Calvin College
An Institution of the Christian Reformed Church

BULLETIN
1952-1953

GRAND RAPIDS, MICHIGAN
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
1952 - 1953

1952

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Re-examinations ................................ September 5
Enrollment of Juniors, Seniors,  
and Sophomores .............................. September 8 and 9
Freshman enrollment and Orientation  .. September 10 and 11
Classes 7:50 A.M.-9:30 A.M.  
and 1:30 P.M.-5:00 P.M. .................. September 12
Convocation 10:00 A.M. ................. September 12
Thanksgiving recess ....................... November 27-30
Christmas vacation begins .............. December 19, 12:00 Noon

1953

Christmas vacation ends ..................... January 6, 7:50 A.M.
Final examinations begin ................. January 12
First semester closes ..................... January 21
Registration for the second semester .. January 21-23
Meeting of Board of Trustees ............ In February
Spring vacation begins ..................... March 25, 12:00 Noon
Spring vacation ends ....................... April 2, 7:50 A.M.
Re-examinations ............................ April 3 and 4
Final examinations begin .................. May 15
Commencement .............................. May 28

Summer Session

Enrollment ..................................... June 22, 9:00 A.M.
Classes begin .................................. June 23, 8:15 A.M.
Independence Day recess .................... July 4
Summer session closes ..................... July 31

General Session 1953 - 1954

Faculty conferences ......................... September 9 and 10
Re-examinations .............................. September 11
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851 Calvin Avenue, S.E. Telephone 3-8438

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Professor of Mathematics
1557 Philadelphia Avenue, S.E. Telephone 5-6752

Richard Drost, Ph. D.
Professor of History
1220 Sherman Street, S.E. Telephone 5-0951

Cornelius Jaarsma, Ph.D.
Professor of Education
2229 College Avenue, S.E. Telephone GL2-3649

Henry Zystra, Ph. D.
Professor of English
711 Benjamin Avenue, S.E. Telephone 3-5413

Theodore Dirksse, Ph. D.
Professor of Chemistry
51 Fitzhugh Avenue, S.E. Telephone 8-3409

Henry A. Brunsma, Ph. D.
Professor of Music
1307 Philadelphia Avenue, S.E. Telephone 5-2438

Cecil deBoer, Ph. D.
Professor of Philosophy
820 Henry Avenue, S.E. Telephone GL2-6280

John Thomas Daling, Ph. D.
Associate Professor of Philosophy and Psychology
West Leonard Road, RFD 5 Telephone 6MA 3186

John J. Timmerman, Ph. D.
Associate Professor of English
1139 Neland Avenue, S.E. Telephone 5-0697

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1017 Alto Avenue, S.E. Telephone GL2-2176
William Spoelhof, Ph. D.
Associate Professor of History
1315 Alexander Street, S.E.

Earl Strikwerda, Ph. D.
Associate Professor of History
1231 Franklin Street, S.E.

Henry R. Van Til, A. B., Th. M.
Associate Professor of Bible
933 Hancock Street, S.E.

John Harold Bratt, A. B., Th. M.
Associate Professor of Bible
815 Alto Avenue, S.E.

James J. De Jonge, M.S., M. Mus.
Associate Professor of Music
1300 Calvin Avenue, S.E.

Martin Karsten, M. S.
Associate Professor of Biology
1491 Eastern Avenue, S.E.

John Tuls, A. M.
Associate Professor of Mathematics
101 Fuller Avenue, S.E.

Donald Herbert Bouma, Ph.D.
Associate Professor of Sociology
1401 Johnston Avenue, S.E.

Clarence Boersma, Ph. D.
Associate Professor of German
365 Richard Terrace, S.E.

Enno Woltz, Ph. D.
Associate Professor of Chemistry
1050 Sherman Street, S.E.

Cornelius A. Plantinga, Ph. D.
Associate Professor of Psychology
1060 Bates Street, S.E.

John Weidenaa, A. B., Th. B.
Associate Professor of Bible
1209 Dunham Street, S.E.

John Lester De Beer, Ed. D., Dean of Students
Associate Professor of Education
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Librarian
923 - 11th Street, N.W.

Catherine Van Opvyn, A. M.
Dean of Women
814 N. Ottilia Street, S.E.

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Assistant Professor of English
330 Diamond Avenue, S.E.

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Assistant Professor of Biology
1201 Sigbee Street, S.E.

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Assistant Professor of Speech and Director of Library
Thornapple River Drive, R. R. #3

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420 Ethel Avenue, S.E.

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Instructor in Economics and Business Administration
1318 Adams Street, S.E.

Helen Van Laar, A. M.
Instructor in Education
1319 Sigbee Street, S.E.

Shirley Balk, M. Mus.
Instructor in Music
2417 Brooklyn Street, S.E.

Henry P. Ippel, A. M.
Instructor in Political Science and History
1327 Hope Street, S.E.

Calvin Andre, Ph.D.
Instructor in Physics

Arthur J. Otten, A. M.
Instructor in French
1124 Bates Street, S.E.

George Graham Harper, A. M.
Instructor in English
1731 E. Burton Street, S.E.

Jan William Kingma, A. B.
Assistant in Dutch
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Robert T. Otten, A. M.
Assistant in Latin
700 Rosewood Avenue, S.E.

Ann Janssen, A. M.
Assistant in Speech and English

Bastiaan Van Elderen, A. B., Th. B.
Assistant in Ancient Languages
1116 Watkins Street, S.E.

David Tuuk, A. M.
Assistant Basketball Coach
1336 Dunham Street, S.E.

Committees of the Faculty
1952 - 1953

Athletics—De Vries, Bouma, Ippel, Karsten, Tuls.
Chapel and Radio—Bratt, Balk, De Beer, De Jonge, De Koster, Meeter, Van Til.
CALVIN COLLEGE

WILLIAM SPOELHOF, PH. D.
Associate Professor of History
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EARL STRIKWERDA, PH.D.
Associate Professor of History
1201 Franklin Street, S.E.

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Associate Professor of Bible
936 Hancock Street, S.E.

JOHN HAROLD BRATT, A. B., TH. M.
Associate Professor of Bible
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Telephone 5-1776
Telephone GL2-4689
Telephone 8-5744
Telephone 5-1689
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Committees of the Faculty
1952-1953

ATHLETICS—De Vries, Boss, Ippel, Karsten, Tuls.
CHAPEL AND RADIO—Bratt, Balk, De Beer, De Jonge, De Koster, Meeter, Van Til.
Discipline—Hoekstra, De Beer, Monsma, Timmerman, Van Opynen, Woltius.


Faculty Social and Special Academic Activities—Radius, Berghuis, Dekker, Harper, Slingerland, Swets.

Faculty and Students Co-Operation—Slingerland, Andre, Bengelink, Strikwerda.

Library—Zylstra, Bruinisma, Dirkse, Jellema, Radius, Strikwerda.

Placement Bureau—Fokstra, Jaarsma, Van Laar.

Pre-Seminary Students Recommendations—R. Stob, Dekker, De vries, Meeter, Ryskamp.

Recreation—Monsma, Bruinisma, De Boer, Slingerland.

Scholarship and Guidance—Dekker, De Beer, Meeter, Ryskamp, R. Stob, Tuls, Van Opynen, Van Til.

Student Housing and Dining Hall—Daling, Bengelink, De Beer, Drost, Muyskens, Slingerland, Van Opynen, Van Til, Was-sink.


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

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.
DISCIPLINE—Hoekstra, De Beer, Monsma, Timmerman, Van Opynen, Wolthuis.


FACULTY SOCIAL AND SPECIAL ACADEMIC ACTIVITIES—Radius, Berghuis, Dekker, Harper, Slingerland, Swets.

FACULTY AND STUDENTS CO-OPERATION—Slingerland, Andre, Bengelink, Strikwerda.

LIBRARY—Zylstra, Bruinisma, Dirkse, Jellemse, Radius, Strikwerda.

PLACEMENT BUREAU—Flokstra, Jaarsma, Van Laar.

PRE-SEMINARY STUDENTS RECOMMENDATIONS—R. Stob, Dekker, De vries, Meeter, Ryskamp.

RECREATION—Monsma, Bruinisma, De Boer, Slingerland.

SCHOLARSHIP AND GUIDANCE—Dekker, De Beer, Meeter, Ryskamp, R. Stob, Tuls, Van Opynen, Van Til.

STUDENT HOUSING AND DINING HALL—Daling, Bengelink, De Beer, Drost, Muyskens, Slingerland, Van Opynen, Van Til, Wassink.


Divisional and Departmental Organization

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   (b) Department of Philosophy
   (c) Department of Education
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   (e) Department of Psychology

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   (a) Department of Classical Languages
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   (c) Department of Modern Languages
   (d) Department of Art
   (e) Department of Music
   (f) Department of Speech

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   (a) Department of Economics and Sociology
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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.
ADMISSION

A. 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 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.

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 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

II. One major sequence (3 units) and two minor sequences (2 units each) are to be chosen from Groups A, B, C, D.

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

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 ....... ½ or 1 unit
Solid geometry ...... ½ unit
Trigonometry ...... ½ unit
Physics ............. 1 unit

0, 2, 3

C. NATURAL SCIENCE GROUP

Biology ............. 1 unit
Botany .............. 1 unit
Chemistry .......... 1 unit
General Science .... 1 unit
Physics ............. 1 unit
Zoology ............ 1 unit

0, 2, 3

D. SOCIAL STUDIES GROUP

Ancient history, 1 unit
European history, 1, ½, or 2 units
American history, ½ or 1 unit
American government, ½ unit
Economics, ½ unit

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.

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

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, 1½ units of algebra, 1 unit of geometry, 1 unit of high school chemistry, 1 unit of high school physics, and two units of high school Latin.

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 by passing examinations satisfactorily they can meet the other requirements of Plan A. Further particulars regarding such examinations may be obtained from the Dean.
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.

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 .................. ½ or 1 unit  Trigonometry .................. ½ unit
   Solid geometry .................. ½ unit  Physics .................. 1 unit 0, 2, 3

C. NATURAL SCIENCE GROUP
   Biology .................. 1 unit  General Science .................. 1 unit
   Botany .................. 1 unit  Physics .................. 1 unit
   Chemistry .................. 1 unit  Zoology .................. 1 unit 0, 2, 3

D. SOCIAL STUDIES GROUP
   Ancient history, 1 unit
   European history, 1, 1½, or 2 units
   American history, ½ or 1 unit
   American government, ½ unit
   Economics, ½ 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.

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

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, 1½ units of algebra, 1 unit of geometry, 1 unit of high school chemistry, 1 unit of high school physics, and two units of high school Latin.

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 servicemen. Further information or counsel will be furnished gladly upon request.

Advanced Standing

ADVANCED STANDING (in other words, college credit) is granted in the following cases:

1. When the applicant submits from an accredited college, junior college, or college of education, 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. The limit of such college credit allowance is six hours.

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

APPLICANTS 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.
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.

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Applicants 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 RATES

Tuition and fees for the semester are due by October 1 for the first semester, and February 15 for the second semester. Accounts not paid by these dates are past due and are subject to a $2.00 late payment fee. Students who have not paid their account by the end of the semester will not be permitted to take examinations.

REGULAR TUITION FEE

The regular tuition is $175.00 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.

Local Zone (extending up to ten miles from Calvin College Campus)

For students residing within this zone the tuition is $125.00 per semester. For two students from one family residing within this zone the tuition for each is $105.00 per semester.

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

For students residing within these zones the tuition is $115.00 a semester. For two students from one family residing in the region defined, the tuition for each is $96.50 a semester.

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

For students residing within these zones the tuition is $85.00 a semester. For two students from one family residing in the region defined, the tuition for each is $68.00 a semester.

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

For students residing within these zones the tuition is $50.00 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 basis of the province in which each resides.

Manitoba, Ontario and Quebec Provinces.

For students residing in these provinces the tuition is $85.00 per semester. For two students from one family residing in these provinces the tuition for each is $68.00 per semester.

Alberta, British Columbia and Saskatchewan Provinces.

For students residing in these provinces the tuition is $50.00 per semester. This is the minimum tuition.

Foreign Countries. (Parents not missionaries).

For students from foreign countries other than Canada, who are members of a Reformed Church, the tuition is $50.00 per semester as long as the student is in the United States on a student visa. If the foreign student intends to become a citizen of the United States, and has taken out his papers, he will receive the reduced rate for only two semesters after taking out his first papers, after which time his rate will be based on the zone in which he lives in the United States.

Children of Missionaries of the Christian Reformed Church.

For students under twenty-one years of age, whose parents are foreign missionaries of the Christian Reformed Church, still active in service, there will be no tuition charge.

Students who are members of the Christian Reformed Church, but whose parents are not.

For students who are members of the Christian Reformed Church, but whose parents are not, the tuition is based on the zone in which the Christian Reformed Church of which the student is a member is located.

Married Students.

In calculating the tuition of married students residence is determined as follows:

The residence of a married student is considered that of his former established home until he has resided in the local zone for two semesters.

For married students who can give evidence of the fact that they return to their former established home during the entire summer vacation, and are gainfully employed while there, the tuition is the amount charged in the zone of their former established home.
STUDENT EXPENSES

TUITION RATES

Tuition and fees for the semester are due by October 1 for the first semester, and February 15 for the second semester. Accounts not paid by these dates are past due and are subject to a $2.00 late payment fee. Students who have not paid their account by the end of the semester will not be permitted to take examinations.

REGULAR TUITION FEE

The regular tuition is $175.00 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.

Local Zone (extending up to ten miles from Calvin College Campus)

For students residing within this zone the tuition is $125.00 per semester. For two students from one family residing within this zone the tuition for each is $105.00 per semester.

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

For students residing within these zones the tuition is $115.00 a semester. For two students from one family residing in the region defined, the tuition for each is $96.50 a semester.

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

For students residing within these zones the tuition is $85.00 a semester. For two students from one family residing in the region defined, the tuition for each is $68.00 a semester.

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

For students residing within these zones the tuition is $50.00 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 basis of the province in which each resides.

Manitoba, Ontario and Quebec Provinces.

For students residing in these provinces the tuition is $85.00 per semester. For two students from one family residing in these provinces the tuition for each is $68.00 per semester.

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For students residing in these provinces the tuition is $50.00 per semester. This is the minimum tuition.

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For married students who can give evidence of the fact that they return to their former established home during the entire summer vacation, and are gainfully employed while there, the tuition is the amount charged in the zone of their former established home.
OTHER FEES

Organization Fee
All students pay an organization fee of four dollars each semester for the benefit of all-school activities.

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

Unclassified Student Fee
Unclassified students pay at the rate of twelve and one-half dollars for each semester hour; members of the Christian Reformed Church, nine dollars.

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.

Directed Teaching Fee
A practice fee of ten dollars a semester is paid by students who register for Directed Teaching.

Graduation Fee
The general graduation fee, including diploma, is ten dollars. The charge for a second diploma on the combined curriculum or like plan is $5.00.

Late Registration Fee
A fee of five dollars will be charged for late registration.

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

Summer Session Fee
The tuition fee is nine dollars per semester hour of credit.

Individual Lessons Fee
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 Fee
All students are charged a locker fee of one dollar per year.

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

STUDENT EXPENSES

If a student withdraws voluntarily and in good standing within two weeks after the first day of enrollment, tuition and all fees, except $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
Living Expenses, including board, room rent, fuel, light, laundry, and text books are from $700.00 up per year.

HOUSING

Housing for Men
Out-of-town men students are housed in private homes in the vicinity of Calvin College. The college keeps on file a list of approved rooming places. The average cost for rooms is about $5.00 per week per person. Students desiring rooms are advised to select their rooming places in August or immediately upon arrival in Grand Rapids for registration. Out-of-town men students must stay in a home on the approved list or at near relatives. If the place in which they desire to stay is not on the approved list they must obtain approval from the Dean of Students before renting the room.

