

# *Calvin College*

An Institution of the Christian Reformed Church

**YEARBOOK  
1948 - 1949**



**Announcements for 1949-1950**

**GRAND RAPIDS, MICHIGAN**

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## HOW TO ADDRESS CORRESPONDENCE

All correspondence should be sent to Calvin College, Grand Rapids, Michigan. In sending correspondence, the specific addresses given below should be used:

Regarding admission and graduation requirements, address the Dean.

Regarding records, transcripts, requests for literature, address the Registrar.

Regarding boarding or rooming places for girls, work for girl students, address the Dean of Women.

Regarding boarding or rooming places for men, address the Committee on Dormitory and Boarding Places.

Regarding teaching positions after graduation, address the Placement Bureau.

Regarding alumni matters, address the Secretary of the Alumni Association.

All checks should be made payable and correspondence concerning them sent to the Treasurer, Calvin College.

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## CALENDAR

1949

### General Session 1949 - 1950

Beginning of first semester and enrolment .....	September 7
Opening exercises.....	September 14
Re-examinations .....	September 12-13
Thanksgiving recess .....	November 24-27
Christmas vacation begins.....	December 21, 12:00 Noon

1950

Christmas vacation ends.....	January 5, 7:50 A. M.
Final examinations .....	January 16
First semester closes.....	January 24
Registration for the second semester.....	January 25-28
Meeting of Board of Trustees.....	In February
Spring vacation begins.....	March 25, 12:00 Noon
Spring vacation ends.....	April 4, 7:00 A. M.
Re-examinations .....	April 7-8
Final examinations .....	May 22-31
Commencement .....	June 2

### Summer Session

Enrolment .....	June 15, 9:00 A. M.
Classes begin .....	June 19
Independence Day recess.....	July 4
Summer session closes .....	July 28

### General Session 1950 - 1951

Beginning of first semester and enrolment .....	September 6
Opening exercises.....	September 13
Re-examinations .....	September 11, 12

## BOARD OF TRUSTEES

### OFFICERS

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THE REV. EDWARD J. TANIS.....	Vice-President
THE REV. RICHARD J. FRENS.....	Secretary
DR. JACOB T. HOOGSTRA.....	Assistant Secretary

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The Rev. James Putt, S.T.D.....	Fulton, Illinois (Classis Chicago, North)
The Rev. Gerrit Hoeksema.....	Chicago, Illinois (Classis Chicago, South)
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The Rev. Martin Monsma.....	Grand Rapids, Michigan (Classis Grand Rapids, South)
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The Rev. William Haverkamp.....	Paterson, New Jersey (Classis Hackensack)
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The Rev. Edward B. Pekelder.....	Kalamazoo, Michigan (Classis Kalamazoo)
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The Rev. John Geels.....	Sully, Iowa (Classis Pella)
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The Rev. Edward Joling.....	Kenosha, Wisconsin (Classis Wisconsin)
The Rev. Jacob H. Bruinooge, Th.D.....	Zeeland, Michigan (Classis Zeeland)
Mr. Herman Elenbaas.....	Lynden, Washington
Mr. John Hamersma.....	Paterson, New Jersey
Mr. John Hekman.....	Grand Rapids, Michigan
Mr. Henry Holtvluwer.....	Grand Rapids, Michigan

Mr. Anthony Meeter.....Lansing, Illinois  
 Mr. Tony Noordewier.....Grand Rapids, Michigan  
 Mr. Theunis Ribbens.....Sheboygan, Wisconsin  
 Dr. John A. Van Bruggen.....Grand Rapids, Michigan  
 Mr. Stanley Vander Ploeg.....Sioux Falls, South Dakota

### EXECUTIVE COMMITTEE

1949 - 1950

Rev. Gerrit Hoeksema, Chairman  
 Rev. Edward J. Tanis, Vice-President  
 Rev. Richard J. Frens, Secretary  
 Dr. J. H. Bruinooge  
 Mr. John Hekman  
 Mr. Henry Holtvliwer

Dr. Jacob T. Hoogstra  
 Rev. Nicholas J. Monsma  
 Mr. Tony Noordewier  
 Rev. E. B. Pekelder  
 Mr. Theunis Ribbens  
 Dr. John A. Van Bruggen

Mr. Tony Noordewier, Treasurer.....855 Kalamazoo Ave., S.E.  
 Mr. Henry J. Voss, Assistant Treasurer.....1117 Neland Ave., S.E.  
 Rev. Arnold Brink, Educational Secretary.....557 Glenwood Ave., S.E.

### ADMINISTRATION

Henry Schultze, A.B., B.D.....President  
 Henry J. Ryskamp, Ph.D.....Dean of the College  
 Harry G. Dekker, M.S.....Registrar  
 Catherine Van Opynen, A.M.....Dean of Women  
 Lambert J. Flokstra, Ph.D.....Director of Teacher Placement

### LIBRARY

Josephine Baker, A.M., A.M.L.S.....Librarian  
 Mrs. Carol Van Drunen, Willemina Twilight.....Assistants in the Library

### OFFICE AND BOOKSTORE

Caroline Veen.....Secretary to the President  
 Lena Bossenbroek.....Office Secretary  
 Connie Kossen, Adeline Veen, Marilyn Zwier.....Office Clerks  
 Gertrude De Boer.....Clerk, Treasurer's Office  
 Ruth Imanse.....Alumni Secretary and Bookstore Manager  
 Mrs. Wilma Westra.....Assistant in the Bookstore  
 Tillie Roeters.....Secretary, Field Representative

### HEALTH

William H. Vander Ploeg, M.D.....1209 Kalamazoo Ave., S.E. 5-3962

### MAINTENANCE AND HOUSING

Henry Keegstra.....Custodian  
 Mr. and Mrs. M. Schreur.....Dietitians, Calvin Dormitory  
 Mrs. Anna Dolfin.....Housemother, Calvin Dormitory  
 Miss Jessie Bylsma.....Housemother, Calvin Hall  
 Mrs. Cora Hazebrook.....Housemother, 1342 Franklin St., S.E.  
 Mrs. A. Prince.....Housemother, 1338 Franklin St., S.E.

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\* Will begin teaching second semester, 1949-50.

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### Committees of the Faculty

1949-1950

ATHLETICS—De Vries, Bult, Tuls, Timmerman, Buter, Bouma.

BOARDING PLACES AND DORMITORY—Wassink, Muyskens, Drost, Slingerland, Van Til, Daling, Van Opynen, Bengelink.

BOOKSTORE—Monsma, Karsten, Drost, Wyngaarden.

DISCIPLINE—Hoekstra, H. Stob, Spoelhof, Van Opynen, Monsma, De Beer.

EDUCATIONAL POLICY—Ryskamp, Dekker, Jellema, Flokstra, Zylstra, R. Stob, Van Haitsma, Hoekstra.

LIBRARY—Zylstra, Strikwerda, Dirkse, Jellema, Radius.

PLACEMENT BUREAU—Flokstra, Van Zyl, Jaarsma, De Boer.

PUBLICATIONS—Radius, Timmerman, Fridsma, De Koster.

RADIO—De Koster, Bratt, De Jonge, Boersma.

RECREATION—Monsma, Buter, Bruinsma, Slingerland, Vande Kieft.

RELIGIOUS AND SOCIAL ACTIVITIES—Meeter, Van Andel, Swets, Strikwerda, Bratt, Jaarsma, Slingerland, Van Opynen.

SCHOLARSHIP AND GUIDANCE—Dekker, Ryskamp, Radius, R. Stob, Van Opynen, Meeter, Van Til.

### Divisional and Departmental Organization

FOR the purpose of integrating the work of the various departments *within* a division and the work of the division with the broader educational objectives of the school as a whole, the various courses and departments are grouped under four large divisions as follows:

1. Division of Bible, Philosophy, Education and Psychology.
  - (a) Department of Bible
  - (b) Department of Philosophy
  - (c) Department of Education
  - (d) Department of Physical Culture
  - (e) Department of Psychology
2. Division of Languages, Literatures and Arts.
  - (a) Department of Classical Languages
  - (b) Department of English
  - (c) Department of Modern Languages
  - (d) Department of Art
  - (e) Department of Music
  - (f) Department of Speech
3. Division of Natural Science and Mathematics.
  - (a) Department of Biology
  - (b) Department of Chemistry
  - (c) Department of Mathematics
  - (d) Department of Physics and Engineering
4. Division of Social Science.
  - (a) Department of Economics and Sociology
  - (b) Department of History and Political Science

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## Aim

CALVIN COLLEGE is an institution that exists under the auspices of the Christian Reformed Church in America. Its origin can be traced back to 1876 when the church organized a school for the training of ministers of the gospel, which at first devoted four years to literary and two years to theological study. This school gradually grew into a fully accredited liberal arts college and into a fully accredited theological seminary.

According to the constitution all instruction given must be in harmony with Reformed truth. The various branches of study, therefore, are considered from the standpoint of faith and in the light of Calvinism as a life and world view. The aim of the college is to give young people an education that is Christian, in the larger and deeper sense that all the class work, all the students' intellectual, emotional, and imaginative activities shall be permeated with the spirit and teaching of Christianity.

It is, furthermore, the aim of Calvin College to maintain standards of sound scholarship. In recognition of this aim the college is fully accredited by the North Central Association of Colleges and Secondary Schools and by the State Education Department of the State of New York, and is a member of the Association of American Colleges.

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## ADMISSION

ALL APPLICATIONS for admission should be made to the Dean at least a month before the date of opening. Since all applications must be made on the forms provided by the college, the applicant should send for these early. The forms referred to include:

- (a) Personal application
- (b) Transcript of high school record
- (c) Recommendation of pastor
- (d) Health record

One who intends to study for the ministry must present a recommendation from his consistory endorsing him for the ministry.

Those seeking admission at the beginning of the second semester should apply, if possible, a month before the semester opens.

Students whose residences are too far distant from Grand Rapids to permit them to attend church services at home are expected to transfer their membership to local churches of their own choice.

### Freshman Standing

STUDENTS will be admitted to Freshman standing by plan A, B, or C.

#### PLAN A.

1. The applicant for admission must submit a certificate from an accredited school.

2. Amount of work. This certificate must testify to the satisfactory completion of fifteen units of work. By a unit of work is meant the equivalent of five recitations a week for thirty-six weeks in one branch of study.

3. Prescribed work. The fifteen units required for admission must include four sequences, two major sequences and two minor sequences, selected from the five groups listed below. A major sequence consists of a minimum of three units, a minor sequence of a minimum of two units.

#### I. ENGLISH

A major sequence of at least 3 units is required..... 3

II. One major sequence (3 units) and two minor sequences (2 units each) are to be chosen from Groups A, B, C, D. Two sequences may be chosen from Group A but only one from Groups B, C, D..... 7

**A. FOREIGN LANGUAGE GROUP**

A sequence consists of work in a single language, not in the combination of two languages. The foreign languages acceptable are: Greek, Latin, French, German, Spanish, and Dutch ..... 0, 2, 3

**B. MATHEMATICS-PHYSICS GROUP**

A minor sequence in this group must include 1 unit of algebra and 1 unit of plane geometry. A major sequence is formed by adding to this minor sequence 1 or more units from the following:

Adv. algebra..... $\frac{1}{2}$ or 1 unit	Trigonometry ..... $\frac{1}{2}$ unit	
Solid geometry..... $\frac{1}{2}$ unit	Physics ..... 1 unit	0, 2, 3

**C. NATURAL SCIENCE GROUP**

Physics .....1 unit	Zoölogy .....1 unit	
Chemistry .....1 unit	Biology (botany, $\frac{1}{2}$ unit	
Botany .....1 unit	and zoölogy, $\frac{1}{2}$ unit)	
	1 unit ..... 0, 2, 3	

**D. SOCIAL STUDIES GROUP**

Ancient history, 1 unit  
 European history, 1,  $1\frac{1}{2}$ , or 2 units  
 American history,  $\frac{1}{2}$  or 1 unit  
 American government,  $\frac{1}{2}$  unit  
 Economics,  $\frac{1}{2}$  unit ..... 0, 2, 3

Minimum requirements from above groups..... 10

The remaining units required to make up the necessary 15 units required are elective from among the subjects listed above and such others as are usually counted toward graduation by the accredited school. The Dean, however, has the right to reject such credits as the institution considers undesirable. One unit of foreign language may be offered under this group ..... 5

Total..... 15

Physics may not be counted in both of the Groups B and C as part of a sequence.

If biology is counted, neither botany nor zoölogy may be counted.

English history may be included under European history. World history may be included when accompanied by a second full year of history.

Half units in the social studies are acceptable as part of a sequence only if taken in the eleventh or twelfth grade.

Students who plan to meet the Bachelor of Arts degree requirements would be wise not to omit more than one of the above groups in selecting sequences and should, if possible, complete one language sequence in high school.

**APPLICANTS FOR PRE-PROFESSIONAL COURSES:**

Pre-seminary students should present, if possible, 2 units of high school German and 2 units of high school Latin for admission.

Pre-medical, pre-dental, pre-engineering, medical technology, and 3-year nursing students should present, if possible,  $1\frac{1}{2}$  units of algebra, 1 unit of geometry, 1 unit of high school chemistry, and 1 unit of high school physics.

Pre-law students should present, if possible, 2 units of high school Latin for admission.

**PLAN B. ADMISSION BY EXAMINATION.** Applicants who are unable to furnish approved certificates, and who are therefore unable to meet the first requirement of Plan A, may be admitted if by passing examinations satisfactorily they can meet the other requirements of Plan A. Further particulars regarding such examinations may be obtained from the Dean.

**PLAN C. PROVISIONAL ADMISSION.** An applicant for admission whether on Plan A or B, who meets all the requirements save that he fails by not more than one unit to satisfy the requirements either as to prescribed work or as to distribution of work, may be admitted provisionally. Such deficiency must, however, be removed during the first year of residence.

**Admission of War Veterans**

Men and women who have been in the Armed Services and who plan to enter college after their discharge should have a transcript of their high school record and previous college record mailed to Calvin College at their earliest convenience. Veterans who have spent time in the Army Specialized Training Program or the Navy College Training Program and who wish to return to Calvin should request the Registrar of the institution at which they received this training to forward a transcript of the credits earned to Calvin College. Advanced credit will be given for all such courses as can be applied toward degree requirements.

Calvin College has been approved by the Government as an institution of higher education for the training of discharged service men. Further information or counsel will be furnished gladly upon request.

**Advanced Standing**

**A**DVANCED STANDING (in other words, college credit) is granted in the following cases:

1. When the applicant submits from an accredited college, junior college, or normal school, a certificate of honorable dismissal and a transcript of the studies pursued. However, no applicant is allowed more than sixteen hours of credit for each semester of work taken at another recognized institution.
2. When the applicant, at the time of entrance, passes satisfactory examinations in the subjects in which he desires advanced standing.
3. When the applicant submits from an accredited high school, in excess of sixteen units for admission, credits in subjects which

are also taught in college; provided that for at least one semester he successfully continues work in these subjects at Calvin College. The limit of such college credit allowance is six hours.

4. When the applicant submits credits from an accredited high school for work done after graduation, provided these credits are in courses taught in both high school and college. No more than six hours will be allowed for a full semester's work.

Admission to advanced standing does not excuse the student from meeting the specified requirements for graduation from Calvin College. For example, students entering as sophomores in the General College course must for graduation earn ninety-four honor points, those entering as juniors sixty-two and one-half honor points, those entering as seniors thirty-one honor points.

All advanced standing is subject to revision at the end of the first year of residence.

Students expecting advanced standing for work done at other institutions should bring full credentials, and should at the time of entrance consult the Dean.

Advanced credit up to nine semester hours will be allowed for courses taken by correspondence at accredited colleges or universities.

### Unclassified Students

**A** PPLICANTS for admission who are not candidates for graduation may be enrolled for such studies as their preparation qualifies them to pursue with profit. Such applicants should consult the Dean regarding arrangements.

## STUDENT EXPENSES

### Tuition and Other Fees

**A** LL TUITION and other fees are charged by the semester, and must be paid to the College Treasurer during the first five days from the time of registration for the semester.

#### REGULAR TUITION FEE

The regular tuition is \$125.00 a semester. For students who are members of a Christian Reformed Church and thus contribute indirectly to the support of Calvin College, the tuition shall be determined on the basis of the zone in which the student resides. The U. S. Official Postal Guide shall determine the zone of residence.

*Zones 1, 2, and 3* (extending up to 300 miles from Grand Rapids)

For students residing within these zones the tuition is \$90.00 a semester. For two students from one family residing in the region defined the tuition for each is \$75.00 a semester.

*Zones 4 and 5* (from 300 to 1,000 miles from Grand Rapids)

For students residing within these zones the tuition is \$65.00 a semester. For two students from one family residing in the region defined the tuition for each is \$52.50 a semester.

