

ADMINISTRATION BUILDING

Calvin College

An Institution of the Christian Reformed Church

BULLETIN
1953-1954



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 of the College.

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 Dean of Students.

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

1953-1954

1953

Faculty Conferences	September 9 and 10
Re-examinations	September 11
Enrollment of Juniors and Seniors	September 11 and 12
Enrollment of Sophomores	September 14
Freshman enrollment and Orientation.....	September 14 and 15
Classes 7:50 A.M.-9:35 A.M. and 1:30 P.M.-5:45 P.M.	September 16
Convocation 10:00 A.M.	September 16
Thanksgiving recess	November 26-29
Christmas vacation begins	December 18, 12:00 Noon

1954

Christmas vacation ends	January 5, 7:50 A.M.
Final examinations begin	January 18
First semester closes	January 26
Registration for the second semester.....	January 27-30
Meeting of the Board of Trustees	In February
Spring vacation begins	March 24, 12:00 Noon
Spring vacation ends	April 1, 7:50 A.M.
Re-examinations	April 2 and 3
Final examinations begin	May 21
Commencement	June 4

Summer Session

Enrollment	June 21, 9:00 A.M.
Classes begin	June 22, 8:15 A.M.
Independence Day recess	July 5
Summer session closes	July 30

General Session 1954-1955

Faculty Conferences	September 8 and 9
Re-examinations	September 10
Enrollment of Juniors and Seniors	September 10 and 11
Enrollment of Sophomores	September 13
Freshman enrollment and Orientation.....	September 13 and 14
Convocation	September 15

BOARD OF TRUSTEES

OFFICERS

(To be elected in February, 1954).....	<i>President</i>
(To be elected in February, 1954).....	<i>Vice-President</i>
THE REV. J. T. HOLWERDA.....	<i>Secretary</i>
THE REV. J. T. HOOGSTRA, TH.D.....	<i>Assistant Secretary</i>

MEMBERS

The Rev. J. K. Van Baalen.....	10952-96th St., Edmonton, Alta, Canada (Classis Alberta)
The Rev. H. De Mots.....	17621 Ardmore Ave., Bellflower, California (Classis California)
The Rev. H. Venema.....	787 N. Murphy Rd., Sarnia, Ont., Canada (Classis Chatham)
The Rev. R. Veenstra.....	1224 S. 60th Ct., Cicero 50, Illinois (Classis Chicago North)
The Rev. G. Hoeksema.....	10942 Perry Ave., Chicago, Illinois (Classis Chicago South)
The Rev. R. J. Bos.....	3 Kildeer Crescent, Toronto 17, Ont., Canada (Classis Eastern Ontario)
The Rev. G. Gritter.....	1241 Fuller Ave., S.E., Grand Rapids 7, Michigan (Classis Grand Rapids East)
The Rev. L. Greenway, Th.D.....	2050 Francis Ave., S.E., Grand Rapids 7, Michigan (Classis Grand Rapids South)
The Rev. J. T. Holwerda.....	961 Alpine Ave., N.W., Grand Rapids 4, Michigan (Classis Grand Rapids West)
The Rev. H. Bouma.....	52 Summer St., Passaic, New Jersey (Classis Hackensack)
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The Rev. E. B. Pekelder.....	823 S. Burdick St., Kalamazoo, Michigan (Classis Kalamazoo)
The Rev. J. H. Rubingh.....	Raymond, Minnesota (Classis Minnesota North)
The Rev. R. Veldman.....	Estelline, South Dakota (Classis Minnesota South)
The Rev. E. J. Tanis.....	503 Columbus St., Grand Haven, Michigan (Classis Muskegon)
The Rev. H. Minnema.....	616 Humiston Ave., Worthington, Minnesota (Classis Orange City)
The Rev. H. Zwaanstra.....	R. R. #3, Grundy Center, Iowa (Classis Ostfriesland)
The Rev. C. M. Schoolland.....	1860 Napier St., Vancouver, B. C., Canada (Classis Pacific)