Board for Men
A few of the homes offering lodging also offer to serve meals to men students. If out-of-town men students are not boarding with relatives or at a home or apartment on the approved list they may eat at the college cafeteria, where the cost for food runs about $180 per semester, depending on changes in the food costs.

Housing and Board for Women
All out-of-town freshman women must live in a school housing facility (cooperative house or dormitory) unless working for room and board or living with near relatives.

The college dormitory on Giddings Avenue provides living accommodations for about 70 women students. Both upper class and freshman women students may apply for admission to the Dormitory. Communications should be addressed to the Dean of Women, Calvin College. Board and room fees total approximately $250.00 per semester.

Three semi-cooperative homes in the southeast section of the city are maintained by the college and provide freshman 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
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room and board, net expenses amounting to about $215.00 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 year, 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 women 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 approved 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 own living. 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.

Apartments

A limited number of apartments is usually available for small groups of men or women who desire to do their own cooking. Permission to stay in an apartment must be obtained from the Dean of Students, for men, and from the Dean of Women, for women students. All apartments must be on the approved list. Freshmen are not permitted to stay in apartments.

All rates quoted for rooms and board are approximations and are subject to change.

Use of Automobiles

Calvin College does require students driving automobiles to have them registered with the college. There are certain regulations on parking of automobiles by students during school hours. No student parking is permitted on the main campus. Students must park their automobiles in the college parking lot east of the campus, on the campus side of the street where parking is permitted, or around Franklin Park. Students parking in areas other than those mentioned above are subject to disciplinary action.

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 January 15.

Rhodes Scholarship.—Male students in the junior and senior years may apply for nomination to the Cecil Rhodes Scholarship. It is important that you should note the following points:

1. Applications should be in the hands of the secretaries of state committees as early as possible in October, and in any case not later than October 29th.

2. Veterans are eligible to compete, provided they are single and provided they fulfill the age and academic requirements.

3. The stipend will have its pre-war value of 500 pounds, supplemented for the present by a special allowance of 100 pounds per year. Veterans who are suitably qualified for benefits under the G. I. Bill of Rights may, of course, receive those benefits as in the past.

More specific information may be obtained from the Calvin College Registrar.

Freshman Scholarship.—Christian High School Graduates. 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.
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For those women 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 approved boarding 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.

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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.

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(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 a three- or four-year 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.

6. Applications should be in the hands of the Registrar not later than May 1.

**Freshman Scholarship—Public High School Graduates.**

Calvin College offers a scholarship consisting of free tuition for the Freshman year to a member of the graduating class in each of five accredited public high schools of the United States and two in Canada, provided:

1. The applicant is a member of the Chr. Ref. Church.

2. The applicant can give evidence that he or she was unable, because of lack of opportunity, to attend a Christian high school. Reasons for not attending a Christian high school should be explained.

3. The applicant is recommended for the scholarship by the faculty of the high school in accordance with the same conditions as are listed above under Freshman Scholarship—Christian High School Graduates.

Applications should be in the hands of the Registrar not later than May 1.

**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.

**Oratorio Society Tuition Scholarships 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. Also, one applied music fee scholarship is offered for a vocal student.**

Applications for these scholarships should be made with the Chairman of the Music Department, or on or before August 1.

**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.

**Dr. Harry Kok Memorial Scholarship.** The Late Dr. Harry Kok, in his Last Will and Testament, bequeathed to Calvin College certain assets to be used for a scholarship award, made annually to a pre-medical student.

"Out of the income received from said property there shall be paid, each year for fifteen (15) consecutive years, [beginning September, 1952] a scholarship of $400.00 to such male student who has taken his pre-medical work at Calvin College and Seminary and shall be selected by the Board of Trustees thereof, said payment to be made to him upon his matriculation at an accredited medical college which awards the degree of Doctor of Medicine."

Students interested should file application with the Registrar, although final award need not necessarily be limited to the student who has made formal application.

**Fulbright Scholarships.** Awards under the Fulbright Act are a part of the educational exchange program of the Department of State. The objectives of this program are to promote better understanding of the United States abroad, and to increase mutual understanding between the people of the United States and the people of other countries.

Eligibility requirements:

1. United States citizenship.

2. A college degree or its equivalent at the time award is to be taken up.
(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 a three- or four-year 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.

6. Applications should be in the hands of the Registrar not later than May 1.

Freshman Scholarship—Public High School Graduates.

Calvin College offers a scholarship consisting of free tuition for the Freshman year to a member of the graduating class in each of five accredited public high schools of the United States and two in Canada, provided:

1. The applicant is a member of the Chr. Ref. Church.

2. The applicant can give evidence that he or she was unable, because of lack of opportunity, to attend a Christian high school. Reasons for not attending a Christian high school should be explained.

3. The applicant is recommended for the scholarship by the faculty of the high school in accordance with the same conditions as are listed above under Freshman Scholarship—Christian High School Graduates.

Applications should be in the hands of the Registrar not later than May 1.

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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.

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Eligibility requirements:

1. United States citizenship.

2. A college degree or its equivalent at the time award is to be taken up.
3. Knowledge of the language of the country sufficient to carry on the proposed study.

4. Good health.

Students interested should confer with the college Fulbright Advisor.

Prizes and Awards

ALUMNI PRIZE.—The Alumni Association offers an annual prize of $15.00 based upon scholarship. For the year 1951-1952 the award was made for special excellence in the department of German.

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.

THE DR. BEETS MEMORIAL PRIZE CONTEST

The Eastern Wisconsin Ladies Missionary Union is sponsoring an essay contest for the school year 1951-52, in memory of the late Dr. Henry Beets, who was the originator of the Missionary Unions and an ardent worker for the cause of Christ in the mission program of our denomination. First and second prizes of $50.00 and $25.00 respectively will be awarded to the students submitting the best essays on some phase of mission interest. The essays should be between 1,500 and 2,000 words and two neatly type-written copies should be submitted to the Bible Department before April 1. The teachers in the Bible Department will serve as judges.

The essays which are submitted in this contest may be used as term papers in other departments such as Bible and English, providing this has the approval of the professors concerned and the essays meet the standards set for such papers by the department.

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."

ANNA BRUINEMA PRIZE IN MUSIC.—The interest of $750, given by Mr. H. J. Bruinema 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.

THE WILLIAM J. YONKER PRIZE.—Dr. and Mrs. William J. Yonker of Chicago, for the year 1952-53, offer a prize of $15.00 for the best essay and a prize of $10.00 for the second best essay on a subject bearing on the Evangelization of the Jews. The contest is open to all College students.

Mr. William B. Eerdmans, Sr., in the interest of encouraging originally expressive writing among Calvin students, has established

THE WILLIAM B. EERDMANS LITERARY AWARDS

Under the terms of the foundation three awards

1st: $35.00  2nd: $25.00  3rd: $15.00

will be made for the three pieces judged best among the contributions to each issue of the Calvin College Student Literary Review published in any given year. Any type of original writing submitted to the Review is eligible for an award, whether it be poetry, fiction, or essay, creative or critical, seriously reflective or delightfully amusing.

YOUNG CALVINIST FEDERATION ORATORICAL CONTEST TUITION AWARDS

The Bergsma Brothers Foundation of Grand Rapids, Michigan, grants tuition awards to two contestants in the National Ora-
3. Knowledge of the language of the country sufficient to carry on the proposed study.

4. Good health.

Students interested should confer with the college Fulbright Advisor.

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Broedman Oratorical Prizes.—Through the generosity of Dr. G. J. Broedman 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.

Student Aid

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."

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.

The William J. Yonker Prize.—Dr. and Mrs. William J. Yonker of Chicago, for the year 1952-53, offer a prize of $15.00 for the best essay and a prize of $10.00 for the second best essay on a subject bearing on the Evangelization of the Jews. The contest is open to all College students.

Mr. William B. Eerdmans, Sr., in the interest of encouraging originally expressive writing among Calvin students, has established

The William B. Eerdmans Literary Awards

Under the terms of the foundation three awards

1st: $35.00  2nd: $25.00  3rd: $15.00

will be made for the three pieces judged best among the contributions to each issue of the Calvin College Student Literary Review published in any given year. Any type of original writing submitted to the Review is eligible for an award, whether it be poetry, fiction, or essay, creative or critical, seriously reflective or delightfully amusing.

Young Calvinist Federation Oratorical Contest Tuition Awards

The Bergsma Brothers Foundation of Grand Rapids, Michigan, grants tuition awards to two contestants in the National Ora-
torical Contest held at the Annual Convention of the Young Calvinist Federation.

To First Place — Two semesters tuition.
To Second Place — One semester tuition.

Contestant must be a member of a Young Calvinist Society which is affiliated with the Young Calvinist Federation. He must participate in League and District run-offs as specified in the regulations. If winner is not eligible to enter college, the award is kept in trust up to three years. Schooling of contestants may not exceed four years. If first place winner does not plan to enter Calvin College, the award is given to the next ranking contestant. Send for complete details to The Young Calvinist Federation, 44 Ionia Ave., S.W., Grand Rapids 2, Mich.

Zondervan Peace Oratorical Prizes

Throughout the generosity of the Zondervan Publishing Company of Grand Rapids, Michigan, credit vouchers for the purchase of books are awarded annually to the first, second, and third place winners in both the men's and the women's divisions of the Peace Oratorical Contest. In each division the winners of first, second, and third places are awarded credit vouchers of $25.00, $10.00, and $5.00, respectively. The first prize winners of each division represent Calvin at the annual State Michigan Peace Oratorical Contest.

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 as soon as possible after graduation. Application for a loan from this fund must be made at the office.

Placement Bureau

The 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.

Student Employment Service

A STUDENT EMPLOYMENT SERVICE is operated under the supervision of the Business Office. Students desiring part-time employment may fill in application cards with this service at the time of registration or at the Business Office any time during the semester. This office has on file the names of business firms and individuals who are interested in employing students on a part-time basis.
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To First Place — Two semesters tuition.
To Second Place — One semester tuition.

Contestant must be a member of a Young Calvinist Society which is affiliated with the Young Calvinist Federation. He must participate in League and District run-offs as specified in the regulations. In case winner is not eligible to enter college, the award is kept in trust up to three years. Schooling of contestants may not exceed High School. If first place winner does not plan to enter Calvin College, the award is granted to the next ranking contestant. Send for complete details to The Young Calvinist Federation, 44 Ionia Ave., S.W., Grand Rapids 2, Mich.

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Administration

Religious Culture

In 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.

Devotional exercises are held daily, including Saturday, at 9:30 A.M. All students are required to attend devotional exercises on the days assigned to them.

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

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.

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 Christian Reformed Church that sponsors Calvin College is eager to have its students live the full Christian life—a life dedicated to the glory of God and to the service of our Lord Jesus Christ. It is deeply grieved when they fall short of the high expectations held for them.

The Faculty of Calvin College has been instructed by the Synod (1940) “to deal in the spirit of love, yet also, in view of the strong tide of worldliness which is threatening our churches, very firmly with all cases of misconduct or offensive conduct in the matter of amusements, particularly theatre-attendance, card-playing, and dancing, and to discipline and finally expel all students who refuse to heed the admonition of the school authorities in this matter.”

The Hekman Memorial Library

The library contains more than 43,000 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.
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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 directed 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

Regular 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 the removal of conditions are held on the first Monday 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.

Administration

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

After 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

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

Dismissal

Admission to Calvin College is a privilege, not a right. This privilege may be withdrawn from any student whose presence is regarded by the college authorities as undesirable.
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 satis-
factorily 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 read-
ing to be completed, or of papers to be handed in. This mark is
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pleting his work on time, such as directed teaching, inability to
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must secure credit for the course by satisfying the instructor within
one year. Responsibility for securing such credit and for obtaining
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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.
Requirements for Graduation

The College graduates or certifies students from the following courses: General College, pre-Seminary, Education, pre-Medical, pre-Dental, 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, fulfill 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, Geography, German, Greek, History, Latin, Mathematics, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Sociology, and Speech.

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, Biol. 109, 110 and Chem 205, 206* 12 hours
- Foreign Language (see following explanation)

*Chem. 205 and 206 will not be offered for General College students during the 1952-53 school year. Sophomores, who had expected to take this course, will be required to complete a total of 9 or 10 hours of Biology, including Biol. 109 and 110. The course in Astronomy, which is to be offered in 1952-53, may also be elected in order to complete this science requirement.

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.


All students pursuing the course leading to a General A. B. degree, especially those who plan to go on to a graduate school, must, not later than the beginning of their junior year, apply to the head of the department of their selection for permission to major or to concentrate in that department. The department head, on accepting the application, will outline the student's program of major and supporting courses.

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, Speech.

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

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

The student must so distribute the total 125 hours (including those prescribed) among the three groups, complying 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, or as specified by the department, 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
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The College graduates or certifies students from the following courses: General College, pre-Seminary, Education, pre-Medical, pre-Dental, 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, fulfill the requirements of the course from which he elects to graduate. The requirements in each course are listed below.

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   - Natural Science, Biol. 109, 110 and Chem 205, 206* 12 hours
   - Foreign Language (see following explanation)

*Chem. 205 and 206 will not be offered for General College students during the 1952-53 school year. Sophomores, who had expected to take this course, will be required to complete a total of 9 or 10 hours of Biology, including Biol. 109 and 110. The course in Astronomy, which is to be offered in 1952-53, may also be elected in order to complete this science requirement.

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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, Speech.

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

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

The student must distribute the total 125 hours (including those prescribed) among the three groups, complying 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, or as specified by the department, 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, at least thirty-six, except for music.

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. 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; 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. 42.)

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 and (e) under C (6) under Education, p. 43.)

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.

Requirements for Graduation

3. Prescribed Work. The following 118 hours of work are prescribed:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201, 202, 301, 302</td>
<td>8</td>
</tr>
<tr>
<td>Biology 210, 306</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 205, 206</td>
<td>6</td>
</tr>
<tr>
<td>Dutch Language</td>
<td>20</td>
</tr>
<tr>
<td>Dutch History 326</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201, 202</td>
<td>6</td>
</tr>
<tr>
<td>Education 201</td>
<td>3</td>
</tr>
<tr>
<td>English incl. 103, 104</td>
<td>12</td>
</tr>
<tr>
<td>Greek 101, 102, 201, 202</td>
<td>20</td>
</tr>
<tr>
<td>History 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Latin 201A, 202A, 307, 308</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy 306, 301, 302</td>
<td>9</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 200 (Logic)</td>
<td>3</td>
</tr>
<tr>
<td>Speech 102, 104, 208</td>
<td>6</td>
</tr>
<tr>
<td>Sociology 200</td>
<td>3</td>
</tr>
</tbody>
</table>

Schedule for the year 1952-1963

This schedule has been arranged for students who have had two years of Latin in high school, but no German.

Freshman Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 103</td>
<td>3</td>
</tr>
<tr>
<td>German 101</td>
<td>4</td>
</tr>
<tr>
<td>History 101</td>
<td>3</td>
</tr>
<tr>
<td>Latin (see page 73)</td>
<td>4</td>
</tr>
<tr>
<td>Speech 103</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 205</td>
<td>3</td>
</tr>
<tr>
<td>Dutch 101</td>
<td>4</td>
</tr>
<tr>
<td>Greek 101</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Junior Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 210</td>
<td>2</td>
</tr>
<tr>
<td>Dutch 201</td>
<td>3</td>
</tr>
<tr>
<td>English 207 (or other)</td>
<td>3</td>
</tr>
<tr>
<td>English elective</td>
<td>3</td>
</tr>
<tr>
<td>Greek 201</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 203</td>
<td>3</td>
</tr>
<tr>
<td>Speech 205</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

*A student who has had two years of German in high school should take Dutch 101 and 102 in his Freshman year.
number of hours required in the major group is, therefore, at least thirty-six, except for music.

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. 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.