*Zones 6, 7, and 8* (over 1,000 miles from Grand Rapids)

For students residing within these zones the tuition is \$40.00 a semester. This is the minimum tuition.

#### Canadian Students

For students residing in Canada, members of the Christian Reformed Church, the tuition shall be calculated on the same mileage basis as given above.

In calculating the tuition, residence is determined as follows:

Residence of minors is that of their parents or legal guardians.

Residence of students whose parents are foreign missionaries of the Christian Reformed Church shall be considered Zone 8.

Residence of a married man is considered that of his established home during the semester preceding the date of registration.

Residence of all others is considered local.

#### ORGANIZATION FEE

All students pay an organization fee of three and one-half dollars each semester for the benefit of all-school activities.

#### EXCESS HOURS

Students taking in excess of seventeen semester hours will be charged an extra fee of eight dollars for each such excess semester hour.

#### UNCLASSIFIED STUDENT FEES

Unclassified students pay at the rate of eight dollars for each semester hour.

#### LABORATORY FEE

An extra fee is charged in some laboratory courses to cover cost of material, wear and tear of instruments, and the like. Amount of such laboratory fee is indicated in the catalog in the description of the specific courses.

#### PRACTICE FEE

A practice fee of eight dollars a semester is paid by students who register for practice teaching.

#### GRADUATION FEE

The general graduation fee, including diploma, is six dollars.

#### LATE REGISTRATION

A fee of two dollars will be charged for late registration.

#### SPECIAL EXAMINATION

A fee of two dollars is charged for all special examinations.

#### SUMMER SESSION

The tuition fee is eight dollars per semester hour of credit.

#### INDIVIDUAL LESSONS

Charges for individual instruction in voice, piano, organ and orchestral or band instruments are at the rate of thirty dollars per semester (fifteen lessons). The fee for use of the organ for practice is ten dollars per semester.

#### LOCKER FEES

All students are charged a locker fee of fifty cents per year.

#### REFUNDMENT

No refunds will be made to any student expelled, suspended, or requested to withdraw on account of conduct or poor scholarship.

If a student withdraws voluntarily and in good standing within two weeks after the first day of enrollment, tuition and all fees ex-

cept \$5.00 to cover registration, will be refunded; if before the end of eight weeks, one-half of the total fees (tuition and miscellaneous fees) will be returned; after eight weeks, no part will be refunded.

### Living Expenses

**L**IVING EXPENSES, including board, room rent, fuel, light, laundry, and text books are from \$500.00 up per year.

## HOUSING

### Lodging and Board for Men

**M**EN students are housed in private homes in the vicinity of Calvin College. The college keeps on file a list of rooming places. However, it has been found desirable for students to discuss financial arrangements and other matters with their prospective landlords, the college students are advised to select their rooming places during August or immediately after arrival in Grand Rapids. The average cost for rooms runs about \$5.00 per week per student for the facilities furnished. Food can be secured in some of these homes, in the neighboring eating places, or at the Dormitory. Board rates for next year in the dormitory are set at \$160 per semester subject to change with the variations of food costs. Application for rooms should be made to the Committee on Housing.

### Lodging and Board for Women

**T**HE college dormitory for women on Giddings Avenue provides living accommodations for about 78 students. Board and room fees total approximately \$230.00 per semester. Application for admission should be made with the Dean of Women, Calvin College. Since new applications are given preference according to time of filing, the applicant is advised to correspond with the Dean of Women as early as possible.

Three semi-cooperative homes in the southeast section of the city are maintained by the college and provide women students with congenial living accommodations. These homes are under the direct control of the faculty, and each is under the personal supervision of a housemother. Each student works out part of her room and board, net expenses amounting to about \$190.00 per semester. Application for admission to these homes should be made with the Dean of Women.

Women living in college residence halls must furnish their own towels, sheets, pillow cases, and blankets.

Applicants accepted for admission to residence halls are expected to retain possession of their rooms for one semester, and may not move to other living quarters without permission.

Admission to residence halls is regarded by the college authorities not as a right, but as a privilege which may be withheld or withdrawn from any student whose presence there may not be considered desirable.

For those students who are unable to procure admission to a college residence hall, or who wish to live in a private home, the college keeps on file a list of rooming places, and will do all in its power to obtain for the student the kind of place desired. A city such as Grand Rapids offers excellent opportunity for self-support, especially for young women who desire to work for their room and board. Since it has been found most desirable for students to discuss financial arrangements and other matters with their prospective landladies, the college will not make advance assignments to private homes. Upon arrival in Grand Rapids the student should report to the Dean of Women.

The college cafeteria is located in the dormitory. In addition to the dormitory residents, a limited number of additional students may be served.

All rates are subject to change.

## STUDENT AID

### Scholarships

**UNIVERSITY OF MICHIGAN STATE COLLEGE SCHOLARSHIP.**—The following is taken from the catalogue of the University of Michigan:

“By action of the Board of Regents, each of the faculties of the accredited colleges of the state of Michigan is authorized to nominate annually to the administrative officers of the Graduate School some member of the graduating class, or some one of their graduates of not more than four years' standing, as a suitable candidate for a State College Scholarship. In each case an alternate may also be nominated.”

Students wishing to make application for this scholarship should consult the Registrar of Calvin College not later than February 1.

**RHODES SCHOLARSHIP.**—Male students in the junior and senior years may apply for nomination to the Cecil Rhodes Scholarship.

A RHODES SCHOLARSHIP is tenable for three years at the University of Oxford. The stipend is at present fixed at 400 pounds a year. However, a Rhodes scholar should be prepared to supplement his stipend by at least 50 pounds a year from his own resources. More specific information may be obtained from the Calvin College Registrar.

**FRESHMAN SCHOLARSHIP.**—Each year Calvin College offers a scholarship, consisting of free tuition for the Freshman year, to a member of the graduating class in each of the accredited Christian High Schools of America supported by our constituency, who is recommended thereto by the faculty of that school, in accordance with the following conditions:

1. (a) The Faculty of Calvin College will select and appoint the winner.  
(b) If, in the opinion of the Faculty of Calvin College, no suitable candidate is available, no award shall be made in that particular year.  
(c) The Faculty always reserves the right, for reasons of its own, to reject any candidate who may be recommended for this scholarship.
2. The recommendation shall be on the basis of scholarship, Christian character, personality, and promise of growth.
3. The recipient should expect to complete the course at Calvin.
4. The recipient must have fulfilled regular college admission requirements.

5. The recipient should have been in residence at the high school from which he graduates for at least his junior and senior years.

**ALUMNI TUITION SCHOLARSHIP.**—The Alumni Association annually offers a tuition scholarship to that member of the Sophomore class who in his Freshman year has shown himself to be deserving. The conditions are as follows:

1. The recommendation shall be on the basis of scholarship, Christian character, personality, and promise of growth.
2. The recipient should expect to complete his college work at Calvin College.
3. If in the opinion of the faculty no suitable candidate is available, no award shall be made in that particular year.

### Prizes and Awards

**ALUMNI PRIZE.**—The Alumni Association offers an annual prize of \$15.00 based upon scholarship. For the year 1948-49 the award was made for special excellence in the department of Dutch.

**THE BEETS CALVINISM PRIZE.**—The late Dr. and Mrs. Henry Beets presented the College with \$500.00, the income of which is to constitute a prize for the best essay or term paper on Calvinism, in any of its bearings, written each year by Calvin College students, and to be awarded at the discretion of the professor holding the chair of Calvinism, in consultation with the President of Calvin College, provided that if during any given year the professor named above does not consider the essays or papers submitted of sufficient merit to deserve the prize, the interest of such a year, or years, be added to the principal.

**BROODMAN ORATORICAL PRIZES.**—Through the generosity of Dr. G. J. Broodman of Grand Rapids, Michigan, gold, silver, and bronze medals are given annually to the winners of the first, second, and third prizes, respectively, in a men's oratorical contest. The first prize winner represents Calvin in the state oratorical contest of the Michigan Intercollegiate Speech League held in March of each year.

**THESPIAN PRIZE.**—The Thespians, dramatics club of Calvin College, offers three prizes in oratory for women, of \$15.00, \$10.00 and \$5.00.

The first prize winner represents Calvin in the state oratorical contest of the Michigan Intercollegiate Speech League held in March of each year.

**THE RINCK MEMORIAL PRIZE.**—A fund of \$500.00 has been subscribed by former students and friends of the late William Rinck, Professor of Mathematics at Calvin College, 1905 to 1920, the income of which is to be devoted to a prize in mathematics. The prize is awarded annually to the student who has done the best work in college algebra, analytical geometry, and calculus, provided the grade in each of these courses is at least "B."

**MUSICIANS' GUILD SCHOLARSHIP.**—Freshmen who register at Calvin College in September, 1949, will be eligible for a \$50 scholarship offered by the Musicians' Guild. Instrumentalists, excluding pianists and organists, will be the only persons eligible for this scholarship. Try-outs will be conducted in September, 1949, after further announcements have been made. The winner will receive the \$50 as a cash award. Persons interested may correspond with Professor Swets or see him at registration next September.

**ANNA BRUINSMA PRIZE IN MUSIC.**—The interest of \$750, given by Mr. H. J. Bruinsma of Grand Rapids in honor of his deceased wife, one of Calvin's alumnae, is to be used in the department of music, two-thirds of it serving as first, and the remaining third as second prize.

**ORATORIO SOCIETY TUITION SCHOLARSHIP IN MUSIC.**—Four College tuition scholarships are presented by the Calvin College Oratorio Society. These scholarships are limited to instrumentalists who can meet College admission requirements, and have records of superior achievement in high school instrumental activities. Recipients will be expected to participate in the scheduled rehearsals and performances of the Calvin College Band, Orchestra, and Chamber Music Ensembles.

**VANDER HEIDE VOICE SCHOLARSHIP.**—One scholarship is offered annually by Mr. and Mrs. Jan Vander Heide. The stipend covers the applied music fee for private lessons in *Voice*. Applications will be judged on the basis of the student's evidence of talent and his financial need. Applicants must have met college admission requirements and be full time students in good standing.

### Loans

**THE DUTCH MOTHER FUND** to the amount of \$2,500 was contributed by one of Calvin's grateful alumni to help students who major in subjects essential to engineering, provided the applicants meet requirements in respect to character and scholarship and promise to repay the loan after graduation as soon as possible. Application for a loan from this fund must be made at the office.

### Placement Bureau

**T**HE PLACEMENT BUREAU was established some years ago for the purpose of assisting prospective teachers, graduates of Calvin College, in securing teaching positions. This bureau keeps on file a list both of vacancies in the teaching forces in our Christian Schools throughout the country, and of graduates who desire to teach. All correspondence for the Bureau should be addressed to: Placement Bureau, Calvin College. There is no charge for these services.

## ADMINISTRATION

### Religious Culture

**I**N ACCORD with its specific aim and with its belief that this aim cannot be attained unless the religious side of the student's life receives due attention, the College makes religious instruction, either doctrinal or historical, compulsory for all classes of students. Ten hours of such religious instruction must be taken during the four college years in accordance with a set program.

Furthermore, all students are required to attend the devotional exercises held in the auditorium on days assigned at 9:30 A. M.

It is understood, too, that on the Sabbath every student worships regularly at some church of his own selection.

As often as is deemed necessary during the course of the college year faculty counselors have consultations with each student, the aim being to offer, in addition to academic counseling, such help in the moral and spiritual life as the student may need.

### The Hekman Memorial Library

**T**HE library contains more than 35,500 volumes. About 2,000 books are added yearly. All students and former students of Calvin College and Seminary are entitled to the full use of the library.

### Physical Education

**A**LL Freshman and Sophomore men students are required to participate in a physical fitness program three times per week. Classes in required physical education for men are given during all periods, including the seventh, on Monday, Wednesday, and Friday. All Freshman and Sophomore girls are required to take physical education. Girl's classes are on Tuesday and Thursday from the first period through the seventh. No academic credit is given for this work. Exemptions from this requirement are permitted only upon written request of the school physician or upon the written consent of the Dean of the college.

### Attendance

**T**HE school year of thirty-six weeks is divided into two semesters of eighteen weeks each. A summer session of six or eight weeks is offered each summer.

Two vacations are given during the year: a vacation of two weeks at the Christmas holidays, and a spring vacation of one week. Students are required to remain on duty until the last school exercise preceding a vacation is completed, and to be present at the hour of opening, after a vacation.

### Grades and Honor Points

REPORT CARDS are sent out at the end of each semester.

In grading the work of students a literal system equivalent in honor points is used; as follows:

MARK	INTERPRETATION	EQUIVALENT HONOR POINTS
A	Exceptional.	3
B	Good or very good.	2
C	Graduation average.	1
D	Unsatisfactory; just passable	0
E	Condition, which may be removed by re-examination.	Minus 1
F	Failure. No re-examination.	Minus 2
Inc.	Work not completed.	
W	Work extending over two semesters.	

The mark E can be removed only by a re-examination passed with a grade of C or better. Such re-examination must be taken *at the appointed time within the next semester. Responsibility* for arranging for re-examination at the appointed time, for securing from the instructor concerned a signed removal slip without which no change is made in the Registrar's entries, and for presenting such removal slip to the Registrar, *lies with the student.* Should the student fail to remove his condition, the mark E is automatically graded F.

For a course marked F a student can receive credit only by satisfactorily repeating the whole course.

If a student is absent from a final examination the mark "No exam." will be given. This mark must be removed by taking the examination at the time scheduled for re-examinations.

The mark Inc. signifies the absence of a certain amount of reading to be completed, or of papers to be handed in. This mark is given only in cases of prolonged illness and in emergencies, i.e., in circumstances which may reasonably prevent a student from completing his work on time, such as practice teaching, inability to obtain necessary books, etc. To remove a mark Inc. the student must secure credit for the course by satisfying the instructor *within one year. Responsibility* for securing such credit and for obtaining from the instructor concerned a signed removal slip without which

no change is made in the Registrar's entries, and for presenting such removal slip to the Registrar, *lies with the student.* Should a student fail to remove the mark Inc. within the allotted time, the mark automatically becomes F.

When the record of a student suggests doubt as to his fitness to do more advanced work in a particular department, his case is determined jointly by the Dean and the instructors concerned.

### Examinations and Written Work

**R**EGULAR examinations, in writing, are held at the close of each semester. In addition, tests and written recitations are given frequently during the year, with or without previous notice, at the option of the instructor.

Supplementary examinations for admission and for the removal of conditions are held on the first Monday and Tuesday of the school year, and on the first Friday and Saturday after the spring vacation.

Term papers and book reports (not including weekly or bi-weekly assignments) shall be in three weeks before the final examinations.

Any student found guilty of dishonesty in any examination or test or required written work of any character, will be graded F in the course, besides being subject to discipline.

### Dropping and Changing of Courses

**A**FTER a student has enrolled for a study, he may not drop it without written permission of the Dean. Such permission will be granted only in exceptional cases after November 1 the first semester, and after March 15 the second semester.

A student may not change his course of study without permission of the Dean.

### Class Visitors

**U**NDER certain conditions, students may attend classes as visitors or auditors. Permission to do so must be obtained from the office.

### Dismission

**A**DMISSION to Calvin College is a privilege not a right. This privilege may be withdrawn from any student whose presence is not regarded as desirable by the college authorities.

## REQUIREMENTS FOR GRADUATION

**T**HE COLLEGE graduates or certifies students from the following courses: General College, pre-Seminary, Education, pre-Medical, pre-Law, pre-Engineering, pre-Business Administration, pre-Forestry, pre-Nursing, and pre-Medical Technology.

Every student (except those few who register as "Unclassified") must, in addition to the required physical education, fulfil the requirements of the course from which he elects to graduate. The requirements in each course are listed below.

By an hour of credit is meant in each case the equivalent of one recitation a week in one subject for one semester. The number of hours of credit given for a particular subject is indicated in the description of that subject to be found under DESCRIPTION OF COURSES.

The subjects are listed as follows: Art, Bible, Biology, Chemistry, Dutch, Economics, Education, Engineering, English, French, German, Greek, History, Latin, Mathematics, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Public Speaking, and Sociology.

No diploma will be granted for less than one year's resident work, which ordinarily must be the year immediately preceding graduation.

When no full course is completed, a statement is given of the studies which the student has successfully completed.

### General College

1. **AMOUNT OF WORK.** The student must complete 125 hours of work.

2. **GRADE OF WORK.** The student must obtain a total of 125 honor points; in other words, must obtain an average grade of C.

3. **PRESCRIBED WORK.** Of the 125 hours required, the following are prescribed:

Bible 101 or 105, 102 or 106, 201, 202, 301	10 hours
English 103, 104	6 hours
History	6 hours
Philosophy (not including Psychology or Logic)	6 hours
Natural Science	10 hours
Foreign Language	(see following explanation)

### Foreign Language Requirements

- a A student who has had no foreign language in high school will be required to take two years (four semesters) of one foreign language and one year (two semesters) of a second foreign language in college. One of these must be an ancient foreign language and the other a modern foreign language.
- b Students who have earned credit for foreign language in high school may have this credit applied toward the fulfillment of the college language requirement. For the purpose of evaluating high school credit in a foreign language one year of foreign language in high school will be regarded as the equivalent of one semester in college.
- c The student is advised to make his choice of foreign languages, particularly his choice of a modern foreign language, in consultation with the Dean.

