Robert W. Scheu, Dayton, Ohio
Clifford J. Suttmiller, Dayton, Ohio
Bernard J. Tetzlaff, Dayton, Ohio
John J. Wirtz, Columbus, Ohio
George L. Wolf, Akron, Ohio

BACHELOR OF CHEMICAL ENGINEERING

George W. Duell, Dayton, Ohio
Charles H. Gerwels, Jr., Dayton, Ohio
Garland E. Lotz, Dayton, Ohio
Robert M. Schneble, Dayton, Ohio
William M. Steffen, Nashville, Tenn.
Victor C. Walling, Piqua, Ohio
*Victor A. Williamitis, Dayton, Ohio

BACHELOR OF CIVIL ENGINEERING

Robert L. Cotterman, Dayton, Ohio
Robert E. Smith, Dayton, Ohio
John E. Unverferth, Dayton, Ohio

BACHELOR OF ELECTRICAL ENGINEERING

Thomas R. Armstrong, Cincinnati, Ohio
Charles W. Benbow, Dayton, Ohio
Paul J. Heckman, Ottoville, Ohio
Elmer F. Jacobs, Columbus, Ohio
Charles R. Wagner, Cleveland, Ohio

*With Honors.

BACHELOR OF MECHANICAL ENGINEERING

Louis Darbier, Yokohama, Japan
David P. McCrate, Portageville, Missouri
William B. Petkewicz, Dayton, Ohio
Robert H. Unverferth, Dayton, Ohio
William A. Weis, Dayton, Ohio
*With Honors

HONORARY DEGREES

Doctor of Laws—Mr. Franklin H. McNutt, Springfield Ohio

Doctor of Engineering—Mr. James C. Zeder, Detroit, Michigan

GRADUATES OF THE RESERVE OFFICERS TRAINING CORPS.

Commissioned 2nd Lieutenants, Officers Reserve Corps, U.S.A.

Roy J. Boemer
Robert L. Cotterman
George W. Duell
Herbert W. Finke
Charles H. Gerwels
Richard C. Hempelman
Daniel J. Hobbs
Garland E. Lotz
Robert F. Pfister
Robert M. Schneble
John E. Unverferth
Robert H. Unverferth
Charles R. Wagner
Ralph Werner
John J. Wirtz
Joseph S. Zotkiewicz