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

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</tr>
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<td>Bible 201, 202, 301, 302</td>
<td>8</td>
<td>Greek 101, 102, 201, 202, 203, 204</td>
</tr>
<tr>
<td>Biology 210, 306</td>
<td>4</td>
<td>313, 314</td>
</tr>
<tr>
<td>Chemistry 205, 206</td>
<td>6</td>
<td>History 101, 102</td>
</tr>
<tr>
<td>Dutch Language</td>
<td>20</td>
<td>Latin 201A, 202A, or 307, 308</td>
</tr>
<tr>
<td>Dutch History 326</td>
<td>3</td>
<td>Philosophy 300, 301, 302</td>
</tr>
<tr>
<td>Economics 201, 202</td>
<td>6</td>
<td>Psychology 201</td>
</tr>
<tr>
<td>Education 201</td>
<td>3</td>
<td>Phil. 300 (Logic)</td>
</tr>
<tr>
<td>English incl. 103, 104</td>
<td>12</td>
<td>Speech 105, 104, 205</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sociology 208</td>
</tr>
</tbody>
</table>

Schedule for the year 1952-1963

This schedule has been arranged for students who have had two years of Latin in high school, but no German.

Freshman Year

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 103</td>
<td>3</td>
<td>English 104</td>
</tr>
<tr>
<td>*German 101</td>
<td>4</td>
<td>*German 102</td>
</tr>
<tr>
<td>History 101</td>
<td>3</td>
<td>History 102</td>
</tr>
<tr>
<td>Latin (see page 73) 3 or</td>
<td>4</td>
<td>Latin (see page 73) 3 or</td>
</tr>
<tr>
<td>Speech 103</td>
<td>2</td>
<td>Speech 104</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201</td>
<td>2</td>
<td>Bible 202</td>
</tr>
<tr>
<td>Chemistry 205</td>
<td>3</td>
<td>Chemistry 206</td>
</tr>
<tr>
<td>Dutch 101</td>
<td>4</td>
<td>Dutch 102</td>
</tr>
<tr>
<td>Greek 101</td>
<td>4</td>
<td>Greek 102</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
<td>Philosophy 200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Junior Year

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 210</td>
<td>2</td>
<td>Biology 306</td>
</tr>
<tr>
<td>Dutch 201</td>
<td>3</td>
<td>Dutch 202</td>
</tr>
<tr>
<td>English 207 (or other)</td>
<td>3</td>
<td>English History 326</td>
</tr>
<tr>
<td>English elective</td>
<td>3</td>
<td>English (continued)</td>
</tr>
<tr>
<td>Greek 201</td>
<td>3</td>
<td>Greek 202</td>
</tr>
<tr>
<td>Sociology 203</td>
<td>3</td>
<td>Philosophy 300</td>
</tr>
<tr>
<td>Speech 205</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

*A student who has had two years of German in high school should take Dutch 101 and 102 in his Freshman 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 State 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:

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

   B. Subject requirements:

      (1) Bible 101-2 or 106-6, 201-2, 301  ——  10 hours
      (2) English 103-4                      ——  6 hours
      (3) History                            ——  6 hours
      (4) Biology 109 and 110               ——  6 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, 306, or 309
      (c) Education 314
      (d) One methods course from Education 307, 310, 324, 326, 328, 340, 330 ———— 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 (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. 40. 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.
      (2) Art studies: Music, Fine Arts, Industrial Arts, Drawing.
      (3) Social studies: Economics, History, Political Science, Sociology, Ethics.
      (4) Science studies: Biology, Geography, Physics, Chemistry, Psychology (not Psychology 202).

   C. Subject requirements:

      (1) Bible 101-2 or 106-6, 201-2, 301 ———— 10 hours
      (2) English 103-4                      ———— 6 hours
      (3) History                            ———— 6 hours
      (4) Biology 109, 110                  ———— 6 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.
Seniors Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Hours</th>
<th>SECOND SEMESTER</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 301</td>
<td>2</td>
<td>Bible 302</td>
<td>2</td>
</tr>
<tr>
<td>Dutch 205</td>
<td>2</td>
<td>Economics 202</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201</td>
<td>3</td>
<td>Greek 314</td>
<td>3</td>
</tr>
<tr>
<td>Education 301</td>
<td>3</td>
<td>Philosophy 302</td>
<td>3</td>
</tr>
<tr>
<td>Greek 313</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy 301</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

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 State 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:

<table>
<thead>
<tr>
<th>Biology</th>
<th>History</th>
<th>Physical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>History</td>
<td>Psychology</td>
</tr>
<tr>
<td>Economics-Sociology</td>
<td>Polit. Science</td>
<td>Science (Biology)</td>
</tr>
<tr>
<td>Economics</td>
<td>Latin</td>
<td>Sociology</td>
</tr>
<tr>
<td>English</td>
<td>Mathematics</td>
<td>Speech</td>
</tr>
<tr>
<td>French</td>
<td>Music</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>Art</td>
<td></td>
</tr>
<tr>
<td>German</td>
<td>Philosophy</td>
<td>Physics</td>
</tr>
</tbody>
</table>

   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) Biology 109 and 110 ............................................................ 6 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, 206, or 209
   (c) Education 314
   (d) One methods course from Education 307, 310, 324, 326, 328, 340, 330. . . to 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 (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. 40. 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.
   (2) **Art** studies: Music, Fine Arts, Industrial Arts, Drawing.
   (3) **Social** studies: Economics, History, Political Science, Sociology, Ethics.
   (4) **Science** studies: Biology, Geography, Physics, Chemistry (not Psychology 202).

   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) Biology 109, 110 ............................................................... 6 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, 306 or 309 ..........
(c) Education 315 or 317 ...........................................
(d) One methods course from 220, 307, 319, 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 318, 225, and 324 .......................... 8 hours
     4) Speech 103 or 104 or Educ. 225 ................. 2 hours

Prerequisites for Education 343, Directed Teaching:

(a) Grade of work equivalent to C+
(b) Principles of Education (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 Pro-
visional 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.

Pre-Medical and Pre-Dental

(See note regarding pre-Medical entrance requirements under
Plan A, page 19, 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 188 honor points, representing an average of B.

3. Prescribed Work. The following courses are prescribed:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST SEMESTER</td>
<td>SECOND SEMESTER</td>
<td>SECOND SEMESTER</td>
</tr>
<tr>
<td>Biology 101 or 105</td>
<td>2 hours</td>
<td>Biology 201</td>
</tr>
<tr>
<td>Biology 109</td>
<td>3 hours</td>
<td>Chemistry 201</td>
</tr>
<tr>
<td>Chemistry 103</td>
<td>4 hours</td>
<td>French or German</td>
</tr>
<tr>
<td>English 103</td>
<td>3 hours</td>
<td>Physics 201</td>
</tr>
</tbody>
</table>
| History 101 or 205 | 3 hours | Pre-Medical students are strongly advised to take a four-year
|               |               | college course.
|               |               | Trigonometry presupposes one and one-half units of Algebra in
|               |               | high school.
|               |               | 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.
|               |               | 4. Distribution of Electives. The number of hours of elec-
|               |               | tives 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 stu-
|               |               | dent 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. An average record of B is required for
|               |               | recommendation to a class A 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.
(6) Education courses .................................................. 20 hours

(a) Psychology 201 and 202
(b) One course from Education 203, 306 or 309
(c) Education 315 or 317
(d) One methods course from 220, 222, 310, 324, 340, 342 .......... 2 or 3 hours
(e) Students planning to teach in a Christian School must add Education 320, 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 316, 225, and 324 .......................... 8 hours
   4) Speech 103 or 104 or Educ. 225 .................... 2 hours

Prerequisites for Education 343, Directed Teaching:
(a) Grade of work equivalent to C+
(b) Principles of Education (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.

Pre-Medical and Pre-Dental

(See note regarding pre-Medical entrance requirements under Plan A, page 19, 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 188 honor points, representing an average of B.

3. PRESCRIBED WORK. The following courses are prescribed:

**Freshman Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 106 .... 2 hours</td>
<td>Biology 110 .... 3 hours</td>
</tr>
<tr>
<td>Biology 109 .... 3 hours</td>
<td>Chemistry 104 .... 4 hours</td>
</tr>
<tr>
<td>Chemistry 103 .... 4 hours</td>
<td>English 104 .... 3 hours</td>
</tr>
<tr>
<td>English 103 .... 3 hours</td>
<td>Mathematics 104 .... 3 hours</td>
</tr>
<tr>
<td>History 101 or 206 .... 3 hours</td>
<td>History 102 or 206 .... 3 hours</td>
</tr>
<tr>
<td><strong>Total</strong> .... 15 hours</td>
<td><strong>Total</strong> .... 16 hours</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 201 .... 4 hours</td>
<td>Biology 208 .... 4 hours</td>
</tr>
<tr>
<td>Chemistry 201 .... 4 hours</td>
<td>Chem. 202 or elective .... 4 hours</td>
</tr>
<tr>
<td>French or German .... 4 hours</td>
<td>French or German .... 4 hours</td>
</tr>
<tr>
<td>Physics 201 .... 4 hours</td>
<td>Physics 202 .... 4 hours</td>
</tr>
<tr>
<td><strong>Total</strong> .... 16 hours</td>
<td><strong>Total</strong> .... 16 hours</td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201 .... 2 hours</td>
<td>Bible 202 .... 2 hours</td>
</tr>
<tr>
<td>Bible 301 .... 2 hours</td>
<td>Biology 306 .... 2 hours</td>
</tr>
<tr>
<td>Biology 207 .... 3 hours</td>
<td>Biology 312 .... 3 hours</td>
</tr>
<tr>
<td>Biology 311 .... 2 hours</td>
<td>Chemistry 302 .... 4 hours</td>
</tr>
<tr>
<td>Chemistry 301 .... 4 hours</td>
<td>Elective .... 4 hours</td>
</tr>
<tr>
<td>Psychology 201 .... 3 hours</td>
<td><strong>Total</strong> .... 15 hours</td>
</tr>
<tr>
<td><strong>Total</strong> .... 16 hours</td>
<td><strong>Total</strong> .... 16 hours</td>
</tr>
</tbody>
</table>

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

Trigonometry presupposes one and one-half units of Algebra in high school.

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.

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. An average record of B is required for recommendation to a class A 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

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 class A medical schools an average grade equivalent to two honor points per semester hour of credit is required.

   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 307 and Chemistry 202 and 308.

Pre-Law — Three Year

(See note regarding Pre-Law entrance requirements under Plan A, page 19, 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, an average of C; except that he must obtain 188 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:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td><strong>SECOND SEMESTER</strong></td>
<td><strong>FIRST SEMESTER</strong></td>
</tr>
<tr>
<td>Bible 101 or 105</td>
<td>3 hours</td>
<td>Bible 201</td>
</tr>
<tr>
<td>English 103</td>
<td>3 hours</td>
<td>Economics 201</td>
</tr>
<tr>
<td>Mathematics or Science</td>
<td>3 hours</td>
<td>Political Science</td>
</tr>
<tr>
<td>Political Science</td>
<td>3 hours</td>
<td>Philosophy 206, Logic</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3 hours</td>
<td>Speech</td>
</tr>
<tr>
<td>Speech</td>
<td>2 hours</td>
<td>Speech</td>
</tr>
<tr>
<td><strong>16 hours</strong></td>
<td></td>
<td><strong>16 hours</strong></td>
</tr>
</tbody>
</table>

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 two honor points per semester hour of credit.

Four-Year Pre-Law Course

(See note regarding Pre-Law entrance requirements under Plan A, page 19, Note.)

* Pre-Law students will be required to do extra work for the fourth hour.
Four-Year Pre-Medical

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 class A medical schools an average grade equivalent to two honor points per semester hour of credit is required.

   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 electives 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 307 and Chemistry 202 and 308m.

Pre-Law — Three Year

(See note regarding pre-Law entrance requirements under Plan A, page 19, 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, an average of C; except that he must obtain 188 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:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td><strong>SECOND SEMESTER</strong></td>
</tr>
<tr>
<td>Bible 101 or 105</td>
<td>Bible 202</td>
</tr>
<tr>
<td>English 103</td>
<td>English 104</td>
</tr>
<tr>
<td>Mathematics or Science</td>
<td>Mathematics or Science</td>
</tr>
<tr>
<td>Political Science</td>
<td>Philosophy 200, Logic</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>Political Science</td>
</tr>
<tr>
<td>Speech</td>
<td>Speech</td>
</tr>
<tr>
<td><strong>16 hours</strong></td>
<td><strong>16 hours</strong></td>
</tr>
</tbody>
</table>
1. **Amount of Work.** The student must complete 125 hours of work.

2. **Grade of Work.** The students must obtain a total of 125 honor points; in other words, an average of C. To obtain faculty recommendation for admission to a recognized law school he must in the years of his residence at Calvin College have earned at least twice as many honor points as the number of hours of credit; in other words, he must have earned a "B" average.

3. **Prescribed Work.** Of the 125 hours required, certain hours are prescribed; as follows:

**Freshman Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105</td>
<td>2 hours</td>
</tr>
<tr>
<td>English 105</td>
<td>3 hours</td>
</tr>
<tr>
<td>History 101 or 205</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mathematics 101</td>
<td>3 hours</td>
</tr>
<tr>
<td>Political Science</td>
<td>3 hours</td>
</tr>
<tr>
<td>Science 102</td>
<td>2 hours</td>
</tr>
<tr>
<td>16 hours</td>
<td>16 hours</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 201</td>
<td>3 hours</td>
</tr>
<tr>
<td>English</td>
<td>3 hours</td>
</tr>
<tr>
<td>French or German</td>
<td>4 hours</td>
</tr>
<tr>
<td>Phil. 200, Logic</td>
<td>3 hours</td>
</tr>
<tr>
<td>Science</td>
<td>3 or 4 hours</td>
</tr>
<tr>
<td>16 or 17 hours</td>
<td>16 or 17 hours</td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201</td>
<td>2 hours</td>
</tr>
<tr>
<td>Econ. 305</td>
<td>4 hours</td>
</tr>
<tr>
<td>Hist. 307 or 203</td>
<td>3 hours</td>
</tr>
<tr>
<td>Hist. 313</td>
<td>3 hours</td>
</tr>
<tr>
<td>Pol. Science 305</td>
<td>3 hours</td>
</tr>
<tr>
<td>15 hours</td>
<td>15 hours</td>
</tr>
</tbody>
</table>

**Senior Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 301</td>
<td>2 hours</td>
</tr>
<tr>
<td>Econ. 308</td>
<td>3 hours</td>
</tr>
<tr>
<td>Hist. 318</td>
<td>3 hours</td>
</tr>
<tr>
<td>Phil. 306</td>
<td>3 hours</td>
</tr>
<tr>
<td>Speech &amp; Literature</td>
<td>2 hours</td>
</tr>
<tr>
<td>16 hours</td>
<td>15 or 16 hours</td>
</tr>
</tbody>
</table>

* If advanced algebra was taken in high school, the student should, with the approval of his adviser, elect another course.

**Pre-Engineering**

This outline of a four-year course has been prepared in order that the student may have as broad and thorough a cultural background for the work in the law school as possible. Furthermore, several law schools are now prescribing four years of undergraduate preparation. Since this is a suggested outline, all the subjects listed need not necessarily be taken by all the students who pursue this course. The student may not, however, make any changes in his program without the approval of his Pre-Law Course Adviser and the Dean. He should make certain that he meets the specific requirements of the law school which he plans to attend and that he secures as thorough a cultural college course as he can.

To meet the language requirement for this course the student is required to present two units of high school Latin. If this was not taken in high school the student must make up the deficiency in college.