4. **DISTRIBUTION OF WORK. MAJORS AND MINORS.** To insure proper distribution of the student's work, the subjects have been divided into three groups; as follows:

Group I. Art, Dutch, English, French, German, Greek, Latin, Music, Public Speaking.

Group II. Biology, Chemistry, Mathematics, Physics, Psychology.

Group III. Bible, Economics and Sociology, Education, History, Philosophy, Political Science.

The student must so distribute the total 125 hours (including, therefore, those prescribed) among the three groups that he complies with the following restrictions:

- a. The student must choose one of these three groups as his major and another group as his minor.
- b. In his major group the student must choose two subjects in one of which he completes a sequence of at least twenty-four hours and in the other of which he completes a sequence of at least twelve hours (or fifteen hours if he desires a Teachers' Certificate). The total number of hours required in the major group is, therefore, thirty-six.
- c. In his minor group the student must choose one subject in which he completes a sequence of twelve hours. Besides, he must take an additional six hours within his minor group. The total number of hours required in the minor group is, therefore, eighteen.
- d. Should a student choose Group II as his major or his minor group, and should he further choose Psychology as a sequence

in this group, nine hours of Psychology and three hours of Logic will be accepted as a twelve-hour sequence.

e. At least one-half of the work taken in residence beyond the sophomore year must be in courses not open to freshmen.

5. **DEGREE.** On satisfactory completion of this course, the student will receive the degree of bachelor of arts. If he has met all the requirements of this course and has completed 60 or more hours in Group II he may elect to receive the degree of bachelor of science instead of bachelor of arts.

6. **STATE TEACHERS' PROVISIONAL CERTIFICATE.** To be eligible for recommendation for a State Teachers' Provisional Certificate the student must on graduation meet the Michigan State Department of Education requirements for either the Elementary or the Secondary Provisional Certificate. The minimum subject requirements stipulated by the Michigan State Department of Education are: Psychology 201-202; Education 203, or 306, or 309; 301, or 314, or 315, or 317; a methods course and Education 343 or 344, a total of at least 20 semester hours of Education.

Prospective high school teachers must arrange their programs so as to complete a major of 24 hours and two minors of 15 hours each. (See 2A under Education, p. 34.)

Prospective elementary school teachers must arrange their programs so as to complete either a major and two minor sequences, or four minor sequences. (See 3A and B under Education, p. 35.)

### Pre-Seminary

(See note regarding Pre-Seminary entrance requirements under Plan A, page 16 NOTE.)

1. **AMOUNT OF WORK.** The student must complete 125 hours of work.

2. **GRADE OF WORK.** The student must obtain a total of 125 honor points; in other words, he must receive an average grade of C. To receive, in addition, the faculty's recommendation for admission to Calvin Seminary, the student must obtain one and one-half times as many honor points as hours of credit.

3. **PRESCRIBED WORK.** The following 118 hours of work are prescribed:

<i>Hours</i>		<i>Hours</i>
8	Bible 201, 202, 301, 302.....	6
4	Biology 210, 306 .....	6
20	Dutch Language .....	6
3	Dutch History 326.....	9
6	Economics 201, 202.....	3
3	Education 301 .....	3
12	English incl. 103, 104.....	6
20	Greek 101, 102, 201, 202, 313, 314 .....	3
	History 101, 102 .....	
	Intro. to Inorganic Science....	
	Latin 201, 202, or 307, 308....	
	Philosophy 204, 301, 302.....	
	Psychology 201 .....	
	Phil. 202 (Logic).....	
	Speech 103, 104, 205.....	
	Sociology 203 .....	

### Schedule for the year 1949-50

This schedule has been arranged for students who enter without any deficiencies and plan to take the full four year course.

#### Freshman Year

FIRST SEMESTER	<i>Hours</i>	SECOND SEMESTER	<i>Hours</i>
Dutch 101 .....	4	Dutch 102 .....	4
English 103 .....	3	English 104 .....	3
History 101 .....	3	History 102 .....	3
Latin 201 or 307.....	3	Latin 202 or 308.....	3
Public Speaking 103.....	2	Public Speaking 104.....	2
	15		15

#### Sophomore Year

Bible 201 .....	2	Bible 202 .....	2
Dutch 203 .....	3	Biology 210 .....	2
Greek 101 .....	4	Dutch 202.....	3
Psychology 201 .....	3	Greek 102 .....	4
Sociology 203 .....	3	Philosophy 202 .....	3
	15		14

#### Junior Year

Dutch 305 .....	3	Biology 306 .....	2
Education 301 .....	3	Dutch 306 .....	3
English 207 (or other English elective) .....	3	Dutch Hist. 326.....	3
Greek 201 .....	3	Greek 202 .....	3
Public Speaking 205.....	2	Philosophy 204 .....	3
Elective .....	3	English continued .....	3
	17		17

#### Senior Year

Bible 301 .....	2	Bible 302 .....	2
Economics 201 .....	3	Economics 202 .....	3
Greek 313 .....	3	Greek 314 .....	3
Philosophy 301 .....	3	Philosophy 302 .....	3
Intro. to Inorganic Science.....	3	Elective .....	2
Elective .....	2	Intro. to Inorganic Science....	3
	16		16

If Dutch 305 and 306 are taken in the Senior year, Economics 201 and 202 should be taken in the Junior year.

To meet the language requirements for this course the student is required to present two units of high school German and two units of high school Latin. If these languages were not taken in high school the student must make up the deficiency in college.

## Education

Completion of the four year course in Education leads to the A.B. degree and a Michigan State Teacher's Certificate. Careful planning will insure the completion of both Calvin and Michigan requirements.

1. AMOUNT AND GRADE OF WORK. One hundred and twenty-five hours of work must be completed with 125 honor points. This means the maintenance of a C average or better. An average of C+ or better is required of all students entering the course in Directed Teaching. This C+ applies to all work taken in the college after February 1, 1949.

### 2. COURSE REQUIREMENTS FOR PROSPECTIVE HIGH SCHOOL TEACHERS: (Grades 7-12.)

A. A major field of 24 hours and two minors of at least 15 hours for either high school or elementary school positions.

Majors and minors may be chosen from the following subjects:

Chemistry	History	Philosophy
Economics-Sociology	History-	Physics
Economics	Polit. Science	Physical Education
English	Latin	Sociology
French	Mathematics	Science (Biology)
German	Music	
	Art	

B. Subject requirements:

- (1) Bible 101-2 or 105-6, 201-2, 301.....10 hours
- (2) English 103-4 ..... 6 hours
- (3) History ..... 6 hours
- (4) Natural Science .....4 hours
- (5) Foreign language.....4 semesters of one foreign language

Students who have earned credit for foreign language in high school may have this credit applied toward the fulfillment of the college language requirement, if the same language is continued.

For the purpose of evaluating high school credit in a foreign language, one year of foreign language in high school will be regarded as the equivalent of one semester in college. The student is advised to make his choice of a foreign language in consultation with the Dean.

- (6) Education courses .....20 hours
  - (a) Psychology 201 and 202
  - (b) One course from Education 203, 305, 306, or 309
  - (c) Education 301 or 314
  - (d) One methods course from Education 307, 310, 324, 326, 328, 340, 330m.....2 or 3 hours
  - (e) Speech 103 or 104
  - (f) Education 342: Observation
  - (g) Education 344: Directed Teaching

Prerequisites for Education 344, Directed Teaching:

- (a) Grade of work equivalent to C+
- (b) Principles of Education (301 or 314)
- (c) Educational Psychology (202)
- (d) Methods course in major field

### 3. COURSE REQUIREMENTS FOR PROSPECTIVE ELEMENTARY TEACHERS: (Kindergarten through Grade 8.)

A. Prospective elementary teachers may select majors and minors from the list under 2A, p. 34. Two of these must be in subjects or subject fields taught in the elementary grades.

B. Prospective elementary teachers are advised preferably to select four minors as follows:

- (1) *English* studies: Credits earned in English literature, Rhetoric, Speech, Reading, Story-Telling count towards this minor.
- (2) *Art* studies: Music, Fine Arts, Industrial Arts, Drawing.
- (3) *Social* studies: Economics, Geography, History, Political Science, Sociology, Ethics.
- (4) *Science* studies: Biology, Psychology, Physics, Chemistry, Mental Hygiene.

C. Subject requirements:

- (1) Bible 101-2 or 105-6, 201-2, 301.....10 hours
- (2) English 103-4 ..... 6 hours
- (3) History ..... 6 hours
- (4) Natural Science ..... 4 hours
- (5) Foreign language.....4 semesters of one foreign language

Students who have earned credit for foreign language in high school may have this credit applied toward the fulfillment of the college language requirement, if the same language is continued.

For the purpose of evaluating high school credit in a foreign language, one year of foreign language in high school will be regarded as the equivalent of one semester in college. The student is advised to make his choice of a foreign language in consultation with the Dean.

- (6) Education courses .....20 hours
  - (a) Psychology 201 and 202
  - (b) One course from Education 203, 305, 306 or 309
  - (c) Education 301 or 315 or 317
  - (d) One methods course from 220, 307, 310, 324, 340, 322 .....2 or 3 hours
  - (e) Students planning to teach in a Christian School must add Education 220, 222, 320, and 322
  - (f) Education 341: Observation
  - (g) Education 343: Directed Teaching
  - (h) In addition to these subjects prospective elementary teachers are urged to include in their courses:
    - 1) Art 227 or 228 (no credit) and Art 301.....3 hours
    - 2) Geography 105 or 106.....3 hours
    - 3) Education 321, 325, and 324.....8 hours
    - 4) Speech 101 or 103 or 104.....2 hours

Prerequisites for Education 343, Directed Teaching:

- (a) Grade of work equivalent to C+
- (b) Principles of Education (301 or 315 or 317)
- (c) Educational Psychology (202)
- (d) Methods course:
  - 1) For teacher of grades K - 3.....Educ. 322
  - 2) For teacher of grades 4 - 8.....Educ. 220

4. THE STATE BOARD OF EDUCATION IN MICHIGAN grants Provisional Certificates to graduates who have met all the requirements of this course. These certificates are valid for five years and may be converted into Permanent Certificates, provided:

- a. The applicants have taught three years successfully.
- b. They have earned ten additional semester hours of credit.

**IMPORTANT DIRECTIONS TO HOLDERS OF LIMITED CERTIFICATES BASED ON THE MICHIGAN TEACHERS' CERTIFICATION CODE**

**CAUTION:** No person may be employed to teach in any school district unless he is legally qualified by holding a valid certificate. In order that the holder of any limited certificate may retain without interruption his status as a legally qualified teacher, he must make application for renewal to the State Board of Education between April 1 and September 1 of the year the certificate expires; if the candidate on the expiration of the certificate does not arrange for renewal as here stated, he will forfeit his status as a legally qualified teacher, and therefore will not be permitted to teach. He will, however, remain eligible to make application for renewal until June 30 of the year following expiration of his certificate after which date renewal privileges are canceled.

A. To the holder of a State Limited Certificate or of the State Limited Renewal Certificate.

1. To the holder of a State Limited Certificate may be issued (five times) a State Limited Renewal Certificate provided the candidate shall have met the following conditions:

(a) Subsequent to the date of issue of the last certificate held, the candidate must have acquired 10 semester hours of credit, of an average grade of "C" or better, earned in an institution or accepted by an institution approved by the State Board of Education. These credits must be applicable toward the requirements of the curriculum prescribed for the State Provisional Certificate eventually desired. Not less than 5 semester hours must be earned in residence; the remainder may be earned in extension study but of this not to exceed 3 semester hours may be correspondence study credit.

(b) In order to assure that the credits earned toward renewal will apply on the State Provisional Certificate curriculum at the institution where the candidate intends to qualify eventually for that certificate, *the candidate should arrange in advance in each case to have his course selections approved by that institution.* Also all credits wherever earned should be submitted to that institution for evaluation and by it transmitted to the State Board of Education with recommendations.

B. The above statement was approved by the State Board of Education.

**Pre-Medical and Pre-Dental**

(See note regarding pre-Medical entrance requirements under Plan A, page 16 NOTE.)

1. AMOUNT OF WORK. The student must complete 94 hours of work.

2. GRADE OF WORK. The student must obtain a total of 94 honor points; in other words, must obtain an average grade of C;

except that to obtain faculty recommendation for admission to a class A medical school he must in the three years of residence obtain a total of 156 honor points, representing an average of B-.

3. PRESCRIBED WORK. The following courses are prescribed:

<i>Freshman Year</i>	
FIRST SEMESTER	SECOND SEMESTER
Bible 101 or 105..... 2 hours	Biology 110 ..... 3 hours
Biology 109 ..... 3 hours	Chemistry 104 ..... 4 hours
Chemistry 103 ..... 4 hours	English 104 ..... 3 hours
English 103 ..... 3 hours	Mathematics 104 ..... 3 hours
History 101 or 205..... 3 hours	History 102 or 206..... 3 hours
15 hours	16 hours

<i>Sophomore Year</i>	
Bible 201 ..... 2 hours	Bible 202 ..... 2 hours
Biology 201 ..... 4 hours	Biology 208 ..... 3 hours
Chemistry 201 ..... 4 hours	Chem. 202 or elective..... 4 hours
French or German..... 4 hours	French or German..... 3 hours
Physics 201 ..... 4 hours	Physics 202 ..... 4 hours
18 hours	16 hours

<i>Junior Year</i>	
Bible 301 ..... 2 hours	Biology 306 ..... 2 hours
Biology 207 ..... 3 hours	Biology 312 ..... 3 hours
Biology 311 ..... 2 hours	Chemistry 302 ..... 4 hours
Chemistry 301 ..... 4 hours	English or elective..... 3 hours
English or elective..... 3 hours	Psychology 312 or elective 3 hours
Psychology 201 ..... 3 hours	
17 hours	15 hours

Pre-Medical students are strongly advised to take a full college course.

Trigonometry presupposes one and one-half units of Algebra.

If the student has had French or German in high school, the number of hours prescribed in the College may be reduced by four hours for each of the first two units of work. But one year of either French or German must be taken in college.

Since modern language requirements for admission into medical schools vary widely, medical students are advised to consult the office in respect to them.

Bible 301 can, at the option of the student, be accredited as philosophy on a transfer of credits.

4. DISTRIBUTION OF ELECTIVES. The number of hours of electives will vary according to the nature of the student's high school preparation in French or German. For their electives students should choose such subjects as are required for admission to the medical school which they expect eventually to attend.

5. **DIPLOMA.** On satisfactory completion of this course the student will receive a three-year diploma.

6. **DEGREE.** On satisfactorily completing this course with a record of not less than 125 honor points received in the required ninety-four hours, the student is eligible for the degree of bachelor of science on the combined curriculum plan in letters and medicine. He will receive this degree after one year of successful work in a recognized medical school.

A two-year pre-dental course is provided for those who desire it, but universities give preference for admission to students who have completed the three-year pre-dental course.

#### Four-Year Pre-Medical Course

1. **AMOUNT OF WORK.** The student must complete 125 hours of work.

2. **GRADE OF WORK.** The student must obtain a total of 125 honor points; in other words, must obtain an average grade of C.

However, for admission to some medical schools an average grade equivalent to one and one-half honor points is required.

#### 3. PRESCRIBED WORK.

a. The student must meet the prescribed course requirement as well as the major and minor group requirements for the General College A. B. course. If he has completed 60 or more hours in Group II he may elect to receive the degree of bachelor of science, general course, instead of the bachelor of arts.

b. The student must meet the prescribed course requirement of the Three-Year pre-Medical Course, and, if possible, in the same order.

4. **DISTRIBUTION OF ELECTIVES.** The number of electives will vary according to the nature of the student's high school preparation in French and German. Not less than 12 hours of his elected courses over and above the courses prescribed under 3 (above), but including Philosophy, must be in Groups I and III. The student is urged to elect Biology 106 and Chemistry 202 and 307.

#### Pre-Law

1. **AMOUNT OF WORK.** The student must complete 94 hours of work.

2. **GRADE OF WORK.** The student must obtain a total of 94 honor points; in other words, an average of C; except that he must

obtain 156 honor points, representing an average of B-, to warrant faculty recommendation for admission to a class A law school.