REGISTER OF STUDENTS IN THE DAY CLASSES

1937-1938

Abrams, Walter.....So. Arts
Ackerland, Gustav J.....
.....Fr. Elect. Eng.
Adams, Isabel C.....Sr. Science
Agnew, Paul J., Jr.....So. Arts
Albrecht, Ernest.....So. Arts
Allen, Robert G.....Fr. Mech. Eng.
Alter, Jack L.....Jr. Science
Amador, Demetrio E.....
.....So. Civil Eng.
Anderson, Richard F.....
.....Jr. Elect. Eng.
Andrasik, Joseph.....Fr. Bus.
Angst, Katherine E.....Fr. Arts
Armstrong, Thomas R.....
.....Sr. Elect. Eng.
Arn, E. Raymond.....Sr. Arts
Arnoldi, Robert P.....Fr. Bus.
Arthur, Thomas T.....Fr. Bus.
Aufderheide, Joseph A.....Fr. Bus.
Aylstock, Grace E.....Jr. Bus.
Bache, Elmer E.....Jr. Arts
Baker, Frank A.....Fr. Mech. Eng.
Baker, Jack R.....Fr. Bus.
Baker, Jacob A.....Jr. Bus.
Banker, Edward C., Jr.....Sr. Arts
Banks, Willard L.....Jr. Arts
Barrett, Christopher S.....
.....So. Elect. Eng.
Baujan, Frank E.....Jr. Arts
Beare, Paul E.....So. Science
Beery, Roland E.....So. Arts
Benbow, Charles W.....
.....Sr. Elect. Eng.
Beringer, William J.....Jr. Arts
Berman, Leo.....So. Bus.
Bernard, Joseph R...Fr. Elect. Eng.
Bersuder, John E...Jr. Chem. Eng.
Bertke, LeRoy R.....Fr. Bus.
Bielman, Roy R.....Fr. Bus.
Biersack, Cletus L.....Fr. Bus.
Bindokas, George W...Jr. Science
Birdsall, Myla.....Fr. Arts
Birmingham, Robert L.....
.....So. Science
Bishop, Edward T.....Jr. Bus.
Bistrek, Helen M.....Unclass.
Bistline, Harold H.....Fr. Bus.
Blake, Belden G.....Fr. Bus.
Bocok, Emil.....Fr. Bus.
Boeckman, Richard J.....So. Bus.
Boemer, Roy J.....Sr. Bus.
Bootes, Donald E.....So. Bus.
Borchers, Edward P.....Fr. Bus.
Borchers, Robert E.....Sr. Arts
Borns, Charles R.....So. Bus.
Borton, Isabel M.....Fr. Arts
Bourgeois, St. M. Audrey..So. Arts
Bowe, Hugh.....Fr. Arts
Boyd, Harold W.....Fr. Bus.
Brands, Eugene B.....Sr. Bus.
Braun, Alma C.....Jr. Science
Braun, Mary T.....Sr. Science
Brennan, John J.....So. Chem. Eng.
Brodbeck, Gerald M.....
.....Fr. Civil Eng.
Brown, Don L.....Fr. Mech. Eng.
Brusman, John J.....Fr. Arts
Buchanan, Dorothy.....Fr. Arts
Bucher, Francis X..Fr. Elect. Eng.
Bucher, Richard K.....Sr. Bus.
Buehler, Henry J...So. Chem. Eng.
Buehrle, William H., Jr...Jr. Bus.
Bunn, Hugh I.....Fr. Bus.
Burger, Julius P.....Fr. Mech. Eng.
Burger, William J., Jr.....
.....So. Elect. Eng.
Burke, Philip B.....Fr. Bus.
Burkhardt, Carl E.....So. Bus.
Burns, John K.....Fr. Mech. Eng.
CaJacobs, George B.....Sr. Science
Carey, Paul E.....Sr. Civil Eng.
Carlen, Bernard A.....Sr. Science
Carley, Arthur W.....Fr. Science
Carlin, Oscar C.....Fr. Bus.
Carne, Hyman J.....Fr. Bus.
Carr, Howard D.....Jr. Arts
Carrigan, Robert E.....So. Bus.
Carroll, John R.....Fr. Bus.
Chabrand, Maury F.....Fr. Bus.
Chalmers, John F.....Fr. Science
Chapin, Norman R.....Fr. Bus.
Chmiel, Henry J.....So. Bus.
Chun, Philip F.....Jr. Science
Clark, Charles V...Fr. Mech. Eng.
Clemens, Louis H.....So. Arts
Clement, Bette.....Special
Coan, Donald J.....Jr. Bus.
Coffman, Marjorie L.....So. Arts
Connare, Kenneth M.....
.....Fr. Chem. Eng.