The Rev. J. Geels.....	Box 14, Sully, Iowa
	(Classis Pella)
The Rev. B. J. Haan.....	142 Second St., N.E., Sioux Center, Iowa
	(Classis Sioux Center)
The Rev. G. Rozenboom.....	426 Geele Ave., Sheboygan, Wisconsin
	(Classis Wisconsin)
The Rev. J. H. Bruinooge, Th.D....	58 S. State St., Zeeland, Michigan
	(Classis Zeeland)
Mr. J. Hamersma, Jr., J.D.....	
	152 Haledon Ave., Prospect Park, New Jersey
Mr. L. Beré.....	7541 S. Carpenter St., Chicago, Illinois
Daniel De Vries, M.D.....	812 Sigsbee St., S.E., Grand Rapids 6, Michigan
Mr. H. Holtvluwer.....	508 Alger St., S.E., Grand Rapids 7, Michigan
Mr. J. De Nooyer.....	4130 Bronson Blvd., Kalamazoo, Michigan
Mr. H. Fles.....	1131 Benjamin Ave., S.E., Grand Rapids 7, Michigan
Mr. B. Staal.....	556 Lawndale Ct., Holland, Michigan
Mr. G. Andreas.....	Pella, Iowa
Mr. H. Elenbaas.....	Box 273, Lynden, Washington

EXECUTIVE COMMITTEE

The Rev. E. B. Pekelder, Vice-President
The Rev. J. T. Holwerda, Secretary
The Rev. J. T. Hoogstra, Th.D., Assistant Secretary
Mr. L. Berè
The Rev. J. H. Bruinooge, Th.D.
Daniel De Vries, M.D.
Mr. J. Herman Fles
The Rev. L. Greenway, Th.D.
The Rev. G. Gritter
Mr. H. Holtvluwer
Mr. B. Staal
The Rev. E. J. Tanis

ADMINISTRATION

William Spoelhof, Ph.D.....	President
Henry J. Ryskamp, Ph.D.....	Dean of the College
Harry G. Dekker, M.S.....	Registrar
John Lester De Beer, Ed.D.....	Dean of Students
Catherine Van Opynen, A.M.....	Dean of Women
Gordon Buter, M.B.A.....	Business Manager
Sydney Youngsma, A.B.....	Financial Secretary

LIBRARY

Lester De Koster, A.M.....	Director of the Library
Josephine Baker, A.M., A.M.L.S.....	Reference Librarian
Willemina Twight, A.M.L.S.....	Circulation Librarian
Barbara Sluiter, Annette Buurstra, Mrs. Louise Hulst.....	Assistants in the Library

OFFICES AND BOOKSTORE

Lester Ippel.....	Assistant Treasurer
Caroline Veen.....	Secretary to the President
Lena Bossenbroek.....	Secretary to the Dean
Adeline Veen.....	Secretary to the Registrar
Mrs. Gretchen Benzema.....	Secretary to the Dean of Students
Gertrude De Boer.....	Secretary to the Seminary Faculty and Business Office
Connie Kossen.....	Supply Room Clerk
Mrs. Cora Van Huesen, Mrs. Johanna Haan, Donna Smith, Ardene Baas, Marian Eggink, Mrs. Marie Van Veld- huizen, Alice Van Beek, Peggy Haan	Clerical Offices
Janna Poel.....	Bookstore Manager
Mrs. Geraldine Alderink.....	Assistant to the Bookstore Manager

HEALTH

College Physician (To be appointed later)	
College Nurse.....	Mrs. Marjorie Monsma, R.N., A.B.