3. **PRESCRIBED WORK.** Of the 94 hours required, certain hours are prescribed; as follows:

<i>Freshman Year</i>	
FIRST SEMESTER	SECOND SEMESTER
Bible 101 or 105.....2 hours	Bible 102 or 106.....2 hours
English 103 .....3 hours	English 104 .....3 hours
Latin .....3 hours	Elective .....3 hours
Mathematics or Science...3 hours	Logic .....3 hours
Psychology .....3 hours	Mathematics or Science...3 hours
Public Speaking .....2 hours	Public Speaking .....2 hours
16 hours	16 hours

<i>Sophomore Year</i>	
Bible 201 .....2 hours	Bible 202 .....2 hours
English .....3 hours	English .....3 hours
History 203 .....3 hours	History 204 .....3 hours
Latin, French or German...3 hours	Latin, French or German...3 hours
Political Science .....3 hours	Political Science .....3 hours
Sociology 203 .....3 hours	Sociology 204 .....3 hours
17 hours	17 hours

<i>Junior Year</i>	
Bible 301 .....2 hours	English .....3 hours
English .....3 hours	History 302 .....3 hours
History 301 .....3 hours	Political Science .....3 hours
Political Science .....3 hours	Latin 320 (Rom. Cul.)...3 hours
Elective .....3 hours	Elective .....2 or 3 hours
14 hours	14 or 15 hours

A student who has had French or German in high school may have his number of hours prescribed in college reduced by four hours for each of the first two units of high school work. But one year of French or German must be taken in college.

Since modern language requirements for admission into law schools vary widely, students are advised to consult the office with respect to them.

4. **DISTRIBUTION OF ELECTIVES.** The number of hours of electives will vary according to the student's high school preparation in languages. For their electives students should choose such subjects as are required for admission in the law school which they expect eventually to attend.

5. **DIPLOMA.** On satisfactory completion of this course the student will receive a three-year diploma.

6. DEGREE. On satisfactorily completing this course with a record of not less than 125 honor points received in the required 94 hours, the student is eligible for the degree of bachelor of arts on the combined curriculum plan in letters and law. He will receive this degree after one year of successful work in a recognized law school.

Some law schools require an average grade equivalent to one and one-half honor points per hour of credit.

### Pre-Engineering Course

Normally four semesters of work at a recognized school of engineering, in addition to the three-year course here outlined, are necessary to finish a regular engineering course.

1. AMOUNT OF WORK. The student must complete 94 hours of work.

2. GRADE OF WORK. The student must obtain a total of 94 honor points; in other words, must obtain an average grade of C.

3. PRESCRIBED WORK. Of the 94 hours required, the following are prescribed:

#### Three-Year General Pre-Engineering Course

##### Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 101 or 105.....	2 hours	Drawing 102*.....	3 hours
Chemistry 103E.....	4 hours	Chemistry 104E.....	4 hours
Drawing 101*.....	3 hours	English 104.....	3 hours
English 103.....	3 hours	Mathematics 104.....	3 hours
Mathematics 103.....	3 hours	Pub. Speaking 103 or 104.....	2 hours
	<hr/> 15 hours		<hr/> 15 hours

##### Sophomore Year

Drawing 201*.....	2 hours	Bible 102 or 106.....	2 hours
Economics 201.....	3 hours	Economics 202.....	3 hours
Mathematics 201.....	3 hours	Mathematics 202.....	3 hours
Physics 201E.....	5 hours	Physics 202E.....	5 hours
Physics 203.....	1 hour	Physics 204.....	1 hour
Surveying 207*.....	2 hours	Elective.....	2 hours
	<hr/> 16 hours		<hr/> 16 hours

##### Junior Year

Bible 301.....	2 hours	Statics 302*.....	3 hours
Mathematics 301.....	5 hours	Mathematics 302.....	5 hours
Economics 301.....	3 hours	Physics 304.....	3 hours
Electives.....	6 hours	Economics 302.....	3 hours
	<hr/> 16 hours	Elective.....	2 hours
			<hr/> 16 hours

\* See Engineering Subjects.

#### Three-Year Chemical Pre-Engineering Course

##### Freshman Year

Bible 101 or 105.....	2 hours	Chemistry 104.....	4 hours
Chemistry 103.....	4 hours	English 104.....	3 hours
English 103.....	3 hours	Drawing 102*.....	3 hours
Drawing 101*.....	3 hours	Mathematics 104.....	3 hours
Mathematics 103.....	3 hours	Public Speaking.....	2 hours
	<hr/> 15 hours		<hr/> 15 hours

##### Sophomore Year

Chemistry 201.....	4 hours	Bible 102 or 106.....	2 hours
Mathematics 201.....	3 hours	Chemistry 202.....	4 hours
Drawing 201*.....	2 hours	Mathematics 202.....	3 hours
Physics 201E.....	5 hours	Physics 202E.....	5 hours
Physics 203.....	1 hour	Physics 204.....	1 hour
	<hr/> 15 hours		<hr/> 15 hours

##### Junior Year

Bible 301.....	2 hours	Chemistry 302.....	4 hours
Chemistry 301.....	5 hours	Economics 202.....	3 hours
Economics 201.....	3 hours	Mathematics 302.....	5 hours
Mathematics 301.....	5 hours	Modern Physics 304.....	3 hours
Elective.....	2 hours	Statics 302*.....	3 hours
	<hr/> 17 hours		<hr/> 18 hours

In case the student has no credit in Advanced Algebra, Mathematics 101 must be taken, and in that event Mathematics 103 must be taken during the second semester.

In case the student has no credit in Solid Geometry, he should arrange to take Mathematics 102, if possible.

Electives must be chosen in consultation with the Dean.

4. DIPLOMA. On satisfactory completion of either course the student will receive a three-year diploma.

5. DEGREE. On satisfactorily completing either course with a record of not less than 125 honor points received in the required 94 hours, the student is eligible for the degree of bachelor of science on the combined curriculum plan in science and engineering. He will receive this degree after completing satisfactorily the requirement for the bachelor of science in engineering in a recognized engineering school.

\* See Engineering Subjects.

### Pre-Business Administration Course

For students interested in Business Administration the following three-year course has been arranged:

<i>Freshman Year</i>	
FIRST SEMESTER	SECOND SEMESTER
Bible 101 or 105.....2 hours	Bible 102 or 106.....2 hours
Economics 103 .....3 hours	Economics 104 .....3 hours
English 103 .....3 hours	English 104 .....3 hours
Lab. Science ..... 3 or 4 hours	Lab. Science .....3 or 4 hours
History or Mathematics .....3 hours	History or Mathematics .....3 hours
14 or 15 hours	14 or 15 hours

<i>Sophomore Year</i>	
Bible 201 .....2 hours	Bible 202 .....2 hours
Economics 201 .....3 hours	Economics 202 .....3 hours
English 201 or 207.....3 hours	English 202 or 208.....3 hours
Mathematics 205 .....3 hours	Mathematics 206 .....3 hours
Psychology 201 .....3 hours	Philosophy 202 .....3 hours
Speech 103 .....2 hours	Speech 104 .....2 hours
16 hours	16 hours

<i>Junior Year</i>	
Economics 301 .....3 hours	Bible 301 .....2 hours
Economics 305 .....4 hours	Economics 302 .....3 hours
Economics 309 .....3 hours	Economics 303 .....3 hours
Pol. Science 303 .....3 hours	Economics 306 .....4 hours
Elective .....3 hours	Pol. Science 304 .....3 hours
16 hours	15 hours

This course is arranged to enable the student to meet the requirements for admission into the School of Business Administration of the University of Michigan. The student after successfully completing a maximum of one year and a summer at the University of Michigan will receive his B.B.A. degree from the University of Michigan.

Students desiring to enter Business Schools other than the University of Michigan should have a catalogue of the school available at the time of registration so that a course can be arranged.

### Major in Business Administration

Candidates for a bachelor's degree from the General College Course may select their subjects with a view to obtaining a major in Business Administration. They should complete the subjects prescribed for the General College Course (see p. 30). To complete the major group requirements they should elect 24 hours in Economics and 12 hours in another department listed in Group III (see p. 31). They may elect to complete their minor group requirement by selecting subjects either in Group I or in Group II. The 24 hours in Economics must include Economics 201 and 202 and Economics 305 and 306.

Students desiring to receive a master's degree in Business Administration at the University of Michigan, after receiving a bachelor's degree from Calvin College, can do so by successfully completing a maximum of one year and one summer at the School of Business Administration of the University of Michigan.

### Pre-Forestry

The following constitutes a recommended two-year Pre-Forestry Course. The student should complete 64 hours of work. He should choose such subjects as are required for admission to the particular school of forestry which he expects eventually to attend. The final arrangement of his course should have the approval of the Dean.

<i>Freshman Year</i>	
FIRST SEMESTER	SECOND SEMESTER
Biology 109 .....3 hours	Bible 102 .....2 hours
Chemistry 101 or 103.....4 hours	Biology 110 .....3 hours
Engineering 101 .....3 hours	Chemistry 102 or 104.....4 hours
English 103 .....3 hours	English 104 .....3 hours
Mathematics 103 .....3 hours	Mathematics 104 .....3 hours
*Engineering 207 .....2 hours	

<i>Sophomore Year</i>	
Bible 201 .....2 hours	Bible 202 .....2 hours
Biology 201 .....4 hours	Biology 206 .....3 hours
Economics 201 .....3 hours	Biology 306 .....2 hours
Physics 201 .....4 hours	Economics 202 .....3 hours
*Engineering 207 .....2 hours	Mathematics 308 .....4 hours
Public Speaking 103.....2 hours	Physics 202 .....4 hours

### Pre-Clinical Nursing Course

For students interested in Nursing, the following one-year course has been arranged to meet the requirements for admission to The Blodgett Memorial School of Nursing of Grand Rapids, Michigan.

FIRST SEMESTER	SECOND SEMESTER
Bible 101 .....2 hours	Biology 106 .....2 hours
Biology 105 .....3 hours	English 104 .....3 hours
English 103 .....3 hours	Psychology 201 .....3 hours
Chemistry 101N .....4 hours	Nutrition .....3 hours
Hygiene } (Hosp.) .....2 hours	Pharmacology .....1 hour
Nursing Arts } .....2 hours	Nursing Arts .....2 hours
Microbiology .....3 hours	Prof. Adjustment .....1 hour
	Physical Education .....2 hours
17 hours	17 hours

\* Since Engineering 207 (Surveying) is taught every even year, students starting in September of the even years should take this course during their freshman year. Other students take Biology 201 during the freshman year.

Students wishing to take this course must make application at Blodgett Hospital with the Director of Nurses before August 1.

Upon completion of this course and twenty-eight months at The Blodgett Memorial Hospital School of Nursing, the student will be eligible to write the examinations given by the Michigan State Board of Registration of Nurses, and upon passing the examinations will receive her certificate to practice as a registered nurse.

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For students who wish to enter Butterworth Hospital of Grand Rapids, Michigan, the following subjects are suggested:

Chemistry 101N .....4 hours	Biology 110 .....3 hours
English Composition .....6 hours	Public Speaking .....4 hours
European History .....3 hours	Sociology .....3 hours
Psychology 201 .....3 hours	Electives .....4 hours

In addition to the above, Bible (2 hours) and Physical Education are required.

For electives the student is advised to choose a subject of her own choice, preferably History, English, Literature or Science.

Upon completion of this course and three years in the School of Nursing at Butterworth Hospital, the student will be eligible for registration by the Michigan State Board of Registration for Nurses.

### Bachelor of Science in Nursing, or in Medical Technology, on the Combined Curriculum Plan

The student must

1. meet regular admission requirements to the college, including among highschool credits Algebra, Geometry, and Chemistry or Physics;
2. successfully complete 94 semester hours of pre-professional subjects considered fundamental in any liberal arts program;
3. complete an additional 12 months of training at an accredited school of Medical Technology.

Courses of a technical nature, such as mechanical or free-hand drawing, practical or physical education are not acceptable as advanced credit toward the 94 hours of college work.

The required college courses in the program are the following:

Bible (including 301).....	6 hours
English Composition and Rhetoric.....	6 hours
English or American Literature.....	6 hours
History .....	6 hours
Psychology .....	6 hours
Sociology (Introduction or Problems).....	3 hours
Philosophy (Introduction to).....	3 hours
*Ancient Language .....	8 hours
Chemistry (Inorganic) 103E and 104E.....	8 hours
Human Anatomy and Physiology.....	5 hours
Organic and Biochemistry.....	8 hours
Animal Biology .....	3 hours
Microbiology .....	4 hours
Microscopic Technique .....	1 hour
Biological Problems .....	2 hours
Plant Biology .....	3 hours
Histology (New course).....	4 hours
Parasitology (New course).....	4 hours
Physics (Introductory) (New Course).....	6 hours
Nutrition .....	3 hours
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	95 hours

### SUGGESTED PROGRAM

#### Freshman Year

FIRST SEMESTER	SECOND SEMESTER
Biology 105 .....3 hours	Biology 106 .....2 hours
Biology 109 .....3 hours	Biology 110 .....3 hours
English 103 .....3 hours	English 104 .....3 hours
Latin or Greek 101.....4 hours	Latin or Greek 101.....4 hours
Physics 101 .....3 hours	Physics 102 .....3 hours
<hr/>	<hr/>
16 hours	15 hours

#### Sophomore Year

Bible 201 .....2 hours	Bible 202 .....2 hours
Biology 107 .....4 hours	Biology 304 .....1 hour
Biology 307 or 309.....4 hours	Chemistry 104E.....4 hours
Chemistry 103E .....4 hours	History 102 .....3 hours
History 101 .....3 hours	Psychology 201 .....3 hours
<hr/>	Sociology 204 .....3 hours
17 hours	<hr/>
	16 hours

#### Junior Year

Bible 301 .....2 hours	Biology 212 .....3 hours
Biology 309 or 307.....4 hours	Biology 306 .....2 hours
Chemistry 303 .....4 hours	Chemistry 304 .....4 hours
English 201 .....3 hours	English 202 .....3 hours
Philosophy 203 .....3 hours	Psychology 312 .....3 hours
<hr/>	<hr/>
16 hours	15 hours

\* If a student has had Latin or Greek in high school, the number of hours prescribed in the college may be reduced by four for each of the first two units of work.

## DESCRIPTION OF COURSES

### Art

Courses 331 and 332 may be credited in the Dutch department. They are of great benefit to teachers and students of history and literature.

228. PENMANSHIP *Two hours*  
 Manuscript and cursive writing. Theory and practice. No credit. For prospective teachers in elementary grades.
301. INDUSTRIAL ART *Three hours*  
 A course in art education in the elementary school. The areas of drawing, values, color, design, lettering and poster work are studied. The student is taught to develop skill in the manipulation of different art media, and given some knowledge of teaching methods relevant to art.
302. HANDCRAFT *Three hours*  
 The course aims to give the student ideas in the field of craft problems related to the elementary grades. It requires work in clay modeling, weaving, and block printing.
331. FLEMISH PAINTING *Three hours*  
 A course in the Flemish and Dutch primitives and Italianizers, followed by a discussion of the Flemish Renaissance painters with emphasis on Rubens and Van Dyck. The course is analytical as well as historical. Lectures, collateral reading, and reports. Not open to Freshmen.
332. DUTCH PAINTING *Three hours*  
 A course in Dutch painting from the Renaissance to modern times. The emphasis is placed on the seventeenth century. Lectures, collateral reading, and reports. Not open to Freshmen.

### Bible

101. INTRODUCTION TO THE BOOKS OF THE BIBLE *Two hours*  
 A general introduction to the Bible as a whole, in which its origin, nature, canonicity, authority, organic unity, revelation and inspiration, and related subjects are investigated. A specific introduction, inquiring into the contents, historical setting, literary form, and especially the permanent ethical and religious values of a few of the individual books.
102. INTRODUCTION TO THE BOOKS OF THE BIBLE *Two hours*  
 Continuation of 101.
105. OLD TESTAMENT HISTORY *Two hours*  
 A survey, from the standpoint of special revelation, of the principal characters and the trend of events from the creation of the world to the return of the Jews from captivity. Special attention is given to the preparation for the coming Saviour. Some of the problems pertinent to Old Testament history are discussed and the significance of the various events is indicated. Lectures and collateral readings.
106. NEW TESTAMENT HISTORY *Two hours*  
 A companion course to 105. Events of the intertestamentary period are sketched with particular reference to the coming Messiah; the principal events and teachings of Christ as recorded in the gospels are treated; and the origin and early expansion of the Christian Church in apostolic times is surveyed. Lectures and collateral readings.

201. REFORMED DOCTRINE *Two hours*  
 An advanced course of study in the doctrine of the Christian religion as contained in the Bible and as reflected in the confessional standards of the Reformed Churches.
202. REFORMED DOCTRINE *Two hours*  
 Continuation of 201.
301. STUDIES IN CALVINISM *Two hours*  
 An inquiry into the origin and nature of Calvinism, its influence upon the development of religion and political life, as well as the proper application of its principles to these spheres. The course consists of lectures, assigned readings, and essays. Open to Juniors and Seniors. To others only by special permission.
302. HEBREW CULTURE *Two hours*  
 A study of the geographical, social, civic, and religious customs of the Hebrews, and of the people among whom they lived when the Bible arose.
303. HISTORY OF THE CHRISTIAN CHURCH *Three hours*  
 A survey of the history of the Christian Church from its beginnings to the present time.
304. HISTORY OF THE CHRISTIAN REFORMED CHURCH *Three hours*  
 The historical antecedents and the development of the Christian Reformed Church in America.