Connell, Bernard J.....Fr. Chem. Eng.
Connelly, William.....Fr. Bus.
Conners, John S.....Fr. Bus.
Conway, Charles F.....Fr. Bus.
Corcoran, John L.....Fr. Arts
Costell, Carl A.....Fr. Bus.
Cotterman, Earl B.....Jr. Science
Cotterman, Robert L.....Sr. Civil Eng.
Culley, Whelan W.....Fr. Science
Curley, John E., Jr.....Fr. Bus.
Dailey, Adrian C...So. Mech. Eng.
Darbier, Louis.....Sr. Mech. Eng.
Daugherty, Lawrence J...Jr. Bus.
Daughters, Lorraine W...Fr. Arts
Decker, Irene R.....So. Bus.
De Laet, Edward W.....Fr. Elect. Eng.
Dell, Joseph A.....Sr. Bus.
Denlinger, John F.....Fr. Chem. Eng.
Di Piero, Leo Q.....Fr. Elect. Eng.
Dohner, Virginia M.....Jr. Bus.
Dolan, Betty V.....So. Science
Doles, Roland E.....Jr. Bus.
Donley, Leo F.....So. Science
Doonan, George J.....Jr. Bus.
Drake, Robert G.....So. Bus.
Drapp, James E.....Fr. Mech. Eng.
Drouhard, Lawrence A.....So. Bus.
Dryden, Elwood R...Fr.Chem.Eng.
Dudeck, Edward.....Fr. Bus.
Duell, George W...Sr. Chem. Eng.
Duffy, William L.....Fr. Bus.
Dugan, Donald.....Fr. Arts
Dugan, Frank C.....Fr. Arts
Durst, John E.....Fr. Elect. Eng.
Early, George M.....Sr. Arts
Economides, Chrissoula.....Jr. Arts
Edgington, Jean B.....Fr. Bus.
Egan, William A...Fr. Chem. Eng.
Egger, Richard J...So. Elect. Eng.
Eiben, Adolph J.....Fr. Mech. Eng.
Eilers, Joseph J., Jr.....So. Bus.
Emrick, Don E.....Jr. Science
Enders, Henry H.....Jr. Bus.
Englert, Norman M.....Fr. Bus.
Ewell, Eugene R.....Special
Farber, Leo J.....Fr. Bus.
Farruggio, Angelo S...Sr. Science
Fella, Anna L.....Fr. Arts
Ferron, John J.....Jr. Science
Ferron, William O.....Fr. Chem. Eng.
Fiel, Katherine E.....Jr. Arts
Finch, Robert W.....Fr. Arts
Fine, Russell L.....Fr. Elect. Eng.
Fink, Lawrence D...So. Chem. Eng.
Finke, Herbert W.....Sr. Bus.
Finke, Virginia.....So. Bus.
Fitz, Raymond L...Jr. Chem. Eng.
Fitzharris, Leo J...So. Chem. Eng.
Fitzpatrick, Gibbons E.....Fr. Bus.
Fitzpatrick, William A., Jr.....Jr. Science
Flagel, George.....Jr. Bus.
Flanagan, William F.....Jr. Chem. Eng.
Fletcher, Richard W.....So. Elect. Eng.
Flynn, John M., Jr.....Fr. Chem. Eng.
Focks, Bernard J.....So. Arts
Foley, Thomas R...So. Mech. Eng.
Forsthoff, Joseph F.....So. Civil Eng.
Fortman, Norbert J.....So. Bus.
Fraher, James W.....Fr. Bus.
Frame, Marion S...Fr. Chem. Eng.
French, Cletus J.....Jr. Arts
Freysinger, Mary Ann....Fr. Arts
Friehs, Curt G.....Fr. Chem. Eng.
Funk, Daniel F.....Fr. Bus.
Furst, Anthony.....So. Bus.
Gatterdam, Richard P.....Fr. Mech. Eng.
Gaylord, David T.....Fr. Civil Eng.
Gebhart, Earl E.....Jr. Arts
Gelofcsak, George A.....Jr. Mech. Eng.
Geng, Steve J.....Jr. Bus.
Genung, Paul K.....Sr. Bus.
George, Frederick J.....Jr. Science
George, Myriam .....Special
Gershow, Jack.....So. Bus.
Gerson, Perry L.....Fr. Arts
Gerwe, Edward A.....Jr. Science
Gerwels, Charles H., Jr.....Sr. Chem. Eng.
Giambrone, Lester S.....Jr. Arts
Gibbons, James C.....So. Bus.
Gibson, James J.....Fr. Science
Gillen, George J.....Fr. Science
Glaser, Joseph C.....Special
Glemet, John F.....Fr. Arts
Glick, Thomas H.....So. Bus.
Glossinger, Matthew W.....So. Elect. Eng.
Goeke, Rufus A.....Fr. Mech. Eng.
Gogolach, Stephen A...Jr. Science