4. Upon completion of this course the student will be granted an "A.B. degree, four-year Pre-Law Course.”

**Three-Year General Pre-Engineering Course**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 103</td>
<td>4</td>
<td>*Drawing 102</td>
<td>3</td>
</tr>
<tr>
<td>*Drawing 101</td>
<td>3</td>
<td>Chemistry 104</td>
<td>4</td>
</tr>
<tr>
<td>English 103</td>
<td>3</td>
<td>English 104</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 201</td>
<td>5</td>
<td>Mathematics 202</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105</td>
<td>2 hours</td>
</tr>
<tr>
<td>Economics 201</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mathematics 301</td>
<td>5 hours</td>
</tr>
<tr>
<td>Physics 201</td>
<td>5 hours</td>
</tr>
<tr>
<td>Physics 203</td>
<td>1 hour</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

*See Engineering subjects.
1. Amount of Work. The student must complete 125 hours of work.

2. Grade of Work. The students must obtain a total of 125 honor points; in other words, an average of C. To obtain faculty recommendation for admission to a recognized law school he must in the years of his residence at Calvin College have earned at least twice as many honor points as the number of hours of credit; in other words, he must have earned a "B" average.

3. Prescribed Work. Of the 125 hours required, certain hours are prescribed; as follows:

<table>
<thead>
<tr>
<th>Freshman Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>Bible 101 or 105</td>
</tr>
<tr>
<td>English 101</td>
</tr>
<tr>
<td>History 101 or 205</td>
</tr>
<tr>
<td><em>Mathematics 101</em></td>
</tr>
<tr>
<td><em>Political Science</em></td>
</tr>
<tr>
<td>Speech 101</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
</tr>
</tbody>
</table>

| **Second Semester** |
| Bible 102 or 106 | 3 hours |
| English 104 | 3 hours |
| History 102 or 206 | 3 hours |
| Political Science | 3 hours |
| Psychology 201 | 2 hours |
| Speech 104 | 2 hours |
| **Total:** | **16 hours** |

| **Sophomore Year** |
| **First Semester** |
| Economics 201 | 3 hours |
| English | 3 hours |
| **French or German** | 4 hours |
| Phil. 200, Logic | 3 hours |
| *Science* | 3 or 4 hours |
| **Total:** | **16 or 17 hours** |

| **Second Semester** |
| Economics 202 | 3 hours |
| English | 3 hours |
| **French or German** | 4 hours |
| Phil. 300, **Ancient** | 3 hours |
| *Science* | 3 or 4 hours |
| **Total:** | **16 or 17 hours** |

| **Junior Year** |
| **First Semester** |
| Bible 201 | 2 hours |
| Econ. 305 | 4 hours |
| Hist. 307 or 303 | 3 hours |
| Hist. 313 | 3 hours |
| Pol. Science 303 | 3 hours |
| **Total:** | **15 hours** |

| **Second Semester** |
| Bible 202 | 2 hours |
| Econ. 306 | 4 hours |
| Hist. 308 or 204 or 302 or 303 | 3 hours |
| Hist. 314 | 3 hours |
| Pol. Science 304 | 3 hours |
| **Total:** | **15 hours** |

| **Senior Year** |
| **First Semester** |
| Bible 301 | 2 hours |
| Econ. 303 | 3 hours |
| Hist. 315 | 3 hours |
| Hist. 311 | 3 hours |
| Phil. 308 | 3 hours |
| Speech | 2 hours |
| **Total:** | **16 hours** |

*If advanced algebra was taken in high school, the student should, with the approval of his adviser, elect another course.

**Not required if the student has had two years in high school.

***Before taking Math 206, the student should make it a point to take Math 205 or another prerequisite, satisfactory to the Mathematics Department.

---

**Requirements for Graduation**

This outline of a four-year course has been prepared in order that the student may have as broad and thorough a cultural background for the work in the law school as possible. Furthermore, several law schools are now prescribing four years of undergraduate preparation. Since this is a suggested outline, all the subjects listed need not necessarily be taken by all the students who pursue this course. The student may not, however, make any changes in his program without the approval of his Pre-Law Course Adviser and the Dean. He should make certain that he meets the specific requirements of the law school which he plans to attend and that he secures as thorough a cultural college course as he can.

To meet the language requirement for this course the student is required to present two units of high school Latin. If this was not taken in high school the student must make up the deficiency in college.

4. Upon completion of this course the student will be granted an "A.B. degree, four-year Pre-Law Course."

**Pre-Engineering**

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** |
| Chemistry 103 | 4 |
| *Drawing 101* | 3 |
| English 103 | 3 |
| Mathematics 201 | 5 |
| **Total:** | **15 hours** |

| **Second Semester** |
| Bible 101 or 106 | 2 |
| Economics 201 | 3 |
| Mathematics 301 | 5 |
| Physics 201E | 5 |
| Physics 205 | 1 |
| **Total:** | **16 hours** |

*See Engineering subjects.
### Requirements for Graduation

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.

### Abbreviated Pre-Engineering Course

For a student who is unable to take more than two years at Calvin College, a two-year program will be arranged to satisfy, as nearly as possible, the requirements of the Engineering School which he plans to attend. This program must be arranged with either the Engineering Course Adviser or the Dean.

### Pre-Business Administration

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

#### Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105</td>
<td>2</td>
<td>Bible 102 or 106</td>
<td>2</td>
</tr>
<tr>
<td>Economics 103</td>
<td>3</td>
<td>Economics 104</td>
<td>3</td>
</tr>
<tr>
<td>English 103</td>
<td>3</td>
<td>English 104</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 201</td>
<td>5</td>
<td>Mathematics 202</td>
<td>5</td>
</tr>
</tbody>
</table>

15 hours

#### Sophomore Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105</td>
<td>2</td>
<td>Bible 102 or 106</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 201</td>
<td>4</td>
<td>Chemistry 202</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 301</td>
<td>5</td>
<td>Mathematics 302</td>
<td>5</td>
</tr>
<tr>
<td>Physics 201E</td>
<td>1</td>
<td>Physics 204</td>
<td>1</td>
</tr>
</tbody>
</table>

17 hours

#### Junior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 201</td>
<td>2</td>
<td>Bible 202</td>
<td>2</td>
</tr>
<tr>
<td>Economics 201</td>
<td>3</td>
<td>Economics 202</td>
<td>3</td>
</tr>
<tr>
<td>English 201 or 207</td>
<td>3</td>
<td>English 202 or 208</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 205</td>
<td>3</td>
<td>Mathematics 206</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
<td>Philosophy 200, Logic</td>
<td>3</td>
</tr>
<tr>
<td>Speech 103</td>
<td>2</td>
<td>Speech 104</td>
<td>2</td>
</tr>
</tbody>
</table>

16 hours

Pre-engineering students who began their pre-engineering course in September, 1951, or earlier should follow the course outlined in the 1951-52 catalogue.

If a 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.

*See Engineering subjects.*
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.

**Abbreviated Pre-Engineering Course**

For a student who is unable to take more than two years at Calvin College, a two-year program will be arranged to satisfy, as nearly as possible, the requirements of the Engineering School which he plans to attend. This program must be arranged with either the Engineering Course Adviser or the Dean.

**Pre-Business Administration**

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

### Freshman Year

<table>
<thead>
<tr>
<th>First Semester Hours</th>
<th>Second Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105 .....</td>
<td>2 hours</td>
</tr>
<tr>
<td>Economics 103</td>
<td>3 hours</td>
</tr>
<tr>
<td>English 103</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mathematics 201</td>
<td>5 hours</td>
</tr>
<tr>
<td>Total</td>
<td>15 hours</td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>First Semester Hours</th>
<th>Second Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105 .....</td>
<td>2 hours</td>
</tr>
<tr>
<td>Chemistry 201</td>
<td>4 hours</td>
</tr>
<tr>
<td>Mathematics 201</td>
<td>5 hours</td>
</tr>
<tr>
<td>Physics 201E</td>
<td>5 hours</td>
</tr>
<tr>
<td>Total</td>
<td>17 hours</td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>First Semester Hours</th>
<th>Second Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101 or 105 .....</td>
<td>2 hours</td>
</tr>
<tr>
<td>Economics 103</td>
<td>3 hours</td>
</tr>
<tr>
<td>English 103</td>
<td>3 hours</td>
</tr>
<tr>
<td>Modern Physics 304</td>
<td>3 hours</td>
</tr>
<tr>
<td>Total</td>
<td>16 hours</td>
</tr>
</tbody>
</table>

Pre-engineering students who began their pre-engineering course in September, 1951, or earlier should follow the course outlined in the 1951-52 catalogue.

If a 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.

---

*See Engineering subjects.*
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. 36). 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. 36). 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.

Freshman Year

**FIRST SEMESTER**
- Biology 109 3 hours
- Chemistry 101 or 102 3 hours
- Engineering 101 3 hours
- English 105 3 hours
- Mathematics 106 3 hours

**SECOND SEMESTER**
- Bible 102 2 hours
- Biology 110 3 hours
- Chemistry 102 or 104 4 hours
- English 104 3 hours
- Mathematics 104 3 hours

16 hours 16 hours

Sophomore Year

**FIRST SEMESTER**
- Bible 201 3 hours
- Biology 201 4 hours
- Economics 201 3 hours
- Physics 201 4 hours
- Speech 207 2 hours

**SECOND SEMESTER**
- Bible 202 2 hours
- Biology 206 3 hours
- Economics 202 3 hours
- Mathematics 206 3 hours
- Physics 202 4 hours

17 hours 17 hours

MAJOR IN MUSIC

Candidates for the A.B. degree in the General College Course or in the Education Course may select music as a major field. They should complete the general course requirements prescribed for the General College Course (see p. 36) or the Education Course (see p. 40). Their minor fields must be chosen with care in order to allow the maximum amount of hours for work in the major field. The candidate for a major in music must complete from 40 to 42 hours of course work in music.

The music major program allows for three different fields of concentration: music history and literature, music theory, and applied music. By the end of the first year of study the candidate should make a choice of one of the three programs. Freshman music majors must elect Music Theory 103-104 since this course is a pre-requisite for all succeeding major courses.

Course Requirements

A. For concentration in music history and literature:
   - Basic Theory ........................................... 12 hours
   - History of Music .................................. 6 hours
   - Advanced Courses in Music History or
     Literature ............................................. 12 hours
   - *Applied Music ......................................... 8 hours
   - Electives in Theory or History Courses to
     complete 40 to 42 hours.

B. For concentration in music theory:
   - Basic Theory ........................................... 12 hours
   - Advanced Courses in Theory, Form,
     Orchestration, etc. ................................ 12 hours
   - History of Music .................................. 6 hours
   - *Applied Music ......................................... 8 hours
   - Electives in History or Theory Courses to
     complete 40 to 42 hours.

C. For concentration in applied music:
   - Note: It must be remembered that this course, within the liberal arts framework, is non-professional, and serves only as partial preparation for the Bachelor of Music degree in the same field. The student who plans to attend a graduate school of music working towards the M.M. degree in applied music should plan to take extra applied music course work without credit at Calvin College or to take extra summer work in order to make up the professional school entrance requirements in applied music.
   - Basic Theory ........................................... 12 hours
   - History of Music .................................. 6 hours
   - Applied Music ........................................ 12 hours
   - Electives in Theory or History to
     complete 40 to 42 hours.

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.

All music majors are required to participate in at least one applied music ensemble each semester. Although the student will be

* More than 8 hours may be taken by the student but not more than 8 hours will be counted toward degree requirements.
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. 36). 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. 36). 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.

**Freshman Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 109</td>
<td>3 hours</td>
</tr>
<tr>
<td>Chemistry 101</td>
<td>3 hours</td>
</tr>
<tr>
<td>Engineering 101</td>
<td>3 hours</td>
</tr>
<tr>
<td>English 103</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mathematics 103</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 102</td>
<td>2 hours</td>
</tr>
<tr>
<td>Biology 110</td>
<td>3 hours</td>
</tr>
<tr>
<td>Chemistry 102</td>
<td>3 hours</td>
</tr>
<tr>
<td>English 104</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mathematics 104</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

16 hours 16 hours

MAJOR IN MUSIC

Candidates for the A.B. degree in the General College Course or in the Education Course may select music as a major field. They should complete the general course requirements prescribed for the General College Course (see p. 36) or the Education Course.
allowed to follow his inclination as much as possible, it may be necessary at times for the faculty to direct the student to a particular ensemble.

MINOR IN MUSIC

A student wishing to choose music as a minor subject must include in the minor sequence:

- **Music Theory**: 103-104 (and)
- **Music Literature**: 211-212 or
- **Music History**: 305-306

Nursing Course

The Nursing Course at Blodgett Memorial Hospital in Grand Rapids, Michigan, is so arranged that the first two semesters of the total three-year program are taken at the college. The courses listed below are given during this period.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bible 101</strong> .......... 2 hours</td>
<td><strong>Biology 106</strong> .......... 2 hours</td>
</tr>
<tr>
<td><strong>Biology 105</strong> ......... 3 hours</td>
<td><strong>English 104</strong> .......... 3 hours</td>
</tr>
<tr>
<td><strong>English 103</strong> ........ 3 hours</td>
<td><strong>Psychology 201</strong> ...... 3 hours</td>
</tr>
<tr>
<td><strong>Chemistry 101N</strong> ...... 4 hours</td>
<td><strong>Nutrition</strong> ........... 3 hours</td>
</tr>
<tr>
<td><strong>Nursing Arts including Hygiene (Hospital)</strong></td>
<td><strong>Pharmacology</strong> ....... 1 hour</td>
</tr>
<tr>
<td><strong>Biology 107</strong> ........ 4 hours</td>
<td><strong>Nursing Arts (Hospital)</strong></td>
</tr>
<tr>
<td><strong>___</strong> .................. 18 hours</td>
<td><strong>___</strong> .................. 1 hour</td>
</tr>
<tr>
<td><strong>___</strong> .................. 15 hours</td>
<td><strong>___</strong> .................. 1 hour</td>
</tr>
</tbody>
</table>

Upon completion of these two semesters and an additional twenty-seven months of clinical experience at Blodgett Memorial Hospital, the student is granted a diploma in nursing. She is then eligible to write the examinations given by the Michigan Board of Registration of Nurses, and upon passing these examinations receives a certificate to practice as a registered nurse.

Students wishing to take this course must make application at Blodgett Memorial Hospital with the Director of the School of Nursing, preferably before August 1.

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

- **Chemistry 101N** ........ 4 hours
- **English Composition** .... 6 hours
- **European History** ........ 3 hours
- **Psychology 201** ........ 3 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, on the combined Curriculum Plan**

The student must

1. Meet regular admission requirements to the college, including among high school 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 27 to 30 months of training at an accredited hospital school of nursing.

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible</td>
<td>6</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>English or American Literature</td>
<td>6</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Sociology, Intro.</td>
<td>3</td>
</tr>
<tr>
<td>Sociology, Problems or The Family</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy (not incl. Psych. or Logic.)</td>
<td>3</td>
</tr>
<tr>
<td>Ancient Language</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry (inorganic)</td>
<td>8</td>
</tr>
<tr>
<td>Organic and Biochemistry</td>
<td>8</td>
</tr>
<tr>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>General Biology</td>
<td>6</td>
</tr>
<tr>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Embryology</td>
<td>4</td>
</tr>
<tr>
<td>Biological Problems</td>
<td>2</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

88 hours

To complete the 94 hours, the student may elect courses in Literature, History, Education, Chemistry, Political Science, Biology such as Histology or Parasitology, or Elementary Physics.

**Bachelor of Science in Medical Technology, on the Combined Curriculum Plan**

The student must

1. Meet regular admission requirements to the college, including among high school 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.
allowed to follow his inclination as much as possible, it may be necessary at times for the faculty to direct the student to a particular ensemble.

MINOR IN MUSIC

A student wishing to choose music as a minor subject must include in the minor sequence:

Music Theory 105-106
and
Music Literature 211-212 or
Music History 305-306

Nursing Course

The Nursing Course at Blodgett Memorial Hospital in Grand Rapids, Michigan, is so arranged that the first two semesters of the total three-year program are taken at the college. The courses listed below are given during this period.