### Biology

For majors in this department, the following courses are required: 105-106, 111, 201, 207, 306, and either 112 or 311 and 312 (24 hours required).

For students who elect Biology as a minor, one of the following sequences is advised:

- General Biology: 105-106, 111, 201, 207, and 306. (Any 15 hours.)  
 Botany and Bacteriology: 107, 111, 112, and 207. (Total 15 hours.)  
 Human Biology: 103, 105-106, 310 and either 212 or 312. (Total 15 hours.)  
 Zoology: 201, 206, 208, 307, 310 and 311-312. (Any 15 hours.)
- For students electing ten hours or less in this department, the following courses are recommended: 102, 103, 107, 109, 110, and 306.

102. HUMAN PHYSIOLOGY *Two hours*  
 An introductory study of the organization, development, and physiological activities of the human body. The work of this course is so arranged that, if desired, it may be continued in course 105. At the same time it is planned to supplement course 103.
103. PERSONAL HYGIENE *Three hours*  
 The proper care of our bodies and approved practices for the prevention of disease are studied. Courses 102 and 103 together form a unit which is adapted to the needs of students who expect to teach health subjects in the elementary grades. Offered both semesters.
105. HUMAN ANATOMY AND PHYSIOLOGY *Three hours*  
 An introduction to the study of human biology, including elements of embryology, genetics, anatomy, histology, and physiology. Two hours of lectures and one laboratory period a week. Laboratory fee, \$3.00.

106. HUMAN ANATOMY AND PHYSIOLOGY *Two hours*  
Continuation of course 105.
107. PRINCIPLES OF MICROBIOLOGY *Three hours*  
The history of Microbiology and the cultural and morphological characteristics of bacteria, yeasts, and molds are considered. Special emphasis is placed on communicable diseases. This course is adapted to pre-nursing students, but is open to all others. Discussions, quizzes, and demonstrations.
109. PLANT BIOLOGY *Three hours*  
A general introduction to the study of plant biology and a brief survey of the plant kingdom. Two hours of lectures and recitations, and one laboratory period a week. Laboratory fee, \$3.00.
110. ANIMAL BIOLOGY *Three hours*  
An introductory study of a few animal types selected to illustrate fundamental principles of anatomy, physiology, ecology, parasitology, and classification. Two lectures or recitations and one laboratory period a week. Laboratory fee, \$3.00.
111. GENERAL BOTANY *Four hours*  
Anatomy and physiology of seed plants. Open to freshmen. Three recitations and one laboratory period a week. Laboratory fee, \$3.00.
112. GENERAL BOTANY *Four hours*  
This course with course 111 constitutes a full year's course in botany. A comparative study of plant forms and life histories of representative plants. The course offers a general systematic view of the plant kingdom. Three hours of lectures and quizzes, one laboratory period a week. Laboratory fee, \$3.00.
201. INVERTEBRATE ZOÖLOGY *Four hours*  
Anatomy, physiology, behavior, and classification of animals representative of the invertebrate groups. Insects and disease-causing forms are emphasized. Three hours of lectures, reports, and recitations; and three hours of laboratory work per week. Laboratory fee, \$3.00.
206. NATURAL HISTORY *Three hours*  
A systematic study of the appearance and habits of animals which are more commonly met near our homes, in zoölogical parks, on pleasure trips, or in literature. Economically important fishes, birds, and fur-bearers will receive special consideration. This course consists of lectures, and library and museum studies. It is intended primarily for general college and education students.
207. GENETICS *Three hours*  
A study of the ways and means by which the inherited characteristics of plants, animals, and man are transmitted from parents to offspring. The course consists of lectures and problems concerning applications of the laws of heredity.
208. INTRODUCTION TO EMBRYOLOGY *Three hours*  
A study of the development of vertebrate animals. Two hours of lectures and recitations and three hours of laboratory work per week. Laboratory fee, \$3.00.
210. GENERAL BIOLOGY *Two hours*  
A brief survey of the more significant phenomena and principles of several divisions of biology, such as plant and animal anatomy, physiology, and classification. The interrelations between plants and animals are emphasized. Two hours of lectures or recitations and one hour of demonstrations per week.

212. NUTRITION *Three hours*  
A study of normal and corrective diets in health and disease. Two lectures and one laboratory period a week. To be preceded or accompanied by 102 or 106. Laboratory fee, \$3.00.
304. MICROSCOPIC TECHNIQUE *One hour*  
The technique of slide making. Killing, fixing, dehydrating, embedding, sectioning, staining, and mounting of tissues. Three hours of laboratory work per week. Laboratory fee, \$3.00.
306. BIOLOGICAL PROBLEMS *Two hours*  
The history of biology and the evidences for evolution and organic teleology are considered. Lectures, assigned readings, recitations, and reports. Prerequisites: 109 and 110 or equivalent courses.
307. PARASITOLOGY *Four hours*  
A study of the morphology, physiology, and life-cycles of the parasites of man and animals. Examples of various phyla: Protozoa, flat worms, round worms, and ectoparasites of the Anthropoda will be considered. Three hours of lectures and recitations and three hours of laboratory work per week. Laboratory fee, \$3.00.
308. HISTOLOGY *Four hours*  
A study of mammalian tissues. The relation between microscopic structure and function will be considered. Three lectures and one laboratory period a week. Laboratory fee, \$3.00.
311. VERTEBRATE ZOÖLOGY *Two hours*  
An introduction to the study of vertebrates with emphasis on their comparative anatomy. Evolution problems are considered. One lecture and one laboratory period a week. Laboratory fee, \$3.00.
312. VERTEBRATE ZOÖLOGY *Three hours*  
A continuation of 311. Two lectures and one laboratory period a week. Laboratory fee, \$3.00. Prerequisite: 311.
- 330m. TEACHING BIOLOGY *Two hours*  
Points of view, contents, and methods of teaching secondary biology, and human physiology and hygiene. Prerequisite: twenty hours of Biology.

## Chemistry

A student who wishes to major in chemistry should complete the following courses: 103-4, 201-2, 301-2, 307-8 and 310. In related fields, he should complete Mathematics through Calculus, and Physics 201 and 202.

101. GENERAL CHEMISTRY *Four hours*  
A non-technical course designed for students who do not need chemistry for pre-professional study. This course is a terminal course and includes a survey of inorganic and organic chemistry. Credit earned in this course can be applied to the laboratory science requirement for graduation. Three hours in class-room and one three-hour laboratory period per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. No prerequisites.
102. GENERAL CHEMISTRY *Four hours*  
Continuation of 101. Hours, texts and fees the same.

103. GENERAL INORGANIC CHEMISTRY *Four hours*  
This course is designed for students who plan to take further work in the department, e.g., chemistry majors, pre-medical, and pre-dental students. Three hours in class-room and one three-hour laboratory period per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. No prerequisites, although a knowledge of high school chemistry is desirable.
104. GENERAL INORGANIC CHEMISTRY *Four hours*  
Continuation of 103. Hours, texts and fees the same.
- 103E. GENERAL INORGANIC CHEMISTRY *Four hours*  
This course is designed primarily for pre-engineering students who need only one year of chemistry. This course differs from 103 in that some material on Qualitative Analysis is also included.
- 104E. GENERAL INORGANIC CHEMISTRY *Four hours*  
Continuation of 103E. Hours, texts and fees the same.
- 101N. CHEMISTRY FOR NURSES *Four hours*  
A one semester course designed for students in the regular pre-nursing course. A survey of inorganic, organic, and biological chemistry as applied to the field of medicine. Three class-room hours and one two-hour laboratory period per week.  
Laboratory fee, \$3.00. Breakage fee, \$5.00. No prerequisites.  
NOTE: Students preparing for a B.S. in nursing are advised to take 103E and 104E.
201. QUALITATIVE ANALYSIS *Four hours*  
Two hours of class-room work, one quiz period, and two laboratory periods of three hours each per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisites: 103 and 104, and Mathematics 101.
202. QUANTITATIVE ANALYSIS *Four hours*  
Two hours in the class-room and from eight to ten hours of laboratory work per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisite: 201.
301. ORGANIC CHEMISTRY *Four hours*  
Two or three hours of class-room work, one quiz period, and two laboratory periods of three hours each per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisite: General Inorganic Chemistry.
302. ORGANIC CHEMISTRY *Four hours*  
Continuation of 301. Hours and fees the same. This course deals primarily with aromatic compounds. Prerequisites: General Inorganic Chemistry and 301.
303. ORGANO-BIOCHEMISTRY *Four hours*  
A brief study of important classes of organic compounds with special emphasis on biochemistry, chemistry of carbohydrates, proteins, fats, enzymes and other subjects. For pre-nursing, pre-medical technology students, and for teachers who have a minor in chemistry. Three hours of classroom work and two laboratory periods of three hours each per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisites: Chemistry 103 and 104.
304. ORGANO-BIOCHEMISTRY *Four hours*  
Continuation of 303. Hours and fees the same.

305. INTRODUCTION TO THE FIELD OF INORGANIC SCIENCE *Three hours*  
This course attempts to evaluate critically the basic assumptions, simple laws and results of modern scientific investigations in the fields of chemistry, physics, and geology. Emphasis is placed on the interrelation of these fields rather than a study of each unit by itself. Open to pre-seminary students and to Juniors and Seniors pursuing an A.B. in Education course who have neither a major nor minor in Science. This course will not be counted as science credit in the 10 hours science requirement of the General College course.
306. INTRODUCTION TO THE FIELD OF INORGANIC SCIENCE *Three hours*  
Continuation of 305.
307. PHYSICAL CHEMISTRY *Four hours*  
A study of the kinetic theory of gases, solids and liquids. Three lecture hours and one laboratory period per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisites: Chemistry 201, Physics 201, Mathematics 301.  
NOTE: Pre-medical students may take the lectures for three hours credit.
308. PHYSICAL CHEMISTRY *Four hours*  
A continuation of 307. Hours and fees the same. A study of electrochemistry, chemical thermodynamics and nuclear structure.
- 308m. PHYSICAL CHEMISTRY FOR PRE-MEDICAL STUDENTS *Three hours*  
A study of the states of matter, properties of solutions, chemical kinetics and the colloidal state. Open only to pre-medical students.
309. BIOCHEMISTRY *Four hours*  
A discussion of the fundamentals of biochemistry, chemistry of carbohydrates, proteins and fats, enzymes, colloids, digestive processes, metabolism and other subject matter essential to an understanding of biochemistry. Three hours of classroom work and two laboratory periods of three hours each per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. Prerequisites: 301 and 302.
310. QUALITATIVE ORGANIC ANALYSIS *Four hours*  
One and one-half hours of lecture and three laboratory periods per week. This course is based on Shriner and Fuson's text. Prerequisite: Chemistry 302. Laboratory fee, \$3.00. Breakage fee, \$5.00.
- 330m. TEACHERS' COURSE *One hour*  
Methods of teaching chemistry in secondary schools. Prerequisite: two years of chemistry.

## Dutch

### A. DUTCH LANGUAGE

101. ELEMENTARY GRAMMAR *Four hours*  
Conjugations and declensions.
102. ADVANCED GRAMMAR *Four hours*  
Review. Full declensions. Syntax. Required outside reading.
201. INTERMEDIATE DUTCH *Three hours*  
Reading of modern prose. Review of the more important parts of grammar. Outside reading of four hundred pages.
202. ADVANCED DUTCH *Three hours*  
Reading of nineteenth century prose and poetry. Grammar review continued. Outside reading of four hundred pages.

305. MODERN LITERATURE *Three hours*  
The outstanding prose writers and poets after 1880 are read and the movements of naturalism, symbolism, neo-romanticism and neo-vitalism are discussed. Required outside reading and essays.

306. RENAISSANCE AND ROMANTICISM *Three hours*  
The leading authors of the Renaissance and the Romantic Movement. Required outside reading and essays.

NOTE: These courses and Dutch History 326 are required of those who take the pre-Seminary course.

#### B. MEDIEVAL AND DUTCH HISTORY

NOTE: For description of Dutch History courses, see under History Department.

323. THE EARLY MIDDLE AGES (400-1000) *Three hours*

324. THE HIGH MIDDLE AGES (1000-1350) *Three hours*

325. THE RENAISSANCE IN FLANDERS AND ITALY (1350-1550) *Three hours*

326. DUTCH HISTORY (1500-1815) *Three hours*

#### C. DUTCH ART

331. FLEMISH PAINTING *Three hours*  
The Flemish and Dutch Primitives and Italianizers between 1400 and 1600 Rubens and Van Dyck and their schools. The course is analytical as well as historical.

332. DUTCH PAINTING *Three hours*  
The Dutch Renaissance (1600-1700) and the modern Dutch painters.

#### Economics

103. ECONOMIC HISTORY (United States) *Three hours*  
A review of the economic development of this country from the time of colonization to the present day. Special emphasis is placed on the development of the transportation system, the history of the tariff question, the development of unionism, the history of the banks, and the development of government regulation in our economic system. Offered the first semester.

104. ECONOMIC GEOGRAPHY *Three hours*  
A study of the physical factors of the environment and man's relationship to them. The subject is approached from the point of view of the various occupations in which man is engaged, and how these occupations are carried on in the world. Offered the second semester.

201. PRINCIPLES OF ECONOMICS *Three hours*  
A review of the fundamental principles underlying modern economic life. Not open to Freshmen except by special permission. Students electing 201 are expected to take 202.

202. PRINCIPLES OF ECONOMICS *Three hours*  
A continuation of the principles of economics and an application of the same to current industrial problems and institutions.

205. BUSINESS MATHEMATICS *Three hours*  
For description of this course, see under Mathematics 205.

206. STATISTICS *Three hours*  
For description of this course, see under Mathematics 206.

301. MONEY AND BANKING *Three hours*

A study of the nature and functions of money, with a view to the understanding of the complex rôle of currency systems in our national and international life. A detailed study of the functions of banking, the Federal Reserve, private financial institutions, foreign trade, and so forth. Prerequisite: 201 and 202 or their equivalents.

302. FINANCIAL PRINCIPLES *Three hours*  
A continuation of 301. The financial promotion of corporations and of trusts. The trust problem.

303. LABOR PROBLEMS AND TRADE UNIONISM *Three hours*  
The historical background of the modern labor movement, the controversies between capital and labor, and the various solutions offered. A careful study of the history, nature, and problems of trade unionism. Prerequisite: 201 and 202.

305. ESSENTIALS OF ACCOUNTING *Four hours*  
An introductory course in accounting. Intended to give students the necessary accounting background for entrance into schools of business administration or for business uses when graduating from Calvin. Emphasis is placed on the principles of accounting and the accounting procedure in corporations. A laboratory period is held each week for application of the material. Prerequisite: 201 and 202 or their equivalents.

306. ESSENTIALS OF ACCOUNTING *Four hours*  
Continuation of 305.

308. PRINCIPLES OF MARKETING *Three hours*  
A study of the marketing functions, the marketing of particular commodities, the functions and modes of operations of middlemen, associate activities affecting marketing, price policies, etc.

309. BUSINESS LAW: CONTRACTS *Three hours*  
Deals with the main principles of contract: offer, acceptance, consideration, capacity of the parties, legality of object, the formal requisites of agreements under the statute of frauds, the operation of contracts in business and their interpretation by the courts. Open to Seniors and to Juniors only by special permission.

312. COST ACCOUNTING *Three hours*  
A beginning course in the principles of cost accounting. A laboratory period is held each week for the application of the material.

#### Education

Students who plan to meet teacher certificate requirements will find detailed information on pages 34 to 36.

##### A. PSYCHOLOGY

(See description of courses under department of Psychology.)

##### B. HISTORY

203. HISTORY OF AMERICAN EDUCATION *Three hours*  
In this course the educational development in our country will be viewed in the light of the religious, social, economic, and political changes.

305. HISTORY OF EDUCATION *Three hours*  
A survey of the growth of educational theory and practice during the ancient and mediæval periods.

306. HISTORY OF EDUCATION *Three hours*  
A continuation of 305 covering the modern period.
309. EDUCATIONAL SOCIOLOGY *Three hours*  
A study of the social structure and educational practice with emphasis on present-day problems. Credit also for Sociology. But not for both. Both semesters.