Goldkamp, Louis E.....Fr. Chem. Eng.
Gorbea, Juan L.....Fr. Science
Goss, Ray.....Jr. Arts
Gott, Major H.....Sr. Arts
Gray, William.....Sr. Science
Graziano, Mary A.....Jr. Bus.
Greenwald, Lester C.....Fr. Chem. Eng.
Gregoric, Albert L.....Fr. Chem. Eng.
Gregory, John G.....So. Bus.
Griffin, Albert H.....Sr. Bus.
Grimes, David L.....Jr. Mech. Eng.
Groos, John L.....Fr. Civil Eng.
Guensche, William J.....Fr. Mech. Eng.
Gurevitz, Marian.....Jr. Arts
Gurren, Sr. M. Palmarita.....Jr. Science
Gutzwiller, Edmund J. Jr.....Sr. Bus.
Hacker, John J.....Jr. Bus.
Hall, Richard.....Fr. Bus.
Hall, Robert J.....Fr. Science
Harig, Frank E.....So. Civil Eng.
Harig, Richard P...So. Civil Eng.
Harlan, Benjamin M.....Sr. Science
Harroll, Theodore F.....So. Bus.
Hartman, Paul H.....Jr. Bus.
Hayes, Charles C...So. Mech. Eng.
Hayes, Robert E.....Fr. Bus.
Heckman, Paul J...Sr. Elect. Eng.
Heet, Donald G.....Fr. Bus.
Heitz, Dorothy L.....Special
Hempelman, Edward C.....Jr. Bus.
Hempleman, Richard Sr. Science
Hendrichs, Charles G.....Fr. Bus.
Hendricks, Earl R.....Fr. Arts
Henke, Lawrence W.....Fr. Bus.
Hermetz, Rose.....Special
Hernandez, Jose A.....So. Mech. Eng.
Hernandez, Luis G.....Fr. Science
Herold, Kaye.....So. Arts
Herzog, William A.....So. Arts
Hettinger, J. Joseph.....So. Mech. Eng.
Hickey, Edward B.....Fr. Science
Hiehle, William.....Jr. Bus.
Higgins, John P.....Fr. Bus.
Hill, A. Lowell, Jr...So. Mech. Eng.
Hill, William C.....So. Civil Eng.
Hiney, James P.....Fr. Bus.
Hobbs, Daniel J.....Sr. Arts
Hochwalt, Constance M...So. Arts
Hoefler, Paul L.....So. Bus.
Hoegler, Albert J.....Fr. Bus.
Hoelzer, Norman F.....So. Arts
Hollencamp, Henry N.....So. Arts
Hollenkamp, Bernard F.....Fr. Chem. Eng.
Hollenkamp, Joseph G.....Fr. Bus.
Hoover, Robert B...Fr. Mech. Eng.
Hoppa, Charles B...So. Elect. Eng.
Hoskinson, Glen G.....Fr. Science
Houghton, Philip W.....Fr. Elect. Eng.
Houser, Max M.....Jr. Arts
Howe, Richard F.....Fr. Arts
Hubbuch, Nicholas J.....So. Mech. Eng.
Huelsman, Myron G.....Sr. Education
Humm, George W.....So. Arts
Humm, John J.....Fr. Elect. Eng.
Hummert, Richard E.....Fr. Arts
Humpert, Paul A.....Fr. Bus.
Ingells, Douglas J.....Special
Israel, Betty J.....Fr. Arts
Israel, David F.....Sr. Bus.
Jackson, Charles H.....Fr. Elec. Eng.
Jackson, Jay E.....Fr. Bus.
Jacobs, Elmer F...Sr. Elect. Eng.
Jacobs, Harry J.....Jr. Science
Jaffe, Judah M.....Fr. Science
Jergens, Margaret M.....Fr. Arts
Jerina, Harry B.....Fr. Bus.
Jimenez, Frank.....Fr. Science
Jones, Robert Q.....Fr. Science
Jurgens, Robert B.....Fr. Bus.
Jurgens, Thomas.....Fr. Bus.
Kahn, Raymond M.....So. Science
Kahn, Siegmond L.....Sr. Science
Kaiser, Robert B...So. Chem. Eng.
Kamtchy, Pandley.....Sr. Bus.
Kappeler, Warren C.....Fr. Arts
Keeshan, John J.....So. Arts
Keiter, Martin E.....Fr. Science
Kelleher, Timothy P.....Fr. Mech. Eng.
Kelly, Mary F.....So. Bus.
Kelly, William P.....Jr. Bus
Kennedy, Francis S.....So. Bus.
Kerezsi, Michael A.....So. Mech. Eng.
Kern, Ervine L.....Fr. Arts
Kerns, Charles R.....Fr. Bus.
Kershner, Richard G.....Fr. Arts
Kersting, Donald A., Jr.....Jr. Bus.