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible 101</td>
<td>2</td>
</tr>
<tr>
<td>Biology 105</td>
<td>3</td>
</tr>
<tr>
<td>English 108</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 101N</td>
<td>4</td>
</tr>
<tr>
<td>Nursing Arts including</td>
<td>2</td>
</tr>
<tr>
<td>Hygiene (Hospital)</td>
<td>2</td>
</tr>
<tr>
<td>Biology 107</td>
<td>4</td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 106</td>
<td>2</td>
</tr>
<tr>
<td>English 104</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
</tr>
<tr>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>Nursing Arts (Hospital)</td>
<td>2</td>
</tr>
<tr>
<td>Prof. Adjust. (Hospital)</td>
<td>1</td>
</tr>
</tbody>
</table>

18 hours

15 hours

Upon completion of these two semesters and an additional twenty-seven months of clinical experience at Blodgett Memorial Hospital, the student is granted a diploma in nursing. She is then eligible to write the examinations given by the Michigan Board of Registration of Nurses, and upon passing these examinations receives a certificate to practice as a registered nurse.

Students wishing to take this course must make application at Blodgett Memorial Hospital with the Director of the School of Nursing, preferably before August 1.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 101N</td>
<td>4</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>European History</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
</tr>
</tbody>
</table>

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, on the combined Curriculum Plan

The student must

1. Meet regular admission requirements to the college, including among high school 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 27 to 30 months of training at an accredited hospital school of nursing.

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible</td>
<td>6</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>English or American Literature</td>
<td>6</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Sociology, Intro.</td>
<td>3</td>
</tr>
<tr>
<td>Sociology, Problems or The Family</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy (not incl. Psych. or Logic)</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry (Inorganic)</td>
<td>8</td>
</tr>
<tr>
<td>Organic and Biochemistry</td>
<td>8</td>
</tr>
<tr>
<td>Human Anatomy and Physiology</td>
<td>8</td>
</tr>
<tr>
<td>General Biology</td>
<td>6</td>
</tr>
<tr>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Embryology</td>
<td>4</td>
</tr>
<tr>
<td>Biological Problems</td>
<td>2</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

88 hours

To complete the 94 hours, the student may elect courses in Literature, History, Education, Chemistry, Political Science, Biology such as Histology or Parasitology, or Elementary Physics.

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

The student must

1. Meet regular admission requirements to the college, including among high school 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) 103 and 104 ...... 8 hours
- Organic and Biochemistry ............. 8 hours
- Human Anatomy and Physiology ......... 6 hours
- General Biology .......................... 6 hours
- Microbiology ............................. 6 hours
- Microscopic Technique ................. 1 hour
- Biological Problems .................... 2 hours
- Histology ................................ 4 hours
- Parasitology ............................. 4 hours
- Physics (Introductory) ................. 6 hours
- Elective .................................. 2 hours

94 hours

**Suggested Program**

**Freshman Year**

**FIRST SEMESTER**

- Biology 105 ................................ 3 hours
- Biology 109 ................................ 3 hours
- English 103 ................................ 3 hours
- Latin or Greek 101 ......................... 4 hours
- Physics 101 ................................ 3 hours

16 hours

**SECOND SEMESTER**

- Biology 106 ................................ 2 hours
- Biology 110 ................................ 3 hours
- English 104 ................................ 3 hours
- Latin or Greek 102 ......................... 4 hours
- Physics 102 ................................ 3 hours

16 hours

**Sophomore Year**

**FIRST SEMESTER**

- Bible 201 ................................ 2 hours
- Biology 107 ................................ 4 hours
- Chemistry 105 .............................. 4 hours
- History 101 ................................. 3 hours
- Psychology 201 ............................. 3 hours

16 hours

**SECOND SEMESTER**

- Bible 202 ................................ 2 hours
- Biology 304 ................................ 1 hour
- Elective .................................... 2 hours
- Chemistry 104 ............................. 4 hours
- History 102 ................................. 3 hours
- Sociology 204 .............................. 3 hours

15 hours

**Junior Year**

**FIRST SEMESTER**

- Bible 301 ................................ 2 hours
- Biology 207 ................................ 4 hours
- Chemistry 303 .............................. 4 hours
- English 201 ................................ 3 hours
- Philosophy 203 ............................. 3 hours

16 hours

**SECOND SEMESTER**

- Bible 306 ................................ 2 hours
- Biology 308 ................................ 4 hours
- Chemistry 304 ............................. 4 hours
- English 202 ................................ 3 hours
- Psychology 312 ............................ 3 hours

15 hours

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bible (including 301)</td>
<td>6</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>English or American Literature</td>
<td>6</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Sociology (Introduction or Problems)</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy (Introduction to)</td>
<td>3</td>
</tr>
<tr>
<td>*Ancient Language</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry (Inorganic) 103 and 104</td>
<td>8</td>
</tr>
<tr>
<td>Organic and Biochemistry</td>
<td>8</td>
</tr>
<tr>
<td>Human Anatomy and Physiology</td>
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<td>General Biology</td>
<td>6</td>
</tr>
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<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Microscopic Technique</td>
<td>1</td>
</tr>
<tr>
<td>Biological Problems</td>
<td>2</td>
</tr>
<tr>
<td>Histology</td>
<td>4</td>
</tr>
<tr>
<td>Parasitology</td>
<td>4</td>
</tr>
<tr>
<td>Physics (Introductory)</td>
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</tr>
<tr>
<td>Elective</td>
<td>2</td>
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</table>

**Suggested Program**

**Freshman Year**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Biology 105</td>
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<tr>
<td></td>
<td>Biology 109</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>English 103</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Latin or Greek 101</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Physics 101</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>Biology 106</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Biology 110</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>English 104</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Latin or Greek 102</td>
<td>4</td>
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<td></td>
<td>Physics 102</td>
<td>3</td>
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</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Bible 203</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Biology 107</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Chemistry 105</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>History 101</td>
<td>3</td>
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<tr>
<td></td>
<td>Psychology 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>Bible 202</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Biology 304</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>2</td>
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<tr>
<td></td>
<td>Chemistry 104</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>History 102</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sociology 204</td>
<td>3</td>
</tr>
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<td></td>
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</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Bible 301</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Biology 307</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Chemistry 303</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>English 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Philosophy 203</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>Biology 306</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Biology 308</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Chemistry 304</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>English 202</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psychology 312</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Art

Courses 221 and 222 may be credited in the Dutch department. They are of great benefit to teachers and students of history and literature.

201. ART FOR ELEMENTARY TEACHERS

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.

202. HANDCRAFT

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.

228. PENMANSHIP

Two hours

Manuscript and cursive writing. Theory and practice. No credit. For prospective teachers in elementary grades.

231. AN INTRODUCTION TO THE HISTORY OF THE FINE ARTS

Three hours

A survey of the history of architecture, painting, and sculpture in Ancient, Medieval and Renaissance times. The character of ancient art from Egypt through Rome will be followed by a study of medieval art from its beginning in the early days of the Christian era to its climax in the Gothic period of the thirteenth century. This course will be concluded with an introduction to the art of the Renaissance in Italy to 1600. Not offered in 1952-53.

232. AN INTRODUCTION TO THE HISTORY OF THE FINE ARTS

Three hours

Continuation of 231. (1600 to the present.) Not offered in 1952-53.

331. FLEMISH PAINTING

Three hours

A course in the Flemish and Dutch primitives and Orientalizers, 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

Continuation of 101.
DISCRIPTION 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.

201. ART FOR ELEMENTARY TEACHERS  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.

202. 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.

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Manuscript and cursive writing. Theory and practice. No credit. For prospective teachers in elementary grades.

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A survey of the history of architecture, painting, and sculpture in Ancient, Medieval and Renaissance times. The character of ancient art from Egypt through Rome will be followed by a study of medieval art from its beginning in the early days of the Christian era to its climax in the Gothic period of the thirteenth century. This course will be concluded with an introduction to the art of the Renaissance in Italy to 1600. Not offered in 1952-53.

321. AN INTRODUCTION TO THE HISTORY OF THE FINE ARTS Three hours
Continuation of 231. (1600 to the present.) Not offered in 1952-53.

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.
Biology

309. **Christian Evidences**  Three hours
   A study of the evidences of the truths of Christianity as found in the records of the Old Testament with its revelations, miracles and prophecies, in the gospel record of the supernatural and vicarious life and death and resurrection of Jesus Christ; and the confirmation of the truth of Christianity as a supernatural force in its history.

310. **Romans**  Three hours
   A presentation of the teachings of the apostle Paul in his epistle to the Romans as they center about Revelation, Redemption, Predestination, and Christian Ethics. Lectures, collateral reading, and reports.

**Biology**

A. **General Biology Major.** For students preparing to teach Biology the following courses are required:
   - General College requirements (see p. 38), omitting Chemistry 205 and 206.
   - Chemistry, 105 and 104, and either Chemistry 303 and 304, or Physics 304 and Electrical Measurements.

B. **Human Biology Major.** For students preparing for various kinds of personnel service, or specializing for advanced work in the medical sciences, or for industry, the following curriculum is required:
   - General College requirements (see p. 38), omitting Chemistry 205 and 206.
   - Biology, 109 and 110, 103, 105 and 106, 107 or 201 and 207 and 306, 306, 307 or 311, 308, and 312.
   - Chemistry, 103 and 104; Mathematics, 101 and 104; and Physics 201 and 202.

C. **For students who elect Biology as a minor,** one of the following sequences is advised, fifteen hours being required in each:
   a) Botany and Bacteriology: Biology, 109 and 110, 107, 111 and 112, 207.
   b) General Biology: Biology, 109 and 110, 105 and 106, 201, 207, and 306.
   c) Human Biology: Biology, 109 and 110, 103, 105 and 106, 308, and 312.
   d) Zoology: Biology, 109 and 110, 201, 206, 208, 207, 308, 311 and 312.

D. **For Students preparing to teach Science Subjects in the Junior High School,** or for those preparing to teach Biology, Chemistry, and Physics in smaller Senior High Schools, the following requirements have been established:
   - General College requirements (see p. 38), omitting Chemistry 205 and 206.
   - Education requirements (see pp. 40 and 41). Biology, 109 and 110, 105 and 106, 206 or 207, and 306.
   - Chemistry, 105 and 104, 303 and 304.
   - Mathematics, 101 or 103, and 104.
   - Physics, 201E and 202E, 203 and 204, and 304.

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 103. At the same time it is planned to supplement course 103. Prerequisite: Biology 109 and 110.
105. OLD TESTAMENT HISTORY  
Two hours  
A survey, from the standpoint of special revelation, of the principal events 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 intertestamental 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  
Continuation of 201.

203. MISSIONS  
Three hours  
In this course the history of missions in the ancient, medieval and modern periods is covered. Emphasis is placed on the Biblical principles involved, the methods employed, the areas covered, the main figures, and the measure of success and failure. The relation of world missions to the Second Advent is also discussed.

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.

305. CALVINISM IN THE NINETEENTH CENTURY  
Three hours  
A study of the development of historic Calvinism during the Nineteenth Century, noting the progress (or lack of progress) which Calvinism has made in the various Calvinistic countries, particularly in non-eclesiastical spheres. Not offered in 1952-53.

308. REFORMED THEOLOGY AND THE MODERN THEOLOGICAL SITUATION  
Three hours  
In this course the Reformed Faith will be set over against modern deviations and defections from the faith. The inclusivist temper of modern ecumenical movements will be exposed and opposed. Modern Liberalism will be traced to its source in Schleiermacher and Kant. Its dominance and decay, together with the rise of the new modernism in Barthianism, will be discussed.

309. CHRISTIAN EVIDENCES  
Three hours  
A study of the evidences of the truths of Christianity as found in the records of the Old Testament with its revelation, miracles and prophecies, in the gospel record of the supernatural and vicarious life and death and resurrection of Jesus Christ; and the confirmation of the truth of Christianity as a supernatural force in its history.

310. ROMANS  
Three hours  
A presentation of the teachings of the apostle Paul in his epistle to the Romans as they center about Revelation, Redemption, Predestination, and Christian Ethics. Lectures, collateral reading, and reports.

Biology

A. General Biology Major. For students preparing to teach Biology the following courses are required: General College requirements (see p. 38), omitting Chemistry 205 and 206. Biology, 109 and 110, 105 and 106, 111 and 112, 201, 207, 306, 311 and 312. Chemistry, 103 and 104, and either Chemistry 303 and 304, or Physics 304 and Electrical Measurements. Mathematics, 101 and 104, and Physics, 201 and 292.

B. Human Biology Major. For students preparing for various kinds of personal service, or specializing for advanced work in the medical sciences, or for industry, the following curriculum is required: General College requirements (see p. 38), omitting Chemistry 205 and 206. Biology, 109 and 110, 103, 105 and 106, 107 or 201 or 207 and 306, 307 or 311, 308, and 312. Chemistry, 105 and 104; Mathematics, 101 and 104; and Physics 201 and 292.

C. For students who elect Biology as a minor, one of the following sequences is advised, fifteen hours being required in each:

a) Botany and Bacteriology: Biology, 109 and 110, 107, 111 and 112, 207.

b) General Biology: Biology, 109 and 110, 105 and 106, 201, 207, and 306.

c) Human Biology: Biology, 109 and 110, 103, 105 and 306, 308, and 312.

d) Zoology: Biology, 109 and 110, 201, 206, 208, 307, 308, 311 and 312.

D. For Students preparing to teach Science Subjects in the Junior High School, or for those preparing to teach Biology, Chemistry, and Physics in smaller Senior High Schools, the following requirements have been established:

General College requirements (see p. 38), omitting Chemistry 205 and 206. Education requirements (see pp. 40 and 41). Biology 109, 110, 103, 105 and 106, 206 or 207, and 306. Chemistry, 103 and 104, 303 and 304. Mathematics, 101 or 103, and 104. Physics, 201E and 202E, 203 and 204, and 304.

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. Prerequisite: Biology 109 and 110.
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. Prerequisite: Biology 109 and 110.

105. HUMAN ANATOMY AND PHYSIOLOGY  Three hours
An introduction to the study of human biology, including ele-
ments of embryology, genetics, anatomy, histology, and physiology.
Two hours of lectures and one laboratory period a week. Labora-
tory fee, $3.00. Prerequisite: Biology 109 and 110.

106. HUMAN ANATOMY AND PHYSIOLOGY  Two hours
Continuation of course 105. Lectures and quizzes.

107. PRINCIPLES OF MICROBIOLOGY  Four hours
The history of Microbiology and the cultural and morphological
characteristics of bacteria, yeasts, and molds are considered. Spe-
cial emphasis is placed on communicable diseases. This course is
adapted to pre-nursing students, but is open to all others. Three
hours of lectures and quizzes. One laboratory period a week.
Laboratory fee, $3.00. Prerequisite: Biology 109 and 110.

109. GENERAL BIOLOGY  Three hours
An introductory study of the basic principles of the various
divisions of biology with emphasis upon the broad cultural aspects
of this science. Two lectures and one laboratory period a week.
Laboratory fee, $3.00.

110. GENERAL BIOLOGY  Three hours
Continuation of Biology 109. Lectures or quizzes.

111. GENERAL BOTANY  Four hours
Anatomy and physiology of seed plants. Open to freshmen.
Three recitations and one laboratory period a week. Labora-
tory fee, $3.00. Prerequisite: Biology 109 and 110.

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 ZOOLOGY  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 study of the classification, identification, appearance, and
habits of animals which are more commonly met near our homes,
in zoological parks, or on pleasure trips. Birds and fur-bearers
will receive special consideration. The course consists of lectures,
museum studies, laboratory work, and field work. Two lectures
and one laboratory period a week. Laboratory fee, $5.00.

207. GENETICS  Three hours
A study of the ways and means by which the inherited char-
acteristics of plants, animals, and man are transmitted from par-
ents to offspring. The course consists of lectures and problems
concerning applications of the laws of heredity.