#### C. PRINCIPLES

301. PRINCIPLES OF EDUCATION *Three hours*  
A study of the aim of education and of the various underlying problems.
314. PRINCIPLES OF TEACHING IN THE SECONDARY SCHOOLS *Three hours*  
The principles of teaching will be discussed in the light of Morrison's *The Practice of Teaching in the Secondary Schools*. The teaching technique in each of the types of subjects in the curriculum is analyzed.
315. PRINCIPLES OF TEACHING IN THE ELEMENTARY SCHOOLS *Three hours*  
Principles governing the directing of learning of children in the elementary school will be taken up.
317. PRINCIPLES OF KINDERGARTEN-PRIMARY GRADES TEACHING *Two or three hours*  
The course includes a brief history of past and present trends in kindergarten work; the capital of the child in these grades; the content of the curriculum for grades one, two, and three; and observations in actual classroom situations.

#### D. PROFESSIONAL COURSES

101. NATURE STUDY *Three hours*  
General introduction to the various phenomena of nature and the methods of teaching nature study in the elementary grades. Credit for A.B. in Education only.
220. TEACHING ARITHMETIC IN ELEMENTARY SCHOOLS *Three hours*  
Both content and methods in arithmetic throughout the grades will be considered.
222. INTRODUCTION TO SCHOOL MUSIC: THEORY AND METHODS. Music 331 may be substituted. *Three hours*
307. SCHOOL ADMINISTRATION *Three hours*  
This course aims to discuss the organization and management of state and local school systems.
310. EDUCATIONAL MEASUREMENTS *Three hours*  
A survey course of present-day practices of measuring the results of teaching. Mental testing is included.
320. TEACHING BIBLE IN ELEMENTARY SCHOOLS *Three hours*  
Both semesters.
321. TEACHING GEOGRAPHY IN ELEMENTARY SCHOOLS: METHODS AND CONTENT *Three hours*
322. TEACHING READING IN ELEMENTARY SCHOOLS *Three hours*  
Both semesters.
325. CHILDREN'S LITERATURE AND THE TEACHING OF ENGLISH IN THE ELEMENTARY SCHOOL *Three hours*
332. REMEDIAL READING *Three hours*

324. TEACHING HISTORY *Two hours*  
A brief survey of the history of our country will be fused with a study of the techniques of teaching history in the elementary and junior high grades.
326. TEACHING ENGLISH IN SECONDARY SCHOOLS *One, two or three hours*  
Content as well as method receives attention. Same as English 330m. Two hours devoted to content; one to method.
328. TEACHING LATIN *Three hours*  
Same as Latin 327 and 330m combined.
340. CURRICULUM *Two hours*  
A study of curriculum requirements for grades four through six, and of the fundamental teaching procedures applying to children of later childhood. Observation required.
341. DIRECTED OBSERVATION OF TEACHING AND LESSON PLANNING *Two or three hours*  
About eighteen hours are spent in the schools of Grand Rapids with specific instructions for directed observation. For students planning to teach in the elementary schools. To be taken simultaneously with Educ. 343.
342. DIRECTED OBSERVATION AND LESSON PLANNING *Two or three hours*  
This course is like Education 341 and is for students looking for positions in the junior and senior high schools. To be taken simultaneously with Educ. 344.
343. DIRECTED TEACHING *Five hours*  
To be taken simultaneously with Education 341. For students planning to teach in the elementary schools. Offered both semesters. See prerequisites listed earlier in this catalogue under Education.
344. DIRECTED TEACHING *Five hours*  
To be taken simultaneously with Educ. 342. For students planning to teach in junior or senior high school. Offered both semesters. See prerequisites listed earlier in this catalogue under Education.
- 330m. THE TEACHING OF LATIN OR ENGLISH, ETC.  
Teachers' courses offered in the various departments are all indicated by the number 330 followed by the letter *m*. For description see under the department wanted.

#### Engineering

101. MECHANICAL DRAWING *Three hours*  
The principles of orthographic projection; practice in the making of working drawings; practice in lettering; and tracing. Three two and one-half hour drafting-room periods, three hours home work a week.
102. DESCRIPTIVE GEOMETRY *Three hours*  
Exercises, instruction, and drill through the medium of 8C printed plates of problems. Three two-hour drafting-room periods, three hours home work a week. Prerequisite: 101.
201. MECHANISM AND SKETCHING *Two hours*  
Sketching of models in orthographic, isometric, and oblique projection; practice in the making of working drawings from sketches; free-hand lettering. Two two-hour drafting-room periods, two hours home work a week. Prerequisite: 102.

207. SURVEYING *Two hours*

Elementary theory and practice; use of instruments, reading verniers and angles; running straight lines; traverse survey; computing areas; leveling; profile; grade stakes; note keeping. Lectures, text assignments, one recitation, and one four-hour field period. Prerequisite: Mathematics 104.

302. STATICS *Three hours*

Study of fundamental principles of mechanics and their application to the simpler problems of engineering. Forces, components, moments, cables, friction, centroids, moments of inertia. Recitations, lectures, problems. Must be preceded or accompanied by Mathematics 302 and Physics 202 or 202E.

**English**

All Freshmen are required to take Freshman English (103-104).

Upperclassmen whose programs of concentration require more than six hours of English, or who choose courses in English as electives, may, if they are sophomores, elect any 200-course, or, if they are Juniors or Seniors, any 300-course. In making their selection of courses, such students should normally favor periods and areas neglected in their past and anticipated programs of concentration.

Students who elect English as the subject of their major concentration should in their selection of courses aim at a disciplinary program historically pursued. A well-balanced program aiming at this objective would be the following:

Freshman English.....	103-104	6 hours
Elizabethan Period .....	207	3 hours
American Literature .....	201	
<i>or</i>		
Seventeenth Century .....	208	3 hours
Eighteenth Century .....	210	3 hours
American Literature .....	202	
<i>or</i>		
Romantic Period .....	301	3 hours
Victorian Poetry .....	302	
<i>or</i>		
Victorian Prose .....	310	3 hours
Contemporary Poetry .....	304	
<i>or</i>		
The Novel .....	312	3 hours

Such a suggested program need not be strictly followed, however; it is susceptible to adjustment in accordance with the student's special interests and his studies in related fields.

English 306 (Advanced Composition) and English 330m (Methods of Teaching English) should not be elected as contributing to a disciplinary program historically pursued, but as professional courses to be taken over and above the main concentration.

103. FRESHMAN ENGLISH *Three hours*

Grammar, rhetoric, and composition. Required of all freshmen, and prerequisite to all other courses in English. Textbooks, periodic themes, and a course paper.

104. FRESHMAN ENGLISH *Three hours*

The theory, example, and practice of composition. A continuation of English 103, required of all freshmen, and prerequisite to all other courses in English. Textbooks, periodic themes, and a course paper.

201. AMERICAN LITERATURE *Three hours*

Analysis of important writings in the colonial and revolutionary periods. Emphasis upon culture and writings of the New England Group. Textbooks, collateral reading, and reports.

202. AMERICAN LITERATURE *Three hours*

Continuation of English 201. Intensive study of Whitman and Twain. Survey of realistic movement, the new poetry, and important twentieth century fiction and criticism. Textbook, collateral reading, and reports.

207. LITERATURE OF THE ELIZABETHAN PERIOD *Three hours*

A survey of the poetic literature of the English renaissance, and an intensive study of the poems and plays of Shakespeare. Textbook, collateral reading, and reports.

208. LITERATURE OF THE SEVENTEENTH CENTURY *Three hours*

A survey of the poetry and prose of the century, and an intensive study of the works of John Milton. Textbook, collateral reading, and reports.

210. LITERATURE OF THE EIGHTEENTH CENTURY *Three hours*

A study of English poetry and prose from Dryden through Burns. Emphasis upon the neo-classicists: Dryden, Pope, Addison, Swift, and Johnson, and a study of the beginnings of the romantic outlook in Gray, Thomson, and Cowper. Textbook, collateral reading, and reports.

301. LITERATURE OF THE ROMANTIC PERIOD *Three hours*

Intensive critical analysis of the work of Wordsworth, Coleridge, Byron, Keats, and Shelley, and a survey of other English poets writing in the years 1798-1830.

302. POETRY OF THE VICTORIAN PERIOD *Three hours*

Intensive critical analysis of the work of Tennyson, Browning, and Arnold seen in relation to relevant cultural influences; a survey of the Pre-Raphaelite Movement; and consideration of the principal poems of Swinburne and Meredith. Textbook, and brief course paper.

303. CONTEMPORARY ENGLISH FICTION *Three hours*

A study of English and American fiction, in its continental relations, from 1890 to the present time. Collateral reading and reports.

304. CONTEMPORARY ENGLISH POETRY *Three hours*

A study of the lyric and dramatic poetry of England, in its continental relations, from 1890 to the present time. Textbook, collateral reading, and reports.

306. ADVANCED COMPOSITION *Three hours*

A practical course in the writing of such types of composition as the formal and informal essay, the informative and feature article, the editorial and book review, the short story, lyric poem, and the like. Some collateral reading and much student writing. Open, by permission only, to students who have ability or unusual interest in creative writing.

310. NINETEENTH CENTURY ENGLISH PROSE *Three hours*

An intensive study of such representative English prose of the nineteenth century, exclusive of fiction, as the works of Carlyle, Ruskin, Arnold, Huxley, Mill, Newman, Pater, Stevenson, and others. Textbook and reports.

## 312. THE ENGLISH NOVEL

Three hours

A survey of the English novel from the beginning through Hardy. Emphasis upon the art and thought of the major novelists with special attention to the development of differing techniques and schools of fiction. Textbook, collateral reading, and reports. Offered 1949-50.

## 330m. METHODS OF TEACHING ENGLISH

One, two, or three hours

A review of the essentials of grammar and rhetoric, and a study of the methods of teaching English in the secondary schools. Prerequisite: at least seven of the courses offered in the English department. First semester.

## French

## 101. ELEMENTARY FRENCH

Four hours

Grammar, pronunciation, composition, dictation, oral drill, and conversation are intended to impart a certain amount of ear-training and ability to understand simple spoken French.

## 102. CONTINUATION OF 101

Four hours

Text in both courses: Micks & Longi, *Fundamental French*. This is followed by the reading of easy prose.

## 201. INTERMEDIATE FRENCH

Three hours

Reading of about two hundred pages of easy nineteenth century text. Special stress on idiom. Composition based on the text read. Prerequisite: 101 and 102.

## 202. CONTINUATION OF 201

Three hours

Reading of about three hundred pages of modern prose. Composition and thorough review of grammar throughout the year. About seven hundred pages of outside reading is required for the year.

## 301. THE ROMANTIC MOVEMENT

Three hours

A history of French literature of the first half of the nineteenth century. Collateral reading and reports. Prerequisite: 101 to 202.

## 302. NINETEENTH CENTURY — SECOND HALF

Three hours

A history of French literature since the middle of the nineteenth century. Collateral reading and reports. Prerequisite: 101 to 202. Anthology in both courses: Schinz, *Nineteenth Century French Readings*, Vols. I and II.

## 303. THE CLASSIC PERIOD

Three hours

A study of French literature and culture in the seventeenth century as a background for the more detailed study of the classic authors. One drama is read in class, others are assigned for outside reading. Prerequisite: 202.

## 304. THE CLASSIC PERIOD

Three hours

A continuation of 303, dealing with the later seventeenth century literature, with special attention to Moliere and Racine. A drama of Racine is read in class. A few dramas are assigned for outside reading. Anthology in both courses: Schinz and King's *Seventeenth Century Readings*. Prerequisite: 202 and 303.

## 330m. METHODS OF TEACHING MODERN FRENCH LANGUAGE

One hour

Intended for prospective teachers of French in secondary schools. Prerequisite: six of the courses offered in this department.

## Geography

## 104. ECONOMIC GEOGRAPHY

Three hours

For description see Economics and Sociology.

## 105. GEOGRAPHY OF NORTH AMERICA

Three hours

A survey of the elements of the natural environment of the major regions of the United States and Canada in their relationship to the cultural landscape. Intended for those specializing in education or in the social sciences.

## 106. GEOGRAPHY OF SOUTH AMERICA

Three hours

A study of the geographic structure of South America in relation to human adjustment and culture. Intended for those specializing in education or in the social sciences.

## 108. GEOGRAPHY OF THE FAR EAST AND THE PACIFIC AREA

Three hours

A study of the geographic and historical background of India, China, Japan, Soviet Asia, Australia, and minor areas of the Far East and the Pacific. The course also deals with the geographic aspects of certain problems dealing with industry, agriculture, and population. Not given in 1949-1950.

## 321. TEACHING GEOGRAPHY IN ELEMENTARY SCHOOLS

Three hours

This course may be counted as credit in Geography toward an A.B. degree in Education except in cases in which it is the student's only course in teaching methods.

This course not only includes a course in methods, but also one hour of content dealing with the Pacific area.

## German

## 101. ELEMENTARY GERMAN

Four hours

Grammar and composition. Text: Vos, *Essentials of German*

## 102. CONTINUATION OF 101

Four hours

Study of grammar continued. Reading of at least one hundred pages of modern prose and poetry.

## 201. INTERMEDIATE GERMAN

Three hours

Reading of nineteenth century prose. Review of the more important parts of grammar. Composition and dictation. Prerequisite: 101 and 102.

## 202. INTERMEDIATE GERMAN CONTINUED

Three hours

Intensive study of modern prose and poetry. By stress upon idiom and otherwise, effort is made throughout the year to create *Sprachgefühl*. Outside reading with reports required to the extent of at least eight hundred pages for the year. Prerequisite: 201.

## 301. THE ROMANTIC PERIOD

Three hours

A survey of German literature of the first half of the nineteenth century. Collateral reading and reports. Prerequisite: 202.

## 302. REALISM

Three hours

History of German literature since the middle of the nineteenth century. Collateral reading and reports. Prerequisite: 202.

## 303. EARLY NINETEENTH CENTURY DRAMA

Three hours

A comprehensive study of the lives and works of leading German dramatists of the early nineteenth century. Assigned readings. Papers on related subjects. Prerequisite: 202. Not offered in 1949-1950.

304. LATER NINETEENTH CENTURY DRAMA *Three hours*  
A study of Hauptmann and Sudermann and their times. Assigned readings and reports. Prerequisites: 202 and 303. Not offered in 1949-1950.
305. THE CLASSIC PERIOD *Three hours*  
A general survey of German literature in the eighteenth century as far as Lessing and with special attention to him. A drama of Lessing is read in class. Collateral reading and reports. Prerequisite: 202. Not offered in 1949-1950.
306. THE CLASSIC DRAMA *Three hours*  
A study of the lives and works of Schiller and Goethe. One or two of their dramas are read. Reports on assigned topics. Prerequisite: 202 and 305. Not offered in 1949-1950.
320. SCIENTIFIC GERMAN *One hour*  
Students wishing to take this course should confer with the professor in charge at the opening of the school year.
- 330m. METHODS OF TEACHING MODERN FOREIGN LANGUAGES *One hour*  
Intended for prospective teachers in German in secondary schools. Prerequisite: six of the courses offered in this department.

### Greek

Students who expect to graduate from the pre-Seminary Course must complete Courses 101, 102, 201, 202, 313, 314.

101. BEGINNERS' GREEK *Four hours*  
Text: Crosby and Schaeffer, *An Introduction to Greek*.
102. BEGINNERS' GREEK *Four hours*  
Continuation of 101. Completion of the text and the reading of the first book of Xenophon *Anabasis*, or its equivalent.
201. XENOPHON *Three hours*  
Selections from the *Anabasis*. Prerequisite: 101 and 102.
202. SELECTIONS FROM PLATO *Three hours*  
Prerequisite: 201.
313. NEW TESTAMENT GREEK *Three hours*  
The Gospel according to Mark is read. A study is made of the special features of Hellenistic Greek. The significance of lexical and syntactical detail for the interpretation of the text is everywhere emphasized. Prerequisite: for pre-Seminary students, 202; others, 102.
314. NEW TESTAMENT GREEK *Three hours*  
A study is made of some of the Pauline Epistles. Lectures and discussion on St. Paul and his times. Prerequisite: 313.
316. GREEK THOUGHT AND THE NEW TESTAMENT *Three hours*  
No knowledge of Greek is required. Lectures, discussions, assigned readings. Open to Juniors and Seniors.
317. PLATO'S REPUBLIC *Two hours*  
No knowledge of Greek is required. The course aims at an understanding and evaluation of Plato's views as presented especially in the Republic. Open to Sophomores, Juniors, and Seniors. Offered both semesters.

### History

Those majoring in History must have had courses 101 and 102 (Growth of Western Civilization) or its equivalent in High School, and eighteen (18) additional hours selected from the following fields: Western European History, 205 and 206; English History, 203 and 204; American History, 301 and 302. Six of these eighteen hours may be taken, if preferred, in courses on Eastern Europe or Mediaeval History.