MAINTENANCE AND HOUSING

Henry Keegstra.....	Custodian
Henry Kooi.....	Steward
Martin Schreur.....	Chef
Mrs. Clara Scherphorn.....	Housemother of new guild halls (To be named later)
Mrs. Ruth Vontom.....	Housemother, Calvin Hall, 820 Bates St., S.E.
Mrs. Carolyn De Koster.....	Housemother, Grace Hall, 1342 Franklin St., S.E.
Mrs. Anna Haedke.....	Housemother, College Hall, 1338 Franklin St., S.E.
Mr. and Mrs. Steve Vander Weele.....	Host and Hostess of Calvin Dormitory

THE FACULTY

- WILLIAM SPOELHOF, PH. D., *President*
1315 Alexander Street, S.E. Telephone CH3-0636
- DR. J. WATERINK
Professor of Education and Applied Psychology, Member of the Humanities and Theological Faculties of the Free University at Amsterdam, The Netherlands; Visiting Professor of Psychology, second semester 1953-1954.
- ALBERTUS J. ROOKS, A. M., *Dean Emeritus*
Professor of Latin Language and Literature, Emeritus
737 Benjamin Avenue, S.E. Telephone 5-1221
- JACOB G. VAN DEN BOSCH, A. M.
Professor of English Language and Literature, Emeritus
857 Bates Street, S.E. Telephone 5-6054
- ALBERT E. BROENE, A. B.
Professor of Modern Languages, Emeritus
1355 Sherman Street, S.E. Telephone GL 4-6363
- JOHANNES BROENE, A. M.
Professor of Education and Psychology, Emeritus
- JOHN P. VAN HAITSMAN, PH. D.
Professor of Biology
1027 Benjamin Avenue, S.E. Telephone CH3-5306
- JAMES NIEUWDORP, B. S.
Professor of Mathematics, Emeritus
1046 Fuller Avenue, S.E. Telephone 5-3765
- HENRY J. G. VAN ANDEL, A. M.
Professor of Language and Culture of the Netherlands, Emeritus
1231 Giddings Avenue, S.E. Telephone 5-5096
- PETER HOEKSTRA, PH. D., *Secretary of the Faculty*
Professor of History and Political Science
1015 Worden Street, S.E. Telephone 5-5057
- * RALPH STOB, Ph.D.
Professor of Classical Languages
1301 Calvin Avenue, S.E. Telephone CH3-0775
- HENRY J. RYSKAMP, PH. D., *Dean*
Professor of Economics and Sociology
1201 Sherman Street, S.E. Telephone 9-3857
- WILLIAM HARRY JELLEMA, PH.D.
Professor of Philosophy
1001 Alexander Street, S.E. Telephone GL2-5449
- HARRY G. DEKKER, M. S., *Registrar*
Professor of Chemistry
1309 Alexander Street, S.E. Telephone CH3-1437
- H. HENRY MEETER, TH. D.
Professor of Bible
1045 Fuller Avenue, S.E. Telephone 5-7692

* On leave of absence.

- HENRY VAN ZYL, PH. D.
Professor of Educational Methods, Emeritus
 1143 Fuller Avenue, S.E. Telephone 5-6600
- SEYMOUR SWETS, A. M.
Professor of Music
 1406 Giddings Avenue, S.E. Telephone CH3-3551
- LAMBERT J. FLOKSTRA, PH. D.
Professor of Education
 1126 Alto Avenue, S.E. Telephone CH3-5979
- EDWIN Y. MONSMA, PH. D.
Professor of Biology
 719 Fuller Avenue, S.E. Telephone 5-9861
- HARRY J. WASSINK, A. B., B. S.
Professor of Physics and Engineering
 835 Eastern Avenue, S.E. Telephone GL2-9502
- WILLIAM THOMAS RADIUS, PH. D.
Professor of Classical Languages
 1341 Colorado Avenue, S.E. Telephone 5-1407
- JOHN DE VRIES, PH. D.
Professor of Chemistry
 851 Calvin Avenue, S.E. Telephone CH3-8438
- ALBERT H. MUYSKENS, A. M.
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 ZYLSTRA, PH.D.
Professor of English
 711 Benjamin Avenue, S.E. Telephone CH3-5413
- THEDFORD DIRKSE, PH. D.
Professor of Chemistry
 154 Holmdene Avenue, N.E. Telephone 8-9409
- * HENRY A. BRUINSMA, PH.D.
Professor of Music
 1225 Bates Street, 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.
Professor of Psychology
 West Leonard Road, RFD 5 Telephone 6MA 3186
- JOHN J. TIMMERMAN, PH. D.
Professor of English
 1133 Neland Avenue, S.E. Telephone 5-0697

* On leave of absence.