208. INTRODUCTION TO EMBRYOLOGY  Four hours
A study of the development of vertebrate animals. Three 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
The study of fundamental principles of human nutrition at all
ages and applied to individual, family, and community nutrition
problems. 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
An introduction to the study of the parasites of man and of
common animals. Classification, and life-cycles of the parasites,
and reactions of the hosts will be studied. Three lectures and
one laboratory period a week. Laboratory fee, $3.00.

308. HISTOLOGY  Four hours
A study of mammalian tissues. The relation between micro-
scopic structure and function will be emphasized. Three lectures
and one laboratory period a week. Laboratory fee, $3.00.

311. VERTEBRATE ZOOLOGY  Two hours
An introduction to the study of vertebrates with emphasis on
their comparative anatomy. Evolution problems are discussed.
One lecture and one laboratory period a week. Laboratory fee,
$3.00.

312. VERTEBRATE ZOOLOGY  Three hours
A continuation of 311. Two lectures and one laboratory period
per week. Laboratory fee, $3.00.

330. 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 fol-
lowing 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,
$5.00. Breakage fee, $3.00. No prerequisites. Not offered in
1952-53.
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. Prerequisite: Biology 109 and 110.

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. Prerequisite: Biology 109 and 110.

106. **Human Anatomy and Physiology**  
Continuation of course 105. Lectures and quizzes.  
Two hours

107. **Principles of Microbiology**  
Four 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. Three hours of lectures and quizzes. One laboratory period a week. Laboratory fee, $3.00. Prerequisite: Biology 109 and 110.

109. **General Biology**  
Three hours  
An introductory study of the basic principles of the various divisions of biology with emphasis upon the broad cultural aspects of this science. Two lectures and one laboratory period a week. Laboratory fee, $3.00.

110. **General Botany**  
Continuation of Biology 109. Lectures or quizzes.  
Three hours

111. **General Botany**  
Anatomy and physiology of seed plants. Open to freshmen. Three recitations and one laboratory period a week. Laboratory fee, $3.00. Prerequisite: Biology 109 and 110.

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 Zoology**  
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 study of the classification, identification, appearance, and habits of animals which are more commonly met near our homes, in zoological parks, or on pleasure trips. Birds and fur-bearers will receive special consideration. The course consists of lectures, museum studies, laboratory work, and field work. Two lectures and one laboratory period a week. Laboratory fee, $3.00.

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**  
Four hours  
A study of the development of vertebrate animals. Three 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  
The study of fundamental principles of human nutrition at all ages, applied to individual, family, and community nutrition problems. 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  
An introduction to the study of the parasites of man and of common animals. Classification, and life-cycles of the parasites, and reactions of the host will be studied. Three lectures and one laboratory period a week. Laboratory fee, $5.00. Not offered in 1952-53.

308. **Histology**  
Four hours  
A study of mammalian tissues. The relation between microscopic structure and function will be emphasized. Three lectures and one laboratory period a week. Laboratory fee, $3.00.

311. **Vertebrate Zoology**  
Two hours  
An introduction to the study of vertebrates with emphasis on their comparative anatomy. Evolution problems are discussed. One lecture and one laboratory period a week. Laboratory fee, $3.00.

312. **Vertebrate Zoology**  
Three hours  
A continuation of 311. Two lectures and one laboratory period a week. Laboratory fee, $3.00.

330w. **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, $8.00. Breakage fee, $3.00. No prerequisites. Not offered in 1952-53.
102. **General Chemistry**  
Continuation of 101. Hours, texts and fees the same. Not offered in 1952-53.

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.

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, $2.00. Breakage fee, $5.00. No prerequisites.  
Note: Students preparing for a B.S. in nursing are advised to take 103 and 104.

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, $7.00. 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, $7.00. Prerequisite: 201.

205. **Introduction to Physical 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. Prerequisite: Mathematics 101.

206. **Introduction to Physical Science**  
Three hours  
Continuation of 205.

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, $7.00. 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. **Organic-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, $7.00. Prerequisites: Chemistry 103 and 104.

304. **Organic-Biochemistry**  
Four hours  
Continuation of 303. Hours and fees the same.

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, $2.00. Breakage fee, $7.00. 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, $7.00. 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 Fison's text. Prerequisite: Chemistry 302. Laboratory fee, $3.00. Breakage fee, $7.00.

330m. **Teachers' Course**  
One hour  
Methods of teaching chemistry in secondary schools. Prerequisite: two years of chemistry.

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**Dutch**

The Queen Juliana Chair of the Language and Culture of the Netherlands

**A. DUTCH LANGUAGE**

101. **Elementary Grammar**  
Conjugations and declensions.  
Four hours

102. **Advanced Grammar**  
Four hours

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**  
Two or three hours  
The outstanding prose writers and poets after 1890 are read and the movements of naturalism, symbolism, neo-romanticism and neo-vitalism are discussed. Required outside reading and essays.

306. **Renaissance and Romanticism**  
Two or 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.
102. GENERAL CHEMISTRY  
Four hours  
Continuation of 101. Hours, texts and fees the same. Not offered in 1952-53.

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.

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 103 and 104.

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, $7.00. 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, $7.00. Prerequisite: 201.

205. INTRODUCTION TO PHYSICAL 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. Prerequisite: Mathematics 101.

206. INTRODUCTION TO PHYSICAL SCIENCE  
Three hours  
Continuation of 205.

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, $7.00. 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, $7.00. Prerequisites: Chemistry 103 and 104.

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304. ORGANO-BIOCHEMISTRY  
Four hours  
Continuation of 303. Hours and fees the same.

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, $7.00. 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, $7.00. 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 Fugon's text. Prerequisite: Chemistry 302. Laboratory fee, $3.00. Breakage fee, $7.00.

330m. TEACHERS' COURSE  
One hour  
Methods of teaching chemistry in secondary schools. Prerequisite: two years of chemistry.

Dutch

The Queen Juliana Chair of the Language and Culture of the Netherlands

A. DUTCH LANGUAGE

101. ELEMENTARY GRAMMAR  
Four hours  
Conjugations and declensions.

102. ADVANCED GRAMMAR  
Four hours  

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  
Two or 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  
Two or 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

325. THE RENAISSANCE IN FLANDERS AND ITALY (1350-1550)
(Not offered in 1952-53.)  
Three hours

326. DUTCH HISTORY (1600-1815)
(Of ferred both semesters.)  
Three hours

C. DUTCH ART

331. FLEMISH PAINTING
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.
Three hours

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

Economics

Students who plan to major in Economics should, no later than the beginning of their junior year, confer with the head of the Department.

103. ECONOMIC HISTORY (United States)  
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. Not offered in 1962-53.
Three hours

104. ECONOMIC GEOGRAPHY
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. Not offered in 1962-53.
Three hours

201. PRINCIPLES OF ECONOMICS
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.
Three hours

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

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

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

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

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

Education

Students who plan to meet teacher certificate requirements will find detailed information on pages 43 to 44.

A. PSYCHOLOGY
(See description of courses under department of Psychology.)

B. HISTORY

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

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

306. HISTORY OF EDUCATION
A continuation of 305 covering the modern period.
Three hours

309. EDUCATIONAL SOCIOLOGY
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.
Three hours

C. PRINCIPLES

301. PRINCIPLES OF EDUCATION
A study of the aim of education and of the various underlying problems.
Three hours
B. MEDIEVAL AND DUTCH HISTORY

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

325. THE RENAISSANCE IN FLANDERS AND ITALY (1350-1560)  Three hours
   (Not offered in 1952-53.)
326. DUTCH HISTORY (1500-1815)  Three hours
   (Offered both semesters.)

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

Students who plan to major in Economics should, no later than the beginning of their junior year, confer with the head of the Department.

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. Not offered in 1952-53.

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. Not offered in 1952-53.

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 role 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.

Education

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   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. Elementary School Music
   Three hours

225. Children's Literature (Story Telling)
   Two or three hours
   This course is offered in order to develop a knowledge of and an interest in good literature on the elementary level. Development of skill in story telling on the part of the teacher is also emphasized.

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.

318. Teaching Geography in Elementary Schools: Methods and Content
   Three hours

320. Teaching Bible in Elementary Schools
   Three hours
   Both semesters.

322. Teaching Reading in Elementary Schools
   Three hours
   Both semesters.

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
   Same as Latin 327 and 330m combined.

332. Remedial Reading
   Three hours

ENGINEERING

340. Curriculum
   Two hours
   A study of curriculum requirements for grades four through six, and the fundamental teaching procedures applying to children of later childhood. Observation required.

341. Directed Observation 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. 342.

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

301. 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 301 and Physics 201 or 201E.
314. **Principles of Teaching in the Secondary Schools**
Three hours

The principles of teaching will be discussed in the light of Morris'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. **Elementary School Music**
Three hours

225. **Children’s Literature (Story Telling)**
Two or three hours

This course is offered in order to develop a knowledge of and an interest in good literature on the elementary level. The development of skill in story telling on the part of the teacher is also emphasized.

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.

318. **Teaching Geography in Elementary Schools: Methods and Content**
Three hours

320. **Teaching Bible in Elementary Schools**
Three hours
Both semesters.

322. **Teaching Reading in Elementary Schools**
Three hours
Both semesters.

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**
Same as Latin 327 and 330m combined.
Three hours

332. **Remedial Reading**
Three hours

**Engineering**

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. 344.

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.

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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.

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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; practicing in lettering; and tracing. Three and one-half hour drafting-room periods, three hours homework a week.

102. **Descriptive Geometry**
Three hours

Exercises, instruction, and drill through the medium of selecting plates of problems. Three two-hour drafting-room periods, three hours homework 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 homework a week. Prerequisite: 102.

207. **Surveying**
Two or three hours

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

301. **Statics**
Three hours

Study of fundamental principles of mechanics and their application to the simpler problems of engineering. Forces, components, moments, cables, friction, centroids, minutes of inertia. Recitations, lectures, problems. Must be preceded or accompanied by Mathematics 301 and Physics 201 or 201E.
302. DYNAMICS Three hours
Motion of a particle, dynamics of moving bodies, Newton's laws, simple harmonic motion, elementary vibration problems, balancing, pendulums, impulse and momentum, work and energy. 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 juniors or seniors, 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman English</td>
<td>6</td>
</tr>
<tr>
<td>Elizabethan Period</td>
<td>3</td>
</tr>
<tr>
<td>American Literature</td>
<td>3</td>
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<td>Seventeenth Century</td>
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<tr>
<td>Eighteenth Century</td>
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<td>American Literature</td>
<td>3</td>
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<tr>
<td>Victorian Poetry</td>
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<tr>
<td>Victorian Prose</td>
<td>3</td>
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<tr>
<td>Contemporary Poetry</td>
<td>3</td>
</tr>
<tr>
<td>The Novel</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

Students planning to pursue graduate studies in English should develop a college major (in the subject) of at least thirty hours. Such students should also achieve a reading knowledge of Latin, French, and German.

103. FRESHMAN ENGLISH Three hours
Grammar, rhetoric, and composition. Introduction to the literature of England. Required of all freshmen, and prerequisite to all other courses in English. Textbooks and periodic themes.

104. FRESHMAN ENGLISH
The theory, example, and practice of composition. Introduction to the literature of England, continued from 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 plays and poems of Shakespeare. Textbook, collateral reading, and reports.

208. LITERATURE OF THE SEVENTEENTH CENTURY Three hours

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
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. Textbooks and critical papers.

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

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.

307. POETRY AND PROSE OF THE SEVENTEENTH CENTURY Three hours
A study of important poetry and prose in England from Donne to Dryden with particular emphasis upon the poetry of Donne, Herbert, Vaughan, Traherne, and Herrick, and upon the prose of Donne, Browne, and Taylor. Textbooks and a critical report.

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.
302. **DYNAMICS**  
*Three hours*

Motion of a particle, dynamics of moving bodies, Newton's laws, simple harmonic motion, elementary vibration problems, balancing, pendulums, impulse and momentum, work and energy. 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 freshmen, 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  
**Elizabethan Period** ....................................... 207  
**American Literature** ..................................... 201  
**or**

**Seventeenth Century** .................................... 208  
**Eighteenth Century** ....................................... 210  
**American Literature** ..................................... 202  
**or**

**Romantic Period** ......................................... 301  
**Victorian Poetry** ......................................... 302  
**or**

**Victorian Prose** ......................................... 310  
**Contemporary Poetry** ..................................... 304  

**or**

**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.

Students planning to pursue graduate studies in English should develop a college major (in the subject) of at least thirty hours. Such students should also achieve a reading knowledge of Latin, French, and German.

103. **FRESHMAN ENGLISH**  
*Three hours*

Grammar, rhetoric, and composition. Introduction to the literature of England. Required of all freshmen, and prerequisite to all other courses in English. Textbooks and periodic themes.

104. **FRESHMAN ENGLISH**

The theory, example, and practice of composition. Introduction to the literature of England, continued from 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 plays of Shakespeare. Textbook, collateral reading, and reports.

208. **LITERATURE OF THE SEVENTEENTH CENTURY**  
*Three hours*


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. Textbooks and critical papers.

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*


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.

307. **POETRY AND PROSE OF THE SEVENTEENTH CENTURY**  
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A study of important poetry and prose in England from Donne to Dryden with particular emphasis upon the poetry of Donne, Herbert, Vaughan, Traberne, and Herrick, and upon the prose of Donne, Browne, and Taylor. Textbooks and a critical report.

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

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.

313. Chaucer

Three hours

A study of the General Prologue, representative Canterbury
Tales and Troilus and Criseyde. Emphasis will fall upon Cha-
cer’s literary genius and the reflection in his work of the major
cultural phenomena of his time. Collateral reading.

315. The Principles of Literary Criticism

Three hours

A course in critical theory, historically and normatively pur-
ased. Analysis of the principal contributions to Western literary cri-
criticism. Emphasis on Plato, Aristotle, Longinus, Horace, Sidney,
Dryden, Pope, Lessing, Wordsworth, Coleridge, Shelley, Poe,
Arnold, and Eliot. Method: explication de texte. Textbook and
critical papers.

330m. Methods of Teaching English

Three hours

Attention is given the terms and standards of literary criticism,
the merits and inadequacies of representative high school English
textbooks, and acceptable methods of teaching composition and
the various literary forms. The student must give evidence of hav-
ing achieved on his own a mastery of the essentials of grammar.

French

101. Elementary French

Four hours

A study of the essentials of grammar, pronunciation, and com-
position. Reading of simple prose.

102. Elementary French

Four hours

Continuation of French 101, with increased emphasis on reading.

201. Intermediate French

Three hours

Intensive and extensive reading, review of grammar. Pre-
requisite: 101 and 102.

202. Intermediate French

Three hours

Continuation of French 201, with reading in representative
French literature.

301. The Romantic Movement

Three hours

A history of French literature of the first half of the nineteenth
Not offered in 1952-53.

302. Nineteenth Century—Second Half

Three hours

A history of French literature since the middle of the nine-
teenth century. Collateral reading and reports. Prerequisite: 101

303. Literature of the Seventeenth Century

Three hours

A study of the growth and spirit of Classicism, with emphasis
on representative authors, especially Corneille and Moliere. Pre-
requisite: 202.

304. Literature of the Seventeenth Century

Three hours

Continuation of 303, with special attention to La Fontaine,
Bollevue, and Racine.

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.

105. Geography of North America

Three hours

A survey of the elements of the natural environment of the ma-
jor regions of the United States and Canada in their relationship
to the cultural landscape. Intended for those specializing in edu-
cation or in the social sciences.

106. Geography of South America

Three hours

A study of the geographic structure of South America in rela-
tion to human adjustment and culture. Intended for those spe-
cializing in education or in the social sciences.

107. 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.

109. Geography of the Caribbean Area

Three hours

A study of the geographic and historic background of this area.
The course deals with the geographic aspects of certain
problems related to industry, agriculture, and population. Not
offered in 1952-53.

318. 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 stu-
dent’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 im-
portant parts of grammar. Composition and dictation. Pre-
requisite: 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.
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.