101. GROWTH OF WESTERN CIVILIZATION *Three hours*  
This course aims to give the student a comprehensive view of the history of civilization from earliest times to 1200 A. D. Required of all students taking the General College Course and of all Pre-Seminary students.
102. GROWTH OF WESTERN CIVILIZATION *Three hours*  
A continuation of Course 101. Particular attention is given to the great movements which have been significant in the development of western civilization to the present day.
201. EASTERN EUROPE SINCE 1815 *Three hours*  
Russia from 1815 to the near present. Lectures, readings, and reports. Prerequisites: 101 and 102. For Sophomores and Juniors.
202. EASTERN EUROPE SINCE 1815 *Three hours*  
The Balkan States, Austria, Hungary, and Czecho-Slovakia. Lectures, readings, and reports. Prerequisites: same as 201.
203. ENGLISH HISTORY TO 1600 *Three hours*  
An outline of the political and constitutional history of England. Prerequisites: 101 and 102. For Sophomores and Juniors.
204. ENGLISH HISTORY TO 1600 *Three hours*  
Continuation of 203, which is prerequisite.
205. EUROPE SINCE 1815 *Three hours*  
The general history of Europe since 1815, with emphasis on such topics as the revolutionary movement in France, the unification of Germany, the rise of socialism. Discussion and assigned reading. Presupposes a high school course in general history.
206. EUROPE SINCE 1815 *Three hours*  
A continuation of 205, which is prerequisite. Courses 205 and 206 are for Freshmen; open to Sophomores by special arrangement.
208. AMERICAN HISTORY *Three hours*  
This course is designed to meet the requirement in American History for prospective teachers. Open only to those students taking the two-year Teacher Training Course.
301. AMERICAN HISTORY *Three hours*  
Lectures and readings. Prerequisite: a high school course in American history.
302. AMERICAN HISTORY *Three hours*  
Continuation of 301, which is prerequisite. Courses 301 and 302 are open to Juniors and Seniors.
303. AMERICAN FOREIGN RELATIONS *Three hours*  
The diplomatic relations of the United States since 1789 with the principal countries of Europe and with China and Japan. Prerequisite: high school course in American history.

304. AMERICAN FOREIGN RELATIONS *Three hours*

Diplomatic relations with South American countries. Origin and development of the Monroe Doctrine. Courses 303 and 304 open to Juniors and Seniors.

Under certain conditions Courses 303 and 304 in American Foreign Relations may be credited toward a major in Political Science.

305. LATIN AMERICAN HISTORY *Three hours*

An account of the history, government, and social and economic development of the Central and South American Republics.

MEDIAEVAL AND DUTCH HISTORY

323. THE EARLY MIDDLE AGES (400-1000) *Three hours*

The rise of Christianity and the Carolingian Empire and the rise of Mohammedanism are discussed after a short review of Greek and Roman civilization. Special attention is paid to the Netherlands during the Roman and Frankish periods.

324. THE HIGH MIDDLE AGES (1000-1350) *Three hours*

The Central Middle Ages: Feudalism; France, Germany, and Italy in the feudal period; crusades, rise of cities especially in Italy and the Netherlands; rise of guilds and democracy; rise of universities, new monasticism, Gothic art, and Romantic literature; Dante.

325. THE RENAISSANCE IN FLANDERS AND ITALY (1350-1550) *Three hours*

The age of unrest. The Christian and the Flemish Renaissance; the Italian Renaissance, and its distribution over Western Europe through the Brethren of the Common Life. The Renaissance spirit.

326. DUTCH HISTORY (1500-1815) *Three hours*

A short review of the history of the Netherlands up to 1500. The Precursors of the Reformation and the Reformation in the Netherlands. The Eighty Years' War. The Dutch Golden Age and its influence on Europe. Dutch commerce and colonization. Wars between the Netherlands and other countries for religious and commercial purposes. The triumph of plutocracy and rationalism in the eighteenth century. The spirit of the French Revolution as manifested in Holland. The rebirth of Calvinism as a political and cultural power after 1815.

Latin

Students who have had two units of Latin in high school should meet their Pre-Seminary or General College ancient language requirement by taking 201 and 202. Students, whether Pre-Seminary or General College, who have completed 101 and 102 should follow these courses with either 301 and 302, or 307 and 308. Those who wish to follow a Latin major should consult with the instructor in charge before registering.

101. ELEMENTARY LATIN *Four hours*

Text: Thompson, Tracy, Dugit: *Essential Latin*.

102. ELEMENTARY LATIN *Four hours*

Continuation of 101. Same text as above.

201. INTERMEDIATE LATIN *Three hours*

For students who have had two units of Latin in high school. A thorough review of the grammar will accompany the reading of selections from various Latin authors.

202. INTERMEDIATE LATIN *Three hours*

Continuation of 201.

301. CICERO'S PHILOSOPHICAL ESSAYS *Three hours*

Reading of one or more of the following: *De Amicitia, De Senectute, Tusculanae Disputationes*.

302. READINGS IN LATIN PROSE AND POETRY *Three hours*

Selections drawn from the following Roman writers: Catullus, Cicero, Horace, Livy, Lucretius, Martial, Ovid, Pliny the Younger, Propertius, Tibullus and Vergil.

307. READINGS IN THE CHURCH FATHERS *Three hours*

Selections drawn from the writings of Tertullian, Minucius, Felix, Cyprian, Lactantius, Ambrose, St. Jerome and St. Augustine.

308. READINGS IN THE CHURCH FATHERS *Three hours*

Continuation of 307.

321. ROMAN CULTURE *Three hours*

Requires no knowledge of the Latin language. The emphasis falls on the development of the constitution, the growth of private law, and the status of education, religion, and philosophy in the Roman world.

322. LATIN LITERATURE IN ENGLISH *Three hours*

No knowledge of Latin is required. The masterpieces of Latin literature are presented through the medium of English translations. Some attention is given to the influence which Latin writers have had upon the literatures of subsequent ages.

327. LATIN GRAMMAR AND WRITING *Two hours*

In this course a thorough review of Latin grammar and syntax will be made, and attention will be given to Latin writing.

This course and 330m may be offered as a three-hour methods course in the department of Education. Same as Education 328.

330m. TEACHERS' COURSE *One hour*

This course is required of all students who expect to teach Latin, and who seek to obtain a State Teachers' Certificate. In this course study will be made of the problems and methods of teaching secondary Latin.

This course will be offered either the first or second semester to meet the convenience of the students interested.

Mathematics

Students who wish to major in Mathematics should take Math. 101 and Math. 102 in high school. Ten hours of Calculus is the basic requirement for a major in Mathematics.

101. ADVANCED ALGEBRA *Three hours*

For those who have had only one year of algebra in high school.

102. SOLID GEOMETRY *Three hours*

Prerequisite: 101 and plane geometry.

103. COLLEGE ALGEBRA *Three hours*

Prerequisite: 101.

104. PLANE TRIGONOMETRY *Three hours*

Prerequisite: 101 and 103. Students taking the Pre-Medical course may be admitted if they have had Course 101.

201. PLANE ANALYTICAL GEOMETRY *Three hours*  
Prerequisite: 103 and 104.
202. CONTINUATION OF 201 *Three hours*  
Plane analytical geometry completed. Introduction to solid analytical geometry.
203. SPHERICAL TRIGONOMETRY *Two hours*  
Prerequisite: 102 and 104.
205. BUSINESS MATHEMATICS *Three hours*  
Required for all students of Business Administration. Prerequisite: Math. 101.
206. STATISTICS *Three or four hours*  
Emphasis on statistical methods. Prerequisite: 101 and 104; 103 is highly desirable.  
For Business Administration: Students 205, or its equivalent, is a prerequisite.
301. DIFFERENTIAL CALCULUS *Five hours*  
Prerequisite: 201 and 202.
302. INTEGRAL CALCULUS *Five hours*  
Integral calculus and introduction to differential equations. Prerequisite: 301.
304. DIFFERENTIAL EQUATIONS *Three hours*  
Prerequisite: 301 and 302.
305. THEORY OF EQUATIONS *Two or three hours*  
Prerequisite: 301 and 302.
309. ASTRONOMY — DESCRIPTIVE *Two hours*  
A study of the solar system, the sidereal universe, and the theory of evolution.
- 330m. TEACHERS' COURSE *One hour*  
Discussion of methods of teaching mathematics in secondary schools. Twenty hours of observation work are required.

## Music

### APPLIED MUSIC REQUIREMENTS

#### A. GENERAL

All music majors must pass a sight reading examination in piano during the four-year course of study. The Department of Music strongly advises each student to pass this examination as early in his course as possible. Opportunity for taking this examination will be provided during registration period in September and at the end of the second semester of the school year.

The examination will consist of sight reading a hymn or chorale and a simple piano accompaniment. The candidates must also be able to play the major and minor scales correctly in moderate tempo and should be grounded in correct touch and technique.

#### B. REQUIREMENTS FOR CONCENTRATES IN APPLIED MUSIC

##### I. Concentrates in Piano

Before a student may be accepted as a concentrate in applied music (piano), he must take the general piano sight reading and technical examination listed above. In his repertoire he should have included some of the standard etudes, such as Czerny, Op. 299, Book I; Heller, Op. 46 or 47; Bach, Two-part Invention, and compositions which correspond in difficulty to:

Haydn, Sonata No. 11, G major No. 20 (Shirmer);  
Mozart, Sonata C major No. 3 or F major, No. 13 (Schirmer);  
Schubert, impromptu Op. 142, No. 2, etc.

By the end of the second year of study in college, the student should have sufficient technique to play scales and arpeggi in rapid tempo, scales in parallel and contrary motion, in thirds and sixths and in various rhythms. His repertoire should include works of at least the following grades of difficulty:

Bach, Three-part Inventions and French Suites;  
Beethoven, Sonatas or movements from Sonatas such as Op. 2, No. 1; Op. 14, Nos. 1 and 2, etc.  
Mozart, Sonatas No. 1, F major, or 16, A major (Schirmer Ed.);  
Mendelssohn, Songs Without Words;  
Liszt, "Liebestraum", or transcriptions such as "On Wings of Song";  
Schubert, Impromptu in B flat;  
Chopin, Polonaise C sharp minor, Valse E minor, Nocturne Op. 9, No. 2;  
Schumann, Nocturne F major, Novelette F major;  
Some compositions by standard modern composers of corresponding difficulty.

By the end of the fourth year of study, the student must have a repertoire comprising the principal classic, romantic and modern compositions which should include such works as:

Bach, Chromatic Fantasia and Fugue, toccatas, organ transcriptions by Busoni, Tausig, Liszt, D'Albert;  
Beethoven, later Sonatas such as Op. 53, 57 and a Concerto;  
Brahms, Rhapsody B minor, Sonata F minor;  
Chopin, Ballades, Polonaises, Scherzi, and a Concerto;  
Liszt, Rhapsodies, Paganini Etudes, a Concerto;  
Schumann, Carneval, Concerto;  
Compositions by standard American and foreign modern composers such as MacDowell, Grieg, Rubinstein, Moszkowski, Debussy, Ravel, Rachmaninoff, and others.

##### II. Concentrates in Voice.

Before a student may be accepted as a concentrate in voice, he must be able to sing on pitch with correct phrasing and musical intelligence, standard songs in good English. He should also demonstrate his ability to read a simple song at sight and a knowledge of the rudiments of music. Some knowledge of piano is urgently recommended, and voice students are urged to satisfy the piano sight reading requirement as soon as possible.

##### III. Concentrates in Organ.

Before a student may be accepted as a concentrate in organ, he should have completed sufficient piano study to perform some Bach Inventions, Mozart Sonatas, easier Beethoven Sonatas, compositions by Mendelssohn, Grieg, etc.

At the end of the second year of study, the student's organ repertoire should include the following compositions or works of comparable difficulty:

Bach (Schirmer Edition) Vol. I, No. 12, Prelude.  
Volume II, No. 17, Fugue in G minor.  
Selections from the *Liturgical Year Chorales*.  
Mendelssohn, Sonatas No. II, IV, V.  
Guilmant, Sonata No. IV.  
Compositions for the modern organ by standard American and foreign composers.

At the end of the fourth year, the student should demonstrate the ability to transpose, improvise, modulate and sight read. He should have a large repertoire of organ literature of all schools, classic and modern, of the degree of difficulty comparable to the following:

- Bach, Vol. IV (Schirmer), No. 4, Fantasia and Fugue, G minor;
- Vol. IV, No. 7, Prelude and Fugue, B minor;
- Vol. II, No. 12, Prelude and Fugue, D major;
- Book V, Sonatas;
- Franck, Chorales, Piece Heroique;
- Widor, Symphony, No. V;
- Guilmant, Sonata D minor, No. 1;
- Vierne, Symphony No. 1.

Compositions for modern organ of same grade of difficulty by standard American and foreign composers.

In addition to the above suggested repertoire, the student should reveal an understanding of the place of the organ in the service of the Calvinist churches and should be able to demonstrate ability in sight reading, solo and choral accompaniments.

IV. Students desirous of studying other instruments under the Applied Music concentrate program should consult the Music Department requirements for such work.

The above applied music requirements conform to the standards set up by the National Association of Schools of Music in 1947.

#### THEORY

- 103. THEORY AND HARMONY *Three hours*  
The elements of music: tonality, notation, rhythm. A coordinated study of harmony through the ear, eye, and keyboard. Writing and harmonization of hymn tunes, sight-singing, dictation using primary chords and dominant seventh chords. Laboratory period to be arranged.
- 104. THEORY AND HARMONY *Three hours*  
Continuation of 103.
- 203. THEORY AND HARMONY, ADVANCED *Three hours*  
Continuation of 103-104. Use of all diatonic triads and seventh chords, altered chords, color chords. Problems of composition involving smaller forms. Continuation of sight-singing and dictation.
- 204. THEORY AND HARMONY, ADVANCED *Three hours*  
Continuation of 203.
- 303. COUNTERPOINT, CANON AND FUGUE *Three hours*  
The principles of contrapuntal composition, including a study of species counterpoint and a detailed analysis of Palestrinian counterpoint. Not offered in 1949-1950.
- 304. COUNTERPOINT, CANON AND FUGUE *Three hours*  
Continuation of 303. Not offered in 1949-1950.
- 315. ARRANGING AND CONDUCTING *Three hours*  
The problems involved in writing for orchestra, band, and choir. A survey of the technical limitations of each instrument and of the human voice. Arrangements written by class members will be performed by student organizations whenever practical. One class period will be devoted to conducting, using phonograph records and class ensemble.
- 316. ARRANGING AND CONDUCTING *Three hours*  
Continuation of 315.

#### HISTORY AND LITERATURE

- 211. INTRODUCTION TO MUSIC LITERATURE (MUSIC APPRECIATION) *Three hours*  
General course designed to develop intelligent discrimination in the listener. Structural principles and aesthetic content of music with reference to the various forms and styles will be considered. The course is planned to give a general idea of the entire realm of music and is intended alike for the technical musician and those who wish to become merely intelligent listeners.
  - 212. MUSIC LITERATURE *Three hours*  
Continuation of 211.
  - 219. CHURCH MUSIC *Two hours*  
The history and practice of worship music from the Hebrews and early Christians to the present. The development of Church chant, the Lutheran chorale and the Genevan Dutch psalm-tunes.  
Hymnody in Germany, England and America. The principles of sound worship music and a study of the literature for organ, choir and congregation. Opportunity to conduct hymns and anthems before the class.
  - 220. CHURCH MUSIC *Two hours*  
Continuation of 219.
  - 305. HISTORY OF MUSIC *Three hours*  
The development of the art of music from the earliest times to the present. Oratorio and church music, the opera, songs, and instrumental music. Biographies of composers. Representative compositions of each main period presented in class. Lectures, collateral reading, term papers, and text-book work.
  - 306. HISTORY OF MUSIC *Three hours*  
Continuation of 305.
  - 307. FORM *Three hours*  
A study of the development of musical forms, beginning with the plain-song, masses, motets, madrigals, and continuing through early orchestral and instrumental compositions. The relationship of musical form to problems of tonality, rhythm, unity and variety. Not offered in 1949-1950.
  - 308. FORM *Three hours*  
Continuation of 307. Not offered in 1949-1950.
  - 311. SYMPHONIC LITERATURE. *Three hours*  
A study of the development of the Symphony from the early sonatas, suites, and overtures, through to the modern symphony.
  - 312. SYMPHONIC LITERATURE. *Three hours*  
Continuation of 311. This second semester will be devoted primarily to the symphonic poem.
- #### MUSIC EDUCATION
- 222. ELEMENTARY SCHOOL MUSIC *Three hours*  
Methods of teaching vocal music in the elementary grades, including the teaching of rote songs, tone-production, rhythm bands, music-reading, and a study and evaluation of music materials.
  - 331. SCHOOL MUSIC METHODS I *Three hours*  
A study and evaluation of vocal materials and methods for the elementary grades. A more intensive course than Music 222 for the music major who intends to teach grade school music. Prerequisite: Music Theory 103 or its equivalent. No credit for a student who has credit for Music 222.