- BERNARD FRIDSMA, A. M.
Associate Professor of German
 1017 Alto Avenue, S.E. Telephone GL2-2176
- WILLIAM SPOELHOF, PH. D.
Associate Professor of History
 1315 Alexander Street, S.E. Telephone CH3-0636
- EARL STRIKWERDA, PH.D.
Associate Professor of History
 1231 Franklin Street, S.E. Telephone CH3-7892
- HENRY R. VAN TIL, TH.M.
Associate Professor of Bible
 935 Hancock Street, S.E. Telephone GL2-0085
- JOHN HAROLD BRATT, TH.M., S.T.M.
Associate Professor of Bible
 815 Alto Avenue, S.E. Telephone 5-2041
- JAMES J. DE JONGE, M.S., M. MUS.
Associate Professor of Music
 1300 Calvin Avenue, S.E. Telephone CH3-7809
- MARTIN KARSTEN, M. S.
Associate Professor of Biology
 1401 Eastern Avenue, S.E. Telephone GL 2-4273
- JOHN TULS, A. M.
Associate Professor of Mathematics
 10¹/₂ Fuller Avenue, S.E. Telephone GL4-4406
- DONALD HERBERT BOUMA, PH.D.
Associate Professor of Sociology
 1401 Johnston Avenue, S.E. Telephone CH3-9992
- CLARENCE BOERSMA, PH. D.
Associate Professor of German
 365 Richard Terrace, S.E. Telephone 8-5811
- ENNO WOLTHUIS, PH. D.
Associate Professor of Chemistry
 1030 Sherman Street, S.E. Telephone GL2-0046
- CORNELIUS A. PLANTINGA, PH. D.
Associate Professor of Psychology
 1060 Bates Street, S.E. Telephone CH 3-3125
- JOHN WEIDENAAR, TH.M.
Associate Professor of Bible
 1209 Dunham Street, S.E. Telephone 5-1776
- JOHN LESTER DE BEER, ED. D., Dean of Students
Associate Professor of Education
 1740 Giddings Avenue, S.E. Telephone GL 2-4680
- H. EVAN RUNNER, TH.M., PH.D.
Associate Professor of Philosophy
 420 Ethel Avenue, S.E. Telephone GL 4-7515
- JOHN VAN BRUGGEN, PH.D.
Associate Professor of Education
 616 College Avenue, S.E. Telephone CH3-6468
- CATHERINE VAN OPYNEN, A.M.
Dean of Women
 814 Otilia Street, S.E. Telephone 5-1689

- GERTRUDE SLINGERLAND, A.M.
Assistant Professor of English
 2601 Almont Avenue, S.E. Telephone 5-7590
- HENRY BENGELINK, M.S.
Assistant Professor of Biology
 1201 Sigsbee Street, S.E. Telephone GL4-6602
- LESTER DE KOSTER, A.M.
Assistant Professor of Speech and Director of Library
 Thornapple River Drive, R. R. #3 Telephone 99-6502
- MELVIN E. BERGHUIS, A.M.
Assistant Professor of Speech
 1234 Boston Street, S.E. Telephone GL2-1525
- * JOHN VANDEN BERG, A.M.
Assistant Professor of Economics
 1318 Adams Street, S.E. Telephone GL2-6785
- HENRY P. IPPEL, A.M.
Assistant Professor of Political Science and History
 1327 Hope Street, S.E. Telephone GL4-9192
- BARNEY STEEN, A.M.
Assistant Professor of Physical Education
 1846 Griggs Street, S.E. Telephone
- HELEN VAN LAAR, A.M.
Instructor in Education
 1319 Sigsbee Street, S.E. Telephone GL6-5083
- SHIRLEY BALK, M. Mus.
Instructor in Music
 942 Sigsbee Street, S.E. Telephone GL1-1647
- CALVIN ANDRE, A.B.
Instructor of Physics
 1010 Thomas Street, S.E. Telephone
- ARTHUR J. OTTEN, A.M.
Instructor in French
 1124 Bates Street, S.E. Telephone GL2-3986
- GEORGE GRAHAM HARPER, A.M.
Instructor in English
 1141 Thomas Street, S.E. Telephone CH1-3621
- ROBERT T. OTTEN, A.M.
Instructor in Classical Languages
 532 Ethel Avenue, S.E. Telephone GL6-9798
- ANN JANSSEN, A.M.
Instructor in Speech and English
 942 Sigsbee Street, S.E. Telephone GL1-1647
- HENRY DE WIT, M.B.A.
Instructor in Economics
 1520 Edwards Street, S.E. Telephone 5-1223
- WALTER LAGERWEY, A.M.
Instructor in Language and Culture of the Netherlands