313. CHAUCER
Three hours
A study of the General Prologue, representative Canterbury Tales, and Troilus and Criseyde. Emphasis will fall upon Chaucer's literary genius and the reflection in his work of the major cultural phenomena of his time. Collateral reading.

315. THE PRINCIPLES OF LITERARY CRITICISM
Three hours

330m. METHODS OF TEACHING ENGLISH
Three hours
Attention is given to the terms and standards of literary criticism, the merits and inadequacies of representative high school English textbooks, and acceptable methods of teaching composition and the various literary forms. The student must give evidence of having achieved on his own a mastery of the essentials of grammar.

**FRENCH**

101. ELEMENTARY FRENCH
Four hours
A study of the essentials of grammar, pronunciation, and composition. Reading of simple prose.

102. ELEMENTARY FRENCH
Four hours
Continuation of French 101, with increased emphasis on reading.

201. INTERMEDIATE FRENCH
Three hours
Intensive and extensive reading, review of grammar. Prerequisite: 101 and 102.

202. INTERMEDIATE FRENCH
Three hours
Continuation of French 201, with reading in representative French literature.

301. THE ROMANTIC MOVEMENT
Three hours

302. NINETEENTH CENTURY—SECOND HALF
Three hours

303. LITERATURE OF THE SEVENTEENTH CENTURY
Three hours
A study of the growth and spirit of Classicism, with emphasis on representative authors, especially Corneille and Moliere. Prerequisite: 202.

**GERMAN**

304. LITERATURE OF THE SEVENTEENTH CENTURY
Three hours
Continuation of 303, with special attention to La Fontaine, Boileau, and Racine.

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.

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.

107. 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.

109. GEOGRAPHY OF THE CARIBBEAN AREA
Three hours
A study of the geographic and historic background of this area. The course deals with the geographic aspects of certain problems related to industry, agriculture, and population. Not offered in 1952-53.

318. 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

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

304. LATER NINETEENTH CENTURY DRAMA
Three hours

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 1952-53.

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 1952-53.

320. SCIENTIFIC GERMAN
One hour
Students wishing to take this course should confer with the professor in charge at the beginning of the fall semester.

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.

311. GREEK HISTORY
Three hours
The political, social, and cultural history of the Greek city-states up to the death of Alexander. Some attention is also given to the history of the Near and the Middle East.

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.

History

Those majoring in History must have had courses 101 and 102 or their equivalent in high school. In addition, 24 hours must be completed, with six (6) hours of credit in each of four (4) chosen fields. The fields of choice are: Ancient History, Medieval History, English History, Modern Europe, United States and Latin America, Eastern Europe. One of these four fields must be in American History.

Students are urged to consult with the head of the department early in their college career regarding their major program of 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 1600 TO 1950
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.

207. AMERICAN HISTORY FOR TEACHERS
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.
### History

Those majoring in History must have had courses 101 and 102 or their equivalent in high school. In addition, 24 hours must be completed, with six (6) hours of credit in each of four (4) chosen fields. The fields of choice are: Ancient History, Medieval History, English History, Modern Europe, United States and Latin America, Eastern Europe. One of these four fields must be in American History.

Students are urged to consult with the head of the department early in their college career regarding their major program of History.

### Greek

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

**101. BEGINNERS' GREEK**

Text: Crosby and Schaeffer, An Introduction to Greek.

**102. BEGINNERS' GREEK**

Continuation of 101. Completion of the text and the reading of the first book of Xenophon Anabasis, or its equivalent.

**201. XENOPHON**

Selections from the Anabasis. Prerequisite: 101 and 102.

**202. SELECTIONS FROM PLATO**

Prerequisite: 201.

**311. GREEK HISTORY**

The political, social and cultural history of the Greek city-states up to the death of Alexander. Some attention is also given to the history of the Near and the Middle East.

**313. NEW TESTAMENT GREEK**

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.
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.

305. LATIN AMERICAN HISTORY
Three hours
An account of the history, government, and social and economic
development of the Central and South American Republics.

307. MEDIEVAL HISTORY
Three hours
The political, cultural and social developments in Europe from
the last century of the Roman Empire to the dawn of the Renais-
sance and the beginnings of the modern era.

308. MEDIEVAL HISTORY
Three hours
Continuation of 307. Prerequisite: 307.

309. EARLY MODERN EUROPE
Three hours
Sixteenth Century Europe (1500-1648). Emphasizing the back-
ground and development of the Reformation, the war of religion
in France, the rise of the Netherlands, and the Holy Roman
Empire and Thirty Years' War. Not given in 1952-1953.

310. EARLY MODERN AND MODERN EUROPE
Three hours
Seventeenth Century and Eighteenth Century Europe (1648-
1815). The Age of Louis XIV, the French Revolution, and the

311. GREEK HISTORY
Three hours
The political, social and cultural history of the Greek city-states
up to the end of the Hellenistic period, 31 B.C. Some attention
is also given to the history of the Near and the Middle East.

312. ROMAN HISTORY
Three hours
The history of Rome from the foundation of the city to A.D.
565, the death of Justinian. The emphasis falls on the develop-
ment of the constitution and its effect upon, and how in turn it
was affected by the expansion of Rome over the Mediterranean.
Economic, social and literary history studied in its relation to the
political.

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.
Not given in 1952-1953.

326. DUTCH HISTORY (1500-1815)
Three hours
A short review of the history of the Netherlands up to 1500.
The Preparations 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 piutocracy and rational-
ism in the eighteenth century. The spirit of the French Revolu-
tion as manifested in Holland. The re birth of Calvinism as a
political and cultural power after 1815.

Latin

Pre-Seminarians —
Those who have had one year in high school take 101.
Those who have had two years in high school take 201A.
Those who have had 101 and 102 at Calvin take 307.

Others —
Those who have had one year in high school take 101.
Those who have had two years in high school take 201 (not 201A).
Those who have had three years in high school take 201 or 301 (con-
sult instructor).
Those who have had 101 and 102 at Calvin take 301 or 307.
Those who have had 201 and 202 at Calvin take 301 or 307.

101. ELEMENTARY LATIN
Four hours
Text: Smith-Thompson, First Year Latin.

102. ELEMENTARY LATIN
Four hours
Continuation of 101. Same text as above.

201. INTERMEDIATE LATIN
For students (except Pre-Seminarians) who have had two
units of Latin in high school or one year in college. A thorough
review of the grammar will accompany the reading of selections
from various Latin authors.

202. INTERMEDIATE LATIN
Continuation of 201.

201A. INTERMEDIATE LATIN FOR PRE-SEMINARIANS
For Pre-Seminary students who have had two units of Latin in
high school. By the end of the second semester this course will
parallel closely the content and level of 308.

202A. INTERMEDIATE LATIN FOR PRE-SEMINARIANS
Continuation of 201A.

301. CICERO'S PHILOSOPHICAL ESSAYS
Three hours
Reading of one or more of the following: De Amicitia, De Senec-
tute, 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. SELECTIONS FROM LACTANTIUS' DIVINAE INSTITUTIONES
Three Hours
Review of grammar. Reading of selected portions of the Institu-
tiones.

308. READINGS IN THE CHURCH FATHERS
Three hours
Continuation of 307.
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.

307. **Medieval History**  
*Three hours*

The political, cultural and social developments in Europe from the last century of the Roman Empire to the dawn of the Renaissance and the beginnings of the modern era.

308. **Medieval History**  
*Three hours*

Continuation of 307. Prerequisite: 307.

309. **Early Modern Europe**  
*Three hours*

Sixteenth Century Europe (1500-1648). Emphasizing the background and development of the Reformation, the wars of religion in France, the rise of the Netherlands, and the Holy Roman Empire and Thirty Years' War. Not given in 1952-1953.

310. **Early Modern and Modern Europe**  
*Three hours*


311. **Greek History**  
*Three hours*

The political, social and cultural history of the Greek city-states up to the end of the Hellenistic period, 31 B.C. Some attention is also given to the history of the Near and the Middle East.

312. **Roman History**  
*Three hours*

The history of Rome from the foundation of the city to A.D. 565, the death of Justinian. The emphasis falls on the development of the constitution and its effect upon, and how in turn it was affected by the expansion of Rome over the Mediterranean. Economic, social and literary history studied in its relation to the political.

325. **The Renaissance in Flanders and Italy (1350-1550)**  
*Three hours*


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### Latin

**Pre-Seminarists**
- Those who have had one year in high school take 101.
- Those who have had two years in high school take 201.
- Those who have had 101 and 102 at Calvin take 307.

**Others**
- Those who have had one year in high school take 101.
- Those who have had two years in high school take 201 (not 201A).
- Those who have had three years in high school take 201 or 301 (consult instructor).
- Those who have had 101 and 102 at Calvin take 301 or 307.
- Those who have had 201 and 202 at Calvin take 301 or 307.

Students who are planning a major in Latin should consult with Dr. W. T. RADIUS.

101. **Elementary Latin**  
*Four hours*

Text: Smith-Thompson, First Year Latin.

102. **Elementary Latin**  
*Four hours*

Continuation of 101. Same text as above.

201. **Intermediate Latin**  
*Three hours*

For students (except Pre-Seminarists) who have had two units of Latin in high school or one year in college. A thorough review of the grammar will accompany the reading of selections from various Latin authors.

202. **Intermediate Latin**  
*Three hours*

Continuation of 201.

201A. **Intermediate Latin for Pre-Seminarists**  
*Three hours*

For Pre-Seminary students who have had two units of Latin in high school. By the end of the second semester this course will parallel closely the content and level of 308.

202A. **Intermediate Latin for Pre-Seminarists**  
*Three hours*

Continuation of 201A.

301. **Cicero's Philosophical Essays**  
*Three hours*

Reading of one or more of the following: *De Amiculis, 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. **Selections from Lactantius' Divinae Institutiones**  
*Three hours*

Review of grammar. Reading of selected portions of the Institutiones.

308. **Readings in the Church Fathers**  
*Three hours*

Continuation of 307.
312. **Roman History**

Three hours

The history of Rome from the foundation of the city to A.D. 565, the death of Justinian. The emphasis falls on the development of the constitution and its effect upon, and how in turn it was affected by, the expansion of Rome over the Mediterranean. Economic, social and literary history studied in relation to the political.

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. Not offered in 1952-1953.

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. Not offered in 1952-1953.

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. Not offered in 1952-1953.

330m. **Teacher’s Course**

Two hours

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. Prerequisite: 12 hours of Latin in College.

**Mathematics**

Students who wish to major in Mathematics should take Math. 101, Math. 102, and Math. 104 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 high school algebra.

102. **Solid Geometry**

Three hours

Prerequisite: Math. 101 and plane geometry.

104. **Plane Trigonometry**

Prerequisite: Math. 101 and plane geometry.

201. **College Algebra and Plane Analytical Geometry**

Five hours

Prerequisite: Math. 101 and Math. 104.

202. **Continuation of 201**

Five hours

Plane analytical geometry completed and an introduction to solid analytical geometry.

203. **Spherical Trigonometry**

Two hours

Prerequisite: Math. 102 and Math. 104.

205. **Business Mathematics**

Three hours

Required of all students of business administration. Prerequisite: Math. 101.

206. **Statistics**

Three hours

Emphasis on statistical methods. Prerequisite: Math. 101. For business administration students Math. 205 is required.

301. **Calculus**

Five hours

Differentiation and integration of algebraic functions. Prerequisite: Math. 201 and 202.

**Music**

302. **Calculus**

Three hours

Differentiation and integration of transcendental functions. Solution of elementary ordinary differential equations. Prerequisite: Math. 301.

304. **Differential Equations**

Two hours

Prerequisite: Math. 302.

305. **Theory of Equations**

Three hours

Prerequisite: Math. 302.

309. **Astronomy—Descriptive**

Three hours

A study of the solar system, the sidereal universe, and the theory of evolution.

330m. **Teacher’s Course**

One hour

Methods of teaching high school mathematics.

**Music (See also page 52)**

**Applied Music Requirements**

All applied music students should study with a member of the college staff. In case of an overload in the department, it may be necessary for the chairman of the department to recommend that the student study with an approved teacher in the community. This recommendation will be made only in an emergency.

No applied music credit may be granted a student who does not comply with these regulations.

All applied music concentrates, planning a junior or senior recital, must study with a member of the faculty when such instruction is offered in the college.

**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. In his repertoire he should have included some of the standard etudes, such as Czerny, Op. 299, Book 1; Heller, Op. 46 or 47; Bach, Two-part Invention, and compositions which correspond in difficulty to:

Haydn, Sonata No. 11, G major No. 20 (Schirmer);
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 arpeggios 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 D 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.
312. **ROMAN HISTORY**  
*Three hours*

The history of Rome from the foundation of the city to A.D. 565, the death of Justinian. The emphasis falls on the development of the constitution and its effect upon, and how in turn it was affected by the expansion of Rome over the Mediterranean. Economic, social and literary history studied in its relation to the political.

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. Not offered in 1952-1953.

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. Not offered in 1952-1953.

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 323. Not offered in 1952-1953.

330m. **TEACHER’S COURSE**  
*Two hours*

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. Prerequisite: 12 hours of Latin in College.

**Mathematics**

Students who wish to major in Mathematics should take Math. 101, Math. 102, and Math. 104 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 high school algebra.

102. **SOLID GEOMETRY**  
*Three hours*

Prerequisite. Math. 101 and plane geometry.

104. **PLANE TRIGONOMETRY**  
*Three hours*

Prerequisite. Math. 101 and plane geometry.

201. **COLLEGE ALGEBRA AND PLANE ANALYTICAL GEOMETRY**  
*Five hours*

Prerequisite: Math. 101 and Math. 104.

202. **CONTINUATION OF 201**  
*Five hours*

Plane analytical geometry completed and an introduction to solid analytical geometry.

203. **SPHERICAL TRIGONOMETRY**  
*Two hours*

Prerequisite: Math. 102 and Math. 104.

205. **BUSINESS MATHEMATICS**  
*Three hours*

Required of all students of business administration. Prerequisite: Math. 101.

206. **STATISTICS**  
*Three hours*

Emphasis on statistical methods. Prerequisite: Math. 101. For business administration students Math. 205 is required.

301. **CALCULUS**  
*Five hours*

Differentiation and integration of algebraic functions. Prerequisite: Math. 201 and 202.

**Music**

(See also page 52)

**APPLIED MUSIC REQUIREMENTS**

All applied music students should study with a member of the college staff. In case of an overload in the department, it may be necessary for the chairman of the department to recommend that the student study with an approved teacher in the community. This recommendation will be made only in an emergency.

No applied music credit may be granted a student who does not comply with these regulations.

All applied music concentrates, planning a junior or senior recital, must study with a member of the faculty when such instruction is offered in the college.

**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. In his repertoire he should have included some of the standard etudes, such as Czerny, Op. 299, Book 1; Heller, Op. 46 or 47; Bach, Two-part Invention, and compositions which correspond in difficulty to:

Haydn, Sonata No. 11, G major No. 20 (Schirmer);
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 arpeggios 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, Novellette F major;
Some compositions by standard modern composers of correspondingly difficult.
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, Carnaval, 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:

Volume II, No. 17, Fugue in G minor.
Selections from the Liturgical Year Chorales.
Mendelssohn, Sonatas No. II, IV, V.
Gulimant, 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 transpone, 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; Gulimant, 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.
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:

- Volume II, No. 17, Fugue in G minor.
- Selections from the Liturgical Year Chorales.
- Mendelssohn, Sonatas No. 11, 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 church and should be able to demonstrate ability in sight reading, solo and choral accompaniments.

IV. Students desiring 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.
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 Two hours

308. FORM Two hours

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)
A maximum of 8 semester hours of credit in Applied Music will be allowed towards the Bachelor's Degree, except for Music Majors concentrating in Applied Music, in which case the maximum is 16 semester hours.