Kersting, Eugene L.....Fr. Bus.
Keyes, Philip G.....Fr. Arts
Kiefer, Russell A., Jr.....
.....So. Mech. Eng.
Kilcullen, John M.....Fr. Science
Kingston, Edward J.....Special
Kinney, William E.....
.....So. Chem. Eng.
Kipner, Morris H.....Fr. Arts
Kirby, Charles V.....Fr. Arts
Kirchmer, Jack T.....
.....Fr. Chem. Eng.
Kirsch, Henry F.....Sr. Bus.
Kissell, Francis E.....So. Bus.
Klepacz, Walter A.....Jr. Bus.
Klosterman, Elmer.....Jr. Science
Knorr, Lawrence F.....So. Bus.
Koch, Wendell R.....Special
Kochendorfer, John S...So. Science
Koenig, Nicholas F.....Jr. Science
Koerner, George A.....Fr. Bus.
Kolker, Sr. M. Delphine..So. Arts
Kosta, James P.....Special
Koverman, Mary J.....Jr. Science
Kroemer, Karl F...So. Elect. Eng.
Kroger, Claude O.....Fr. Bus.
Kroger, Oscar G...Fr. Chem. Eng.
Kroger, William H...Jr. Elect. Eng.
Krumhansl, James A.....
.....Jr. Elect. Eng.
Kuenle, James A.....Sr. Bus.
Kuhlman, Ellsworth V.....
.....Fr. Science
Kuhn, John J.....So. Bus.
Kunkler, Rose E.....Fr. Arts
Kuntz, Marianna.....Jr. Arts
Lacey, Norman L.....Fr. Bus.
Lansdowne, Howard J.....Fr. Bus.
Lasar, Frank J.....Jr. Civil Eng.
Laukhart, Therese A.....Special
Lawlor, Kenneth F.....Fr. Arts
Lee, Alberta.....Special
Lee, Frederick H.....Jr. Science
Lee, George W.....Fr. Mech. Eng.
Lehman, C. Virginia.....Jr. Arts
Leies, Gerard M.....So. Science
Lemming, John S.....So. Bus.
Leonard, James M.....
.....So. Mech. Eng.
Leonard, Joseph H.....
.....Fr. Chem. Eng.
Leugers, William H.....
.....Fr. Chem. Eng.
Levy, Carla L.....So. Bus.
Lewis, Carl G.....Fr. Civil Eng.
Leyes, Charles J.....Fr. Bus.
Lindauer, Richard B.....
.....Fr. Chem. Eng.
Litkowski, Charles J.....So. Arts
Litteken, Mark F...Fr. Chem. Eng.
Loges, Kramer G.....Fr. Bus.
Lohrey, Ralph C.....Jr. Science
Longfellow, L. Richard.....
.....Fr. Science
Lorenz, Herman A.....
.....Jr. Mech. Eng.
Losh, Miriam E.....Fr. Arts
Lott, George R.....So. Bus.
Lotz, Garland E.....Sr. Chem. Eng.
Lusch, John W.....So. Mech. Eng.
Maher, Thomas E.....Jr. Bus.
Makley, Torrence A.....So. Science
Malloy, Donald J.....Jr. Arts
Malloy, Edward Q.....Special
Mangan, Howard F.....So. Arts
Mannig, Thomas P.....Jr. Arts
Manny, Martha R.....Fr. Bus.
Markey, John J.....Fr. Arts
Marre, Edward J.....So. Civil Eng.
Martin, James F.....Jr. Arts
Martin, Joseph F.....Jr. Bus.
Mastandrea, Robert E.....Sr. Bus.
Matusoff, Irwin....Fr. Chem. Eng.
May, Francis V.....Fr. Bus.
May, Raymond E.....Jr. Bus.
Mayerson, Manuel D.....Sr. Bus.
McBridge, Charles J.....Fr. Engin.
McClellan, Frances C.....Special
McClusky, Louis L.....So. Bus.
McClusky, Richard J.....Sr. Bus.
McConnaughey, David C...Jr. Bus.
McCrate, David P...Sr. Mech. Eng.
McDonald, William E.....
.....Fr. Mech. Eng.
McDonnough, Coleman....Jr. Bus.
McFarland, Charles M.....
.....Fr. Chem. Eng.
McKirnan, Robert R...Fr. Science
McLaughlin, Jeanne.....Fr. Arts
McLaughlin, John G.....Sr. Arts
McLaughlin, Paul J.....Fr. Science
McNamara, Robert W.....So. Arts
Mendes, Melvin T.....Fr. Science
Meng, Raymond A.....Fr. Science
Mess, Margaret A.....Fr. Arts
Messham, Richard H.....Fr. Arts
Mestemaker, Robert.....Fr. Engin.
Metzler, Robert A...So. Mech. Eng.
Michael, William A.....Jr. Arts
Millonig, Arthur F.....So. Science
Mittenberger, Betty J.....Jr. Arts
Moore, William P...Fr. Mech. Eng.