332. SCHOOL MUSIC METHODS II *Three hours*

A study and evaluation of vocal methods and materials for the junior and senior high schools, embracing a study of the adolescent child, the changing voice, the music curriculum, the organization and maintenance of vocal ensembles, including the high school choir. Primarily for music majors who plan to teach junior or senior high school music. Prerequisite: Music Theory 103 or its equivalent.

333. INSTRUMENTAL METHODS I—Strings *Three hours*

Problems in the organization of a school instrumental program, beginning with the establishment of elementary school rhythm bands; principles of class instruction in violin, clarinet, and trumpet; evaluation of methods of class instruction; orchestra and band organization; repertoire.

334. INSTRUMENTAL METHODS II—Woodwinds *Three hours*

Same description as 333.

APPLIED MUSIC (Individual Lessons)

117-118. FIRST YEAR VOICE *One hour*

Classification of the voice, vocalizations for tone production. Simple Italian and old English classics to assist in tone production through articulation and diction. Easy oratorio arias. Fee, \$30 per semester.

217-218. SECOND YEAR VOICE *One hour*

Continuation of technical studies for development of the necessary qualities of the individual voice. Additional Italian and English classics. German or French songs introduced. Additional recitatives and arias from oratorios. Fee, \$30 per semester.

317-318. THIRD YEAR VOICE *One hour*

Study of songs with foreign text continued. Additional material from oratorios and selected material from the operatic repertoire. Technical studies likewise continued. Fee, \$30 per semester.

327-328. FOURTH YEAR VOICE *One hour*

Preparation of program for graduation recital, selected from repertoire acquired in previous grades; public recital; appearance with orchestra upon recommendation of the music faculty. Fee, \$30 per semester.

109-110. FIRST YEAR ORGAN *One hour*

Individual lessons in organ. Prerequisite: three years of piano. Fee \$30 per semester plus \$10 per semester for the use of the organ.

209-210. SECOND YEAR ORGAN *One hour*

Individual lessons in organ. Fee \$30 per semester plus \$10 per semester for the use of the organ.

309-310. THIRD YEAR ORGAN *One hour*

Individual lessons in organ. Fee \$30 per semester plus \$10 per semester for the use of the organ.

PIANO

141-2, 241-2, 341-3, 351-2 (4 years). Per semester one hour. Individual lessons in piano. Fee \$30 per semester.

VIOLIN

161-2, 261-2, 361-2, 371-2 (4 years). Per semester one hour. Individual lessons in violin. Fee \$30 per semester.

NOTE: Arrangements will be made for additional private lessons in piano or other instruments for interested students.

APPLIED MUSIC (Groups)

101-102. ORATORIO CHORUS *No Credit*

The study of representative works of the great masters of choral writing with a view to public performance. Händel's *Messiah* is rendered annually at Christmas time. Another oratorio is presented in the spring.

Open to all who meet the requirements of voice and musicianship.

207. A CAPPELLA CHOIR *One hour*

Representative works in the field of choral literature are studied and a limited number of selections prepared for concert performance. Open only to those who meet the demands of voice and musicianship.

208. A CAPPELLA CHOIR *One hour*

Continuation of 207.

213-214. BAND *One hour per Semester*

215-216. ORCHESTRA *One hour per Semester*

Philosophy

Students who plan to major in Philosophy should, before the beginning of their junior year, confer with a member of the departmental staff.

202. LOGIC *Three hours*

A course in traditional and elementary symbolic logic. This is a semester course which is offered both in the first semester and in the second. Not open to freshmen.

203. INTRODUCTION TO PHILOSOPHY *Three hours*

A study of the aims and methods of critical reflection and a discussion of representative philosophical problems. Not open to freshmen. No prerequisite.

203A. INTRODUCTION TO PHILOSOPHY *Three hours*

Continuation of 203.

204. HISTORY OF PHILOSOPHY: ANCIENT *Three hours*

An examination of the philosophical question raised by the Greek mind and an attempt to trace the implicit movement in the preferred solutions. For students taking only six hours of philosophy, 203 is prerequisite.

301. HISTORY OF PHILOSOPHY: MEDIEVAL *Three hours*

A study of the Christian philosophical synthesis. Special attention is given to St. Augustine and St. Thomas Aquinas. Prerequisite: 204.

302. HISTORY OF PHILOSOPHY: MODERN *Three hours*

A study of the development of philosophical thought from the Renaissance to Hegel. Prerequisite: two semesters of philosophy.

303. HISTORY OF PHILOSOPHY: RECENT *Three hours*

An examination of the leading thought movements of the last 100 years. Prerequisite: 302.

304. METAPHYSICS *Three hours*

An attempt, through a consideration of ontological and cosmological problems, to lay bare the outlines of a philosophical system. Prerequisite: 302.

305. ETHICS *Three hours*  
 A course in moral philosophy conducted by way of a critical evaluation of rival ethical theories. Open to Juniors and Seniors. Prerequisite: two semesters of philosophy.

306. THE PHILOSOPHY OF THOMAS AQUINAS *Three hours*  
 A course in Thomistic thought based upon a critical analysis of the Summae. Prerequisite: 301. Open only to Seniors.

### Physical Education

Students desiring the degree of A.B. in Education may obtain a minor in this department. They should select twelve hours from the courses listed here; the remaining three hours they should select from the following: Organic Science 105, and 210.

103. PERSONAL HYGIENE *Three hours*  
 The proper care of our bodies and approved practices for the prevention of disease are studied.

104. PRINCIPLES AND METHODS OF PHYSICAL EDUCATION *Two hours*  
 Traces the history of Physical Education from its early origin to present-day trends. Considers the relation of Physical Education to life and ideas. Acquaints the student with the profession of Physical Education.

203. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION *Two hours*  
 A study of the representative programs of Physical Education and evaluation of these programs. Offered in 1949-1950.

204. COMMUNITY RECREATION *Two hours*  
 A study of the development, administration, and use of leisure time within the community and of the community agencies organized to meet present-day recreational needs. Offered in 1949-1950.

205. COACHING OF BASKETBALL *Two hours*  
 A consideration of the fundamentals that make up the game of basketball; team conditioning, styles of play, and team strategy.

206. COACHING OF SPRING SPORTS *Two hours*  
 A study of the fundamentals of Track, Tennis, and Golf. Methods of teaching and coaching of these sports are also discussed.

### SPECIAL PHYSICAL EDUCATION COURSES FOR GIRLS

221. SPRING SPORTS FOR GIRLS *Three hours*  
 A study of the background, fundamentals, and coaching methods of Tennis, Golf, Badminton, Archery, and Softball. Not offered in 1949-1950.

223. TEACHING OF PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS *Three hours*  
 Theoretical and practical methods in the teaching of play activities to children of the elementary grades. Not offered in 1949-1950.

### Physics

101. ELEMENTARY PHYSICS *Three hours*  
 Mechanic, sound, and heat. Adapted to pre-nursing, medical technology students and normal students preparing to teach general science. Accompanied with exercises and demonstrations. No laboratory.

102. ELEMENTARY PHYSICS *Three hours*  
 Magnetism, electricity, and light. Adapted to pre-nursing, medical technology students and normal students preparing to teach general science. Accompanied with exercises and demonstrations. No laboratory.

201. GENERAL PHYSICS *Four hours*  
 Mechanics, sound, and heat. Prerequisite: plane trigonometry. Three recitations and one two-to-three-hour laboratory period a week. Laboratory fee, \$3.00.

202. GENERAL PHYSICS *Four hours*  
 Electricity and light. Continuation of 201. Three recitations and one two-to-three-hour laboratory period a week. Laboratory fee, \$3.00.

201E. GENERAL PHYSICS *Five hours*  
 Mechanics, sound, and heat. (Required of all engineering students.) At least half the semester is devoted to elementary mechanics; the remainder of the time to sound and heat. Many experimental illustrations. Four recitations and one two-to-three-hour laboratory period a week. Prerequisite: plane trigonometry and a preparatory course in physics. Laboratory fee, \$3.00.

202E. GENERAL PHYSICS *Five hours*  
 Electricity and light. (Required of all engineering students.) A continuation of 201E. It takes up the fundamental phenomena and laws of electricity and light with ample class illustrations. Four recitations, and one two-to-three-hour laboratory period a week. Laboratory fee, \$3.00.

203. PHYSICS PROBLEM COURSE *One hour*  
 Should be preceded by or accompany 201 or 201E. This course consists of the solution and discussion of problems in mechanics, sound, and heat. One recitation a week.

204. PHYSICS PROBLEM COURSE *One hour*  
 A continuation of 203. One recitation a week.

304. MODERN PHYSICS *Three hours*  
 A study of physics beginning with the discovery of radioactivity, electricity, the nature of radiant energy, x-ray, atomic spectra. Discussion of subjects such as the atomic nature of matter and molecular structure and radioactivity. Prerequisite: Physics 202 or 202E.

305. SURVEY COURSE *Two hours*  
 A non-mathematical presentation of the fields of physics accompanied with demonstrations. Those concentrating in science do not receive credit for this course. No prerequisite. Offered odd years.

### Political Science

History 303 and History 304 (Foreign Relations) may be taken to satisfy requirements for a major in *either* History or Political Science, but they may not be used to satisfy requirements in both departments.

101. GOVERNMENT OF MODERN STATES *Three hours*  
 The organization and operation of modern governments. Emphasis is placed on British and Continental European governments with a special regard for recent political developments in these countries. Lectures and collateral reading.

102. GOVERNMENT OF MODERN STATES *Three hours*  
 Continuation of 101, which is prerequisite.

201. PRINCIPLES OF POLITICAL SCIENCE *Three hours*  
(Formerly Political Science 301 — Introduction to Political Science.)  
An analysis of problems dealt with in Political Science, including the origin, nature, and essential functions of the state; the nature of sovereignty and law; and relations of government to the individual. Lectures and collateral reading. Not open to freshmen.
202. PRINCIPLES OF POLITICAL SCIENCE *Three hours*  
Continuation of 201, which is prerequisite.
303. AMERICAN NATIONAL GOVERNMENT *Three hours*  
Basic principles and their practical application to the operation of the Federal constitution. The interpretation of the constitution by the various branches and departments of government, and the extension of government into the socio-economic field.
304. AMERICAN NATIONAL GOVERNMENT *Three hours*  
Continuation of 303, which is prerequisite.  
NOTE: *Foreign Relations.* See History 303 and 304.

### Psychology

201. INTRODUCTORY PSYCHOLOGY *Three hours*  
A general course in psychology for beginners. This course is given during both semesters.
202. EDUCATIONAL PSYCHOLOGY *Three hours*  
Course 201, or its equivalent, is a prerequisite.
204. CHILD PSYCHOLOGY *Three hours*  
A study of the physical and mental development of the child. Course 201, or its equivalent, is a prerequisite.
301. MENTAL HYGIENE *Two hours*  
A study of personal attitudes toward reality and the solution of maladjustment by means of integration.
312. THE PSYCHOLOGY OF ABNORMAL PEOPLE *Three hours*  
A study of disorders of sensation, perception, association, and so forth. Some study is made of hypnosis, hysteria, and other subjects usually considered under the heading of abnormal psychology, and especially, too, the phenomena and problems of the psychoses. Psychology 201, or its equivalent, is a prerequisite. This course is open only to seniors and to pre-medical and pre-law students of the junior year who are in their last year of residence.

### Sociology

203. PRINCIPLES OF SOCIOLOGY *Three hours*  
A study of the structure, functions and changes of social groups, stressing the important role that group relationships play both for the individual and for society. Fundamental concepts are discussed and an introductory view of the general field of sociology is presented. Not open to freshmen, except by special permission.
204. SOCIAL PROBLEMS *Three hours*  
An investigation of the primary and secondary causes of social maladjustments in general and a survey of a number of major social problems confronting American society. These include population problems, poverty, crime and delinquency, divorce, race and minority cleavages, and problems of farm and village. It is desirable, but not necessary, to precede this course with 203.

206. RURAL SOCIOLOGY *Three hours*  
A study of contemporary farm and village social organization and of problems arising in the rural framework. The suburban, or "fringe", development is considered as well as urban-rural relationships. 203 is a prerequisite except for those who are working towards a two-year State Limited Certificate.
303. LABOR PROBLEMS *Three hours*  
This course is described under Economics.
304. THE FAMILY *Three hours*  
This course will be adapted to suit the needs of the students. It aims, however, at an intensive study of the history of the family as a social and educational institution, and at a thorough discussion of the divorce problem and other problems connected with modern family life. Prerequisites: 203 and 204, or their equivalents.
305. THE FIELDS OF SOCIAL WORK *Three hours*  
A survey of the various types of social work, including individual case work, group work, and community organization. Agencies set up to work with deviate forms of behavior and situations are studied both theoretically and in operation. Should be valuable for teachers as well as those contemplating doing social work.
306. CRIMINOLOGY AND DELINQUENCY *Three hours*  
A study of the primary and secondary causes for, manifestations of, and ameliorative and preventive programs for criminal and delinquent behavior. Emphasis is placed on the implications for various community institutions, including school and church.
309. EDUCATIONAL SOCIOLOGY *Three hours*  
This course is offered in the department of Education.
315. SOCIAL CASE WORK *One hour*  
Sociology students interested in social work have the opportunity of doing volunteer case work for agencies affiliated with the Grand Rapids Community Chest. Where satisfactory arrangements have been made, the college allows one hour of credit per semester for such work.
320. PROSEMINAR IN SOCIOLOGICAL RESEARCH *Two hours*  
How to set up a problem for research, techniques of collecting data, sources of data, uses of tables and charts, and the preparation of research reports. Prerequisite: At least 12 hours of Sociology. Open to seniors only and by permission. Taught both semesters.
- 330m. METHODS OF TEACHING SOCIAL PROBLEMS *One or two hours*  
A study of the methods of teaching sociology, social problems and similar courses on the secondary level. Prerequisite: Five of the courses offered in this department. Offered first or second semesters to meet the convenience of the students interested.

### STATISTICS

A course in statistics is offered in the Mathematics department. Students majoring in Sociology should consult the Dean when making their arrangements for a major in this field.

## Speech

A student wishing to major in Speech should consult one of the members of the staff.

### PRACTICE-THEORY COURSES

101. SPEECH FOR THE ELEMENTARY TEACHER *Two hours*  
Methods and materials relative to story telling in the early grades.
103. FUNDAMENTALS OF SPEECH — I *Two hours*  
Basic principles of public speaking on the college level, with the aim of developing proper mental, vocal, and physical habits.
104. FUNDAMENTALS OF SPEECH — II *Two hours*  
Continuation of 103, with emphasis on longer speeches, rhetoric, and special applications such as discussion, debate, parliamentary practice, etc. Prerequisite: Course 103.
204. ANCIENT ORATORS AND THEORIES OF SPEECH *Two hours*  
Analytical study of ancient orators and rhetorical theory, pre-Demosthenes through Quintillian. Not open to Freshmen.
205. ADVANCED SPEECH COMPOSITION *Two hours*  
Study of the psychological and rhetorical techniques involved in speech composition. Speeches and oration. Intended particularly for juniors in the pre-Seminary course.
207. INTRODUCTION TO SPEECH BASED ON THE GREAT BOOKS *One hour*  
Prerequisite to Course 208. A study of Adler's *How to Read a Book* intended to prepare the student for careful and critical reading of the Great Books chosen as basic for work in 208. Open to Freshmen by permission.
208. SPEECH BASED ON THE GREAT BOOKS *Two hours*  
Each student will choose one of the books from the Adler list and use it as a basis for his speeches during the semester. Emphasis on speech. Prerequisite: Course 207.
301. ADVANCED SPEECH *Two hours*  
A practice course, designed for pre-Seminary students. Open to others only by permission.
303. INTERPRETATIVE READING (Formerly 201) *Two hours*  
The principles of interpretation and expression. Oral interpretation of representative selections. Prerequisite: Course 103.
304. ADVANCED INTERPRETATION *Two hours*  
Continuation of 303, being its application to a broader range of material, interpretation of the drama, choral reading, recitals.
309. SPEECH FOR THE CLASSROOM TEACHER *Three hours*  
Designed to: (1) improve the prospective teacher's vocal habits; (2) train in the detection, appreciation, and handling of speech defects encountered in the classroom; (3) aid the prospective coach of forensic programs. Open only to juniors and seniors in Education, and others by permission.
311. ORAL DISCUSSION AND DEBATE *Two hours*  
Theory and practice of discussion and debate in their various forms.

## FORENSICS

209. INTERCOLLEGIATE PEACE ORATORY (Formerly 305) *One hour*
211. INTERCOLLEGIATE ORATORY (Formerly 307) *One hour*
310. INTERCOLLEGIATE INTERPRETATIVE READING *One hour*
312. INTERCOLLEGIATE DEBATING *One hour*

### SUMMARY OF ATTENDANCE

Seniors .....	205
Juniors .....	379
Sophomores .....	362
Freshmen .....	432
Unclassified .....	28
Summer School .....	345
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