MUSIC

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, $50 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


VIOLIN


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. Handel'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.

207-8. 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.
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, song, 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
Continuation of 305.
Three hours

307. FORM
Two hours

308. FORM
Two hours

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
Continuation of 311. This second semester will be devoted primarily to the symphonic poem.
Three hours

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)
A maximum of 8 semester hours of credit in Applied Music will be allowed towards the Bachelor's Degree, except for Music Majors concentrating in Applied Music, in which case the maximum is 16 semester hours.

MUSIC

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
141-12, 341-2, 351-2 (4 years). Per semester one hour. Individual lessons in piano. Fee $30 per semester.

VIOLIN

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.

207-8. 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.
213-214. **Band**  
Representative works in the field of symphonic band literature are studied and prepared for concert performance. The repertoire is changed annually so that over a period of four years the standard works for symphonic band will have been performed. Open to all Calvin College students after consultation with the director. A limited number of instruments are available to students on loan from the Band library. Three rehearsals a week.

215-216. **Orchestra**  
Representative works in the field of chamber orchestra and symphony orchestra are studied and prepared for concert performance. The repertoire is changed annually so that over a period of four years the standard works will have been studied. Open to all Calvin College students after consultation with the director. A limited number of instruments are available to students on loan from the Orchestra library. Two rehearsals a week.

**Philosophy**

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

**ELEMENTARY COURSES**

**200. Logic**  
A course in traditional and elementary symbolic logic. Offered each semester.

**201. Introduction (Perspectives)**  
Three hours  
An introduction to philosophy and its problems which emphasizes the basic differences in philosophical orientation and perspective between naturalism, classical pagan idealism, modernity, and Christianity. Together with 202, intended primarily for students wishing to satisfy the six-hour Philosophy requirement for the A.B. degree. Offered first semester only.

**202. Introduction (Perspectives)**  
Three hours  
Continuation of 201, but may be taken independently by qualified students. Offered second semester only.

**203. Introduction**  
Three hours  
A course in the aims and methods of critical reflection and a discussion of representative philosophers and philosophical problems. Not open to freshmen.

**204. Introduction**  
A continuation of 203.

**INTERMEDIATE COURSES**

Intermediate courses normally presuppose three hours of Philosophy, but are open to all qualified juniors and seniors.

**300. History of Philosophy: Ancient**  
Three hours  
Historical and critical study of the philosophical question raised by the Greek and classic pagan mind, and of the implicit movement in the proffered solutions. Through Plotinus. Offered each semester.

**301. History of Philosophy: Medieval**  
Three hours  
Historical and critical study of the Christian philosophical synthesis from the beginnings of Christianity to the Renaissance. Special emphasis is given to Augustine and Thomas Aquinas. Offered each semester.

**PHYSICAL EDUCATION**

**302. History of Philosophy: Modern**  
Three hours  
Historical and critical study of the philosophical perspective of modernity. Renaissance through Kant. Offered each semester.

**303. Philosophy of Science**  
Three hours  
A study of the first principles underlying Greek, modern classical, and contemporary physical science. Illustrations and analogies will be confined to the history of relativity and thermodynamics. Offered first semester.

**305. Ethics**  
Three hours  
The study is systematic rather than historical. In the discussion of moral problems and their solution, emphasis is on the contrast between the "morals commonwealths" of ethical naturalism in its various forms, of classic pagan and modern idealism, and of Christianity. Offered first semester only.

**307. Political Philosophy**  
Three hours  
A history of political thought from the Hebrews to contemporary times, with special emphasis upon the development of democratic ideals and their application.

**308. Aesthetics**  
Three hours  
A study of the main features of the aesthetic judgment as exemplified in the fine arts, of the relation of man to the aesthetic, and of the relation of aesthetic value to other values such as e.g., the moral.

**ADVANCED COURSES**

Advanced courses normally presuppose six hours of Philosophy, but are open to all qualified seniors.

**350. Aristotle**  
Three hours  
Advanced study of Aristotle and the chief of the Hellenistic thinkers. Offered first semester.

**351. Kant**  
Three hours  

**352. The Philosophy of Thomas Aquinas**  
Three hours  
A course in Thomistic thought based upon a critical analysis of the Summae. Prerequisite: 301.

**353. Plato**  
Three hours  
Study of the later Platonic dialogues.

**352. Contemporary Philosophy**  
Three hours  
History of the major philosophical movements in the last 100 years. Offered first semester.

**364. Metaphysics**  
Three hours  
A study of first principles or ultimate philosophical questions involved in the theory of reality, the theory of knowledge, and the theory of value.

**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: Biology 105 and 216.

**103. Personal Hygiene (Biol. 102)**  
Three hours  
The proper care of our bodies and approved practices for the prevention of disease are studied.
PHYSICAL EDUCATION

302. HISTORY OF PHILOSOPHY: MODERN  Three hours
Historical and critical study of the philosophical perspective of
modernity. Renaissance through Kant. Offered each semester.

303. PHILOSOPHY OF SCIENCE  Three hours
A study of the first principles underlying Greek, modern classi-
cal, and contemporary physical science. Illustrations and anal-
ologies will be confined to the history of relativity and thermo-
dynamics. Offered first semester.

305. ETHICS  Three hours
The study is systematic rather than historical. In the discussion
of moral problems and their solution, emphasis is on the contrast
between the “moral commonwealths” of ethical naturalism in its
various forms, of classic pagan and modern idealism, and of
Christianity. Offered first semester only.

307. POLITICAL PHILOSOPHY  Three hours
A history of political thought from the Hebrews to contempo-
rary times, with especial emphasis upon the development of
democratic ideals and their application.

308. AESTHETICS  Three hours
A study of the main features of the aesthetic judgment as
exemplified in the fine arts, of the relation of art to the aesthetic,
and of the relation of aesthetic value to other values such as e.g.,
the moral.

ADVANCED COURSES

Advanced courses normally presuppose six hours of Philosophy, but
are open to all qualified seniors.

350. ARISTOTLE  Three hours
Advanced study of Aristotle and the chief of the Hellenistic
thinkers. Offered first semester.

351. KANT  Three hours

352. THE PHILOSOPHY OF THOMAS AQUINAS  Three hours
A course in Thomistic thought based upon a critical analysis of
the Summae. Prerequisite: 301.

353. PLATO  Three hours
Study of the later Platonic dialogues.

362. CONTEMPORARY PHILOSOPHY  Three hours
History of the major philosophical movements in the last 100
years. Offered first semester.

364. METAPHYSICS  Three hours
A study of first principles or ultimate philosophical questions
involved in the theory of reality, the theory of knowledge, and the
theory of value.

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 fol-
lowing: Biology 105 and 210.

103. PERSONAL HYGIENE  (Biol. 103)  Three hours
The proper care of our bodies and approved practices for the
prevention of disease are studied.
POLITICAL SCIENCE

201. History and Principles 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 ideals. 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.

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.

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.

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.

Physics

Students who plan to major in Physics should complete Mathematics 202 and Chemistry 104 during the freshman year and consult with a member of the departmental staff at the beginning of the sophomore year.

101. Elementary Physics  
Three hours
Mechanics, sound, and heat. Adapted to pre-nursing, medical technology students and normal students preparing to teach general science. Accompanied with demonstrations and several laboratory exercises.

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 demonstrations and several laboratory exercises.

201. General Physics  
Four hours
Mechanics, sound, and heat. Prerequisite: Math. 104. 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, $5.00.

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, $5.00.

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.

Note: Prerequisites for the following courses are Physics 202E and Mathematics 302.

305. Heat  
Three hours
An introduction to the first and second laws of thermodynamics and to the kinetic theory of gases.

306. Optics  
Three hours
The phenomena of interference, diffraction and polarization. Two lectures and one three-hour laboratory period a week. Laboratory fee $3.00.

307. Electricity and Magnetism  
Four hours
The elementary theory of electrostatics, magnetism, direct current and alternating current circuit theory, and electromagnetic waves. Three lectures and one three-hour laboratory period a week. Laboratory fee $3.00. Not offered in 1952-1953.

308. Electricity and Magnetism  
Four hours
A continuation of 307 which is a prerequisite. Three lectures and one three-hour laboratory period a week. Laboratory fee $3.00. Not offered in 1952-1953.

309. Astronomy — Descriptive  
Three hours
A study of the solar system, the sidereal universe, and the theory of evolution.

Political Science

History 203 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.
104. **History and Principles 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.

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.

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.

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**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.

222. **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.

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**Physics**

Students who plan to major in Physics should complete Mathematics 202 and Chemistry 104 during the freshman year and consult with a member of the departmental staff at the beginning of the sophomore year.

**101. Elementary Physics**  *Three hours*
Mechanics, sound, and heat. Adapted to pre-nursing, medical technology students and normal students preparing to teach general science. Accompanied with demonstrations and several laboratory exercises.

**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 demonstrations and several laboratory exercises.

**201. General Physics**  *Four hours*
Mechanics, sound, and heat. Prerequisite: Math. 104. 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.

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**Political Science**

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, $5.00.

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, $5.00.

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.

Note: Prerequisites for the following courses are Physics 202E and Mathematics 302.

305. **Heat**  *Three hours*
An introduction to the first and second laws of thermodynamics and to the kinetic theory of gases.

306. **Optics**  *Three hours*
The phenomena of interference, diffraction and polarization. Two lectures and one three-hour laboratory period a week. Laboratory fee $3.00.

307. **Electricity and Magnetism**  *Four hours*
The elementary theory of electrostatics, magnetism, direct current and alternating current circuit theory, and electromagnetic waves. Three lectures and one three-hour laboratory period a week. Laboratory fee $3.00. Not offered in 1962-1963.

308. **Electricity and Magnetism**  *Four hours*
A continuation of 307 which is a prerequisite. Three lectures and one three-hour laboratory period a week. Laboratory fee $3.00. Not offered in 1962-1963.

309. **Astronomy—Descriptive**  *Three hours*
A study of the solar system, the sidereal universe, and the theory of evolution.

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**Political Science**

History 203 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.
Government of Modern States

Continuation of 101, which is prerequisite.

Principles of Political Science

Three hours (Formerly Political Science 301 — Introduction to Political Science.)

A presentation of the important conclusions of modern investigations of learning and forgetting and an evaluation of the various contributions to their explanation. The place of learning theory in general psychology is stressed.

Contemporary Schools of Psychology

Three hours

A critical examination of the principal theories, systems and schools of modern psychology and their philosophical implications. Readings, discussions and individual investigations will constitute the course.

Sociology

A candidate for the A.B. degree in the General College course or in the Education course may select sociology as a major field. He should complete the subjects prescribed for the General College (see p. 00) or the Education course (see p. 00). To complete the major group (Group III) requirements he should elect 24 hours in sociology. The 24 hours must include courses 203, 204, 206, 210, 304.

A student who expects to enter a graduate school of social work should elect sociology as his major subject. The 24 hours must include courses 203, 204, 206, 210, 304, 305, 306, 315.

Any other Group III (see p. 00) subject may be selected for the 12-hour sequence. (15 hours for a Teacher's Certificate.)

Psychology

Introductory Psychology

Three hours

A general course in psychology for beginners. This course is given during both semesters.

Educational Psychology

Three hours

Course 201, or its equivalent, is a prerequisite.

Child Psychology

Three hours

A study of the physical and mental development of the child. Course 201, or its equivalent, is a prerequisite.

Mental Hygiene

Two or three hours

A study of personal attitudes toward reality and the solution of maladjustment by means of integration.

Social Psychology

Three hours

A study of individual human behavior in reaction to social environment, of the consequences of such social interaction for human personality, and of the behavior and consciousness of groups.

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.

Advanced General Psychology

Three hours

A more detailed study than is possible in Psychology 201 of the major psychological functions of man. Emphasis will be placed on problems involved in perceiving, imagining and thinking. Prerequisite: Psychology 201.

History of Psychology

Three hours

A historical introduction to the problems and theories of modern psychology with special reference to the origin of divergences in the interpretation of human nature. Readings and discussions.
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 constitu-
tion 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.

209. Mental Hygiene  Two or three hours
A study of personal attitudes toward reality and the solution
of maladjustment by means of integration.

210. Social Psychology  Three hours
A study of individual human behavior in reaction to social en-
vironment, of the consequences of such social interaction for human
personality, and of the behavior and consciousness of groups.

212. 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 psy-
chology, and especially, too, the phenomena and problems of the
psychoses. Psychology 201, or its equivalent, is a prerequisite.

300. Advanced General Psychology  Three hours
A more detailed and thorough examination than is possible in
Psychology 201 of the major psychological functions of man.
Emphasis will be placed on problems involved in perceiving, imag-
inng and thinking. Prerequisite: Psychology 201.

301. History of Psychology  Three hours
A historical introduction to the problems and theories of
modern psychology with special reference to the origin of diver-
gences in the interpretation of human nature. Readings and dis-
ussions.

Sociology

302. Theories of Learning  Three hours
A presentation of the important conclusions of modern investi-
gations of learning and forgetting and an evaluation of the various
contributions to their explanation. The place of learning theory
in general psychology is stressed.

304. Contemporary Schools of Psychology  Three hours
A critical examination of the principal theories, systems and
schools of modern psychology and their philosophical implications.
Readings, discussions and individual investigations will constitute
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A candidate for the A.B. degree in the General College course or in
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clude courses 203, 204, 210, 304, 306, 315.

Any other Group III (see p. 00) subject may be selected for the
12-hour sequence. (15 hours for a Teacher's Certificate.)

Psychology must be elected in Group II for the 12-hour minor
sequence. Psychology 201, 209, and 312 are mandatory.

The following courses also should be elected: Economics 201, 202,
306; Political Science 201, 202; Physical Education 204.

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 popu-
lation problems, poverty, crime and delinquency, divorce, race
and minority group cleavages, and problems of farm and village. It is
desirable, but not necessary, to precede this course with 203.

206. Rural and Urban Community  Three hours
A comparative analysis of culturally variant rural and urban
communities in the United States. The emphasis is on function,
process, value systems and styles of life, rather than on community
structure. The suburban, or "fringe" development is consid-
ered as well as rural-urban relationships. 203 is a prerequisite
except for those who are working towards a two-year State Lim-
ited Certificate.

208. Community Recreation (Phys. Ed. 204)  Two hours
Especially for pre-social work students. Taught in Department
of Physical Education.

210. Social Psychology (Psych. 210)  Three hours
This course is described under Psychology. Credit may be ap-
plicated either as Sociology or Psychology.
303. LABOR PROBLEMS
This course is described under Economics.

304. THE FAMILY
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 an 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
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
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
This course is offered in the department of Education.

315. INTRODUCTION TO SOCIAL WORK
The analysis of social work principles, problems, and methods based upon theoretical and case material. Prerequisite: three courses in Sociology. Admission by permission of Sociology adviser. Open to seniors and to selected juniors.

320. PROSEMINAR IN SOCIOLOGICAL RESEARCH
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.

330. 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

103. FUNDAMENTALS OF SPEECH — I
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
Continuation of 103, with emphasis on longer speeches, motivation, and rhetoric. Panel discussions, symposiums, and different types of speeches will be presented. Prerequisite: Course 103.

202. PARLIAMENTARY PROCEDURE
One hour
A study of the basic principles of parliamentary procedure. Opportunity will be given for developing skill in the handling of the rules of parliamentary procedure. Especially recommended for pre-seminary, pre-law, and education students.

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
Two hours
The principles and techniques of interpretation and expression. Oral interpretation of representative selections. Practice in individual and choral reading.

304. ADVANCED INTERPRETATION
Two hours
Continuation of 303. Application of its principles to a broader range of material, including drama, recitals, and radio reading. Especially designed for prospective teachers of interpretation and dramatics.

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 various forms.

FORENSICS

209. INTERCOLLEGIATE PEACE ORATORY (Formerly 305)
One hour

211. INTERCOLLEGIATE ORATORY (Formerly 307)
One hour

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