Moore, Wilma M.....So. Arts
Moran, Robert P.....Jr. Elect. Eng.
Moran, William B...Fr. Elect. Eng.
Morkoetter, Sr. M. Bathildis.....
.....Sr. Arts
Moritz, Martin F.....Fr. Bus.
Morris, Harriet.....Sr. Arts
Mueller, Melvin J...So. Mech. Eng.
Mulcahy, Lawrence R.....Fr. Bus.
Mullen, Howard A...Jr. Mech. Eng.
Mulligan, Thomas F.....So. Bus
Murphy, Frank X...So. Elect. Eng.
Murray, Thamas J...Jr. Elect. Eng.
Myers, Mary E.....Fr. Bus.
Myers, Roland W.....Jr. Arts
Myrick, George W.....
.....Jr. Chem. Eng.
Nash, D. James.....So. Civil Eng.
Nakao, Ambrose.....Jr. Arts
Nellis, Melvin A...Fr. Chem. Eng.
Newsock, John I.....Jr. Bus.
Nicol, Jack T.....So. Mech. Eng.
Nierberlein, Vernon A.....
.....Jr. Chem. Eng.
Niehaus, Ralph H.....Jr. Arts
Nolan, Nicholas F., Jr.....So. Arts
Nosil, Anthony W., Jr.....
.....So. Mech. Eng.
Nowak, Lorraine.....So. Science
Obee, Duncan L.....Fr. Bus.
O'Connor, William P.....Sr. Arts
O'Grady, John R.....Fr. Bus.
Ohata, Seiya.....Jr. Science
Olazagasti, Ignacio.....
.....Fr. Mech. Eng.
Olazagasti, Juan.....Fr. Engin.
Olcott, Eugene D.....Fr. Science
Olcott, James D.....Jr. Mech. Eng.
Olejnyik, Joseph B...Jr. Mech. Eng.
Oswald, Muriel R.....Fr. Arts
O'Toole, Elward J...So. Mech. Eng.
Overman, Guy R.....Special
Padley, John J.....So. Bus.
Palmer, Janet E.....Special
Paluzzi, Joseph B.....Fr. Arts
Parrish, Marguerite M.....
.....Sr. Science
Paul, William.....So. Science
Pauzar, Pauline M.....Fr. Arts
Pequignot, James E.....So. Bus.
Perez, Hector.....Fr. Bus.
Pernush, Valentine J.....Fr. Bus.
Petkewicz, William B.....
.....Sr. Mech. Eng.
Pfister, Robert F.....Sr. Science
Pflum, James F...Jr. Chem. Eng.
Pickrel, Richard G.....Fr. Science
Placke, Eugene W.....
.....Fr. Chem. Eng.
Plappert, Elma R.....Fr. Bus.
Poeppelmeier, Vincent E.....
.....Fr. Engin.
Powers, Edmund R.....Fr. Bus.
Psaki, F. Jerry.....So. Arts
Psaki, Nicholas N.....Fr. Arts
Psaki, Raoul C.....Sr. Science
Purviance, Stanley W.....
.....So. Mech. Eng.
Quatman, George W.....Fr. Arts
Quatman, Joseph B.....Sr. Arts
Quatman, Philip A.....Jr. Arts
Rab, Thomas P.....Jr. Science
Rado, Paul J.....Jr. Arts
Ramos, Florentino A...Fr. Science
Redding, Herbert J.....
.....Fr. Civil Eng.
Reeb, Andrew J...Fr. Elect. Eng.
Reeves, John P.....So. Bus.
Reiling, Thomas L.....
.....Jr. Chem. Eng.
Reilly, Brendan J...Jr. Chem. Eng.
Reis, John P.....Sr. Bus.
Reis, Paul J.....Fr. Bus.
Rex, Martin A.....So. Engin.
Reynolds, Melvin L.....Fr. Science
Richart, June L.....So. Arts
Riedel, Robert M.....So. Bus.
Ritter, John H.....Jr. Chem. Eng.
Roelker, Sr. M. Raphaelis.....
.....Jr. Science
Roessler, Christopher H.....
.....Fr. Mech. Eng.
Rosato, Albert J.....So. Bus.
Rosencrans, William R.....Fr. Bus.
Rotgeri, Sr. M. Manegildis.....
.....So. Science
Rothberg, Rose D.....Fr. Arts
Rubin, Gerald N.....Sr. Science
Rudzienski, Alex A.....Jr. Bus.
Ruh, Carl J.....So. Bus.
Rumig, John J.....Fr. Bus.
Rupert, Oscar M.....Jr. Elect. Eng.
Rush, Anthony P.....So. Science
Russell, Raymond W.....
.....So. Civil Eng.
Ryan, Thomas H.....Fr. Arts
Ryan, Thomas P.....Jr. Mech. Eng.
Sabrey, Robert C.....Fr. Science
Sachs, Isabel F.....Jr. Arts
Sachs, William J.....Sr. Arts
Sajovitz, William N.....Fr. Arts
Samu, Joseph J.....Fr. Bus.