* On leave of absence, first semester, 1953-1954.

STEVE JOHN VANDER WEELE, A.M.

Visiting Instructor in English
701 Giddings Avenue, S.E.

Telephone 5-8322

* JAN WILLIAM KINGMA, A.B.

Assistant in Dutch
2211 Boston Street, S.E.

Telephone GL2-0998

** BASTIAAN VAN ELDEREN, A.B., B.D.

Assistant in Classical Languages
1116 Watkins Street, S.E.

Telephone 5-3237

LIBRARIANS

JOSEPHINE BAKER, A.M., A.M.L.S.

Reference Librarian
923 Eleventh Street, N.W.

Telephone 8-5744

WILLEMINA TWIGHT, A.M.L.S.

Circulation Librarian
1011 Watkins Street, S.E.

Telephone 5-1788

OTHER FULL-TIME ASSISTANTS

DAVID TUUK, A.M.

Assistant Basketball Coach and Director of Intramural Sports
1336 Dunham Street, S.E.

Telephone GL2-5852

MRS. MARJORIE VAN DYKEN MONSMA, R.N., A.B.

College Nurse
300 Eastern Avenue, S.E., Apt. 4

Telephone GL4-0038

Committees of the Faculty

ATHLETICS—De Vries, Karsten, Muyskens, Tuls, Vanden Berg (De Vries, Faculty Representative on the M.I.A.A. Board)

CHAPEL AND RADIO—Drost, Balk, De Jonge, Meeter.

COLLEGE-SEMINARY INTERRELATIONS—Flokstra, Ryskamp.

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

EDUCATIONAL POLICY—Ryskamp, Dekker, Hoekstra, Jaarsma, Jellema, Radius, Van Haitisma, Weidenaar.

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

FACULTY AND STUDENTS CO-OPERATION—Slingerland, André, De Beer, De Boer, Harper, Steen.

LIBRARY—Zylstra (on leave of absence), Strikwerda, Bruinsma, Lagerwey, A. Otten, Wolthuis.

LONG-RANGE PLANNING (Board of Trustees Committee)—Dekker, Strikwerda.

PLACEMENT BUREAU—Flokstra, Jaarsma Van Laar.

* On leave of absence, first semester, 1953-1954.

** On leave of absence for the school year 1953-1954.

PRE-SEMINARY RECOMMENDATIONS—Van Til, Dekker, Meeter, Runner, Ryskamp.

SCHOLARSHIP AND GUIDANCE—Dekker, Bouma, De Beer, De Wit, Ryskamp, Van Opynen.

STUDENT HOUSING AND HEALTH SERVICE—Daling, De Beer, Dirkse, Mrs. Monsma, Van Opynen, Wassink.

STUDENT PUBLICATIONS—Boersma, De Koster, Fridsma, Janssen, R. Otten.

STUDENT RELIGIOUS AND SOCIAL ACTIVITIES—Bratt, Bengelink, De Beer, De Jonge, Ippel, Monsma, Van Opynen.