Samuels, Martin E.....Jr. Chem. Eng.
Santaella, Eugene R.....Sr. Bus.
Saunders, Frank B.....So. Mech. Eng.
Saurine, Charles E.....So. Bus.
Scharf, Henry W...So. Chem. Eng.
Schendelman, Charles G.....Fr. Science
Scheu, Robert W.....Sr. Bus.
Schlattman, Russell H.....Fr. Mech. Eng.
Schmitt, Francis J.....So. Mech. Eng.
Schneble, Anthony J.....Fr. Elect. Eng.
Schneble, Richard J.....Fr. Science
Schneble, Robert M.....Sr. Chem.. Eng.
Schneble, William A.....Jr. Chem. Eng.
Scholz, Robert F.....So. Bus.
Schramm, Stuart E.....Fr. Elect. Eng.
Schreiber, Karl F...So. Chem. Eng.
Schroeder, William M.....Jr. Mech. Eng.
Schulman, William B.....Special
Schultz, Stanley R.....So. Science
Schwering, James L.....Jr. Chem. Eng.
Scott, Blaz Y.....So. Elect. Eng.
Scott, Melvyn A.....Sr. Arts
Selender, Sam.....Special
Servaites, John J.....Jr. Bus.
Shafer, Ivan B.....Fr. Science
Shannon, Dwight W.....Sr. Arts
Shannon, J. Robert.....So. Chem. Eng.
Sharkey, Mary G.....So. Arts
Sharpe, Ernest.....So. Bus.
Shearer, Dalton H.....Fr. Bus.
Sheeran, Donald E.....Jr. Bus.
Sheridan, Joan.....Special
Sherman, John N.....So. Bus.
Sherman, William P.....Fr. Bus.
Shimanek, Joseph M.....Fr. Elect. Eng.
Shroyer, Robert.....So. Bus.
Shultz, Robert.....Fr. Chem. Eng.
Siewe, Al G.....Fr. Bus.
Simmons, Edward C.....So. Mech. Eng.
Simmons, Francis X.....Jr. Science
Simmons, Samuel.....Fr. Bus.
Simmons, Louis R.....Fr. Bus.
Skapik, Richard L.....Fr. Arts
Smith, Elizabeth L.....Fr. Arts
Smith, Elmer F.....Fr. Elect. Eng.
Smith, Glen.....Special
Smith, Hugh M.....Fr. Civil Eng.
Smith, Marvin B.....So. Bus.
Smith, Mary E.....Jr. Bus.
Smith, R. Kenneth..So. Civil Eng.
Smith, Richard T.....So. Bus.
Smith, Robert E.....Sr. Civil Eng.
Smith, William H.....Fr. Bus.
Smolka, Glenn J.....Sr. Arts
Snapp, Patricia J.....Fr. Arts
Sommers, Frederic D.....Fr. Bus.
Spatz, Henry J.....Jr. Bus.
Spegele, Ernest A.....So. Bus.
Spitler, Marijane T.....Jr. Science
Sprauer, Anthony E.....Jr. Bus.
Sprinkle, Eugene R.....So. Mech. Eng.
Sroka, Adolph A...Fr. Chem. Eng.
Stang, Bernard P.....So. Bus.
Stapenhorst, Jean C.....So. Bus.
Steffen, Walter C.....Jr. Arts
Steffen, William M.....Sr. Chem. Eng.
Stoecklein, Joseph D...Fr. Science
Stoecklein, Robert J.....Jr. Arts
Stoecklein, Virginia.....Jr. Arts
Stolz, John E.....So. Bus.
Strain, Venita M.....So. Arts
Strasser, Robert A.....So. Elect. Eng.
Struck, Katherine.....Jr. Arts
Sullivan, Gilbert F.....Fr. Bus.
Sullivan, Michael T.....Jr. Civil Eng.
Sultenfuss, John H.....So. Civil Eng.
Suttmann, Alois T.....Fr. Arts
Suttmiller, Alvin H.....Fr. Bus.
Suttmiller, Clifford J.....Sr. Bus.
Swartz, Walter L.....Fr. Bus.
Swindler, Harry E.....Fr. Bus.
Tanis, Charles.....So. Chem. Eng.
Taylor, Mary.....Special
Tetzlaff, Bernard J.....Sr. Bus.
Thomas, Harold F.....Special
Thomas, Howard B.....Sr. Bus.
Thomas, Joseph F.....So. Arts
Thompson, Edwin G.....So. Mech. Eng.
Titsch, Gilbert.....So. Bus.
Tolson, John.....Fr. Bus.
Tom, Richard K.....Jr. Civil Eng.
Tonnous, Thomas S.....Jr. Science

Torpey, John W.....Jr. Bus.
Towne, Joseph, Jr.....Fr. Bus.
Towne, Mary.....Fr. Science
Tranter, Charles J.....Fr. Bus.
Trost, Norman F...Jr. Mech. Eng.
Trupp, Mary E.....So. Bus.
Tsai, Bartholomew H.....
.....Fr. Mech. Eng.
Tscherne, Adolph J.....Sr. Arts
Tubman, William A.....
.....Fr. Mech. Eng.
Ullrich, Emerson H.....Jr. Bus.
Unger, Paul E.....Fr. Mech. Eng.
Unverferth, Harold S.....Jr. Bus.
Unverferth, John E.....
.....Sr. Civil Eng.
Unverferth, Robert H.....
.....Sr. Mech. Eng.
Van Hausen, Richard J.....
.....Fr. Chem. Eng.
Van Horn, Robert K.....
.....Fr. Mech. Eng.
Varley, Joseph J.....Jr. Science
Vogel, Paul A.....Fr. Science
Voit, Caspar M.....Jr. Bus.
Waag, Donald H.....Jr. Science
Wagner, Charles R.....
.....Sr. Elect. Eng.
Wagner, Paul A.....Jr. Elect. Eng.
Wagner, Rosanna E.....So. Arts
Walling, Victor C...Sr. Chem. Eng.
Walter, Robert L.....Fr. Bus.
Walther, Jacob D...Fr. Chem. Eng.
Warner, Daniel T.....Fr. Bus.
Warner, Roger M...Jr. Elect. Eng.
Watts, G. William.....Fr. Arts
Weber, Albert R.....Fr. Science
Weber, Paul F.....Fr. Bus.
Weckesser, Julia A.....Jr. Arts
Wehner, Paul J.....Fr. Science
Weis, William A.....Fr. Bus.
Welhener, Carl F.....Fr. Bus.
Welhener, Martha J.....Sr. Arts
Welter, Carl T.....Jr. Bus.
Werner, Ralph.....Sr. Arts
Westendorf, Eugene U.....
.....Fr. Mech. Eng.
White, Joseph D.....Jr. Arts
Wick, Paul A.....Sr. Arts
Widmont, Joseph C., Jr.....
.....Fr. Mech. Eng.
Wilcox, John A.....So. Science
Wiley, Earl T.....So. Mech. Eng.
Wilke, Charles R...So. Chem. Eng.
Williamitis, Victor A.....
.....Sr. Chem. Eng.
Williams, Harold L.....So. Bus.
Willoughby, Edward O.....
.....Jr. Science
Willoughby, William H.....
.....Fr. Science
Wilson, Betty H.....Fr. Arts
Winkeljohn, Sr. M. Irenaea.....
.....Jr. Science
Winkeljohn, Walter H.....So. Bus.
Winstel, Henry P...Fr. Elect. Eng.
Winter, James F.....Fr. Bus.
Winter, Tyrus D.....Jr. Science
Wirtz, John J.....Sr. Bus.
Wohlschlaeger, Joseph A.....
.....Fr. Civil Eng.
Wolf, Charles G.....So. Bus.
Wolf, George L.....Sr. Bus.
Wolff, Grace D.....Special
Wong, Henry M.....Sr. Mech. Eng.
Woodburn, Harry C.....
.....So. Chem. Eng.
Wool, Max L.....Fr. Science
Wright, Loren J.....Fr. Arts
Wurstner, Shirley K.....So. Arts
Wyse, Harold.....Fr. Science
Yohey, Gerald F.....So. Arts
Young, Clem J.....Fr. Mech. Eng.
Young, Edwin L.....Jr. Science
Zahn, George A.....Jr. Elect. Eng.
Zarka, John S.....Jr. Arts
Zidanavich, Albert T.....Fr. Bus.
Ziegler, Ramon D...So. Civil Eng.
Ziegler, Robert W.....
.....Fr. Chem. Eng.
Zink, Otto A., Jr.....Jr. Arts
Zonars, Theodora.....Fr. Bus.
Zotkiewicz, Joseph S.....Sr. Arts
Zwiesler, Charles J.....Fr. Arts

Bro James Bennett
Bro Michael Bobal
Bro Wm Bush
Bro Geo Dobe
Bro Al. Doyle
Bro L. Dreffner
Fr Henry Fritz
Fr Henry Kobe
Bro Geo Ley
Bro Wm Ley
Bro Alf Lonsing
Bro Pet. Michels

Bro Paul Omler ✓
Bro Andrew Orshell
Bro Fr. Patsak
Bro Louis Shott
Bro Jos Seubert
Bro Leo Verhoeven