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 —
DR. JELLEMA, *Chairman*.
 - (a) Department of Bible — DR. MEETER, *Chairman*
 - (b) Department of Philosophy — DR. JELLEMA, *Chairman*
 - (c) Department of Education — DR. FLOKSTRA, *Chairman*
 - (d) Department of Physical Culture —
PROF. STEEN, *Acting Chairman*
 - (e) Department of Psychology — DR. DALING, *Chairman*
2. Division of Languages, Literatures and Arts —
DR. RADIUS, *Chairman*.
 - (a) Department of Classical Languages — DR. RADIUS, *Chairman*
 - (b) Department of English —
DR. TIMMERMAN, *Acting Chairman*
 - (c) Department of Modern Languages —
DR. BOERSMA, *Acting Chairman*
 - (d) Department of Art
 - (e) Department of Music — PROF. SWETS, *Chairman*
 - (f) Department of Speech — PROF. BERGHUIS, *Acting Chairman*
3. Division of Natural Science and Mathematics —
DR. VAN HAITSMAN, *Chairman*.
 - (a) Department of Biology — DR. VAN HAITSMAN, *Chairman*
 - (b) Department of Chemistry — DR. DE VRIES, *Chairman*
 - (c) Department of Mathematics — PROF. MUYSKENS, *Chairman*
 - (d) Department of Physics and Engineering —
PROF. WASSINK, *Chairman*
4. Division of Social Science — DR. HOEKSTRA, *Chairman*.
 - (a) Department of Economics and Sociology —
DR. RYSKAMP, *Chairman*
 - (b) Department of History and Political Science —
DR. HOEKSTRA, *Chairman*

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. It was approved as an institution of learning for immigrant students on Feb. 17, 1928, in accordance with the Immigration Act of 1924.

ADMISSION

ALL APPLICATIONS for admission should be made to the Dean of the College 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 any 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

(Two units of one foreign language is a very desirable minor sequence.)

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 foreign 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, 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.

Pre-engineering students should present, if possible, 1½ units of algebra, 1 unit of geometry, ½ unit of trigonometry, 1 unit of chemistry, and 1 unit of physics.

PLAN B. ADMISSION BY EXAMINATION. Applicants who are unable to furnish approved certificates, and who are therefore un-

able 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. The deficiency must be removed before the end of the first year of residence. However, applicants are strongly urged to make up any deficiency during the summer preceding their enrollment as freshmen. Attention is called to the course offerings of the Calvin College summer session.

Admission of War Veterans

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

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

Advanced Standing

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 of the College 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.

Tuition fees listed below include the organization, health service and locker fees.

REGULAR TUITION FEE

The regular tuition fee is \$210.00 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 \$140.00 per semester. For two students from one family residing within this zone the tuition for each is \$120.00 per semester.

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

For students residing within these zones the tuition is \$125.00 per semester. For two students from one family residing in the region defined, the tuition for each is \$105.00 per semester.

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

For students residing within these zones the tuition is \$95.00 per semester. For two students from one family residing in the region defined, the tuition for each is \$75.00 per semester.

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

For students residing within these zones the tuition is \$60.00 per 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 \$95.00 per semester. For two students from one family residing in these provinces the tuition for each is \$75.00 per semester.

Alberta, British Columbia and Saskatchewan Provinces.

For students residing in these provinces the tuition is \$60.00 per semester. This is the minimum tuition.

Foreign Countries. For students whose parents are not missionaries.

For students from foreign countries other than Canada, who are members of an affiliated Church, the tuition is \$60.00 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.

Other Fees

ORGANIZATION AND HEALTH SERVICE FEES

The regular tuition charge per semester for all students, except those registered for less than six semester hours, includes a \$5.00 Organization fee and a \$2.50 Health Service fee. No separate charge is made for either of these.

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 fifteen dollars for each semester hour; members of the Christian Reformed Church, ten 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

No separate charge is made for a locker. Rental charge for the use of lockers is included in the tuition fee.

REFUND

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

If a student withdraws voluntarily and in good standing within two weeks after the first day of enrollment, tuition and all fees, 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 \$650.00 up per year.

HOUSING**Housing for Men**

OUT-OF-TOWN freshman men students are accommodated in the campus dormitory. Other 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 must eat at the Commons where the cost for food runs about \$180 per semester, depending on changes in food costs.

Housing and Board for Women

ALL out-of-town freshman women must live in a school housing facility unless working for room and board or living with near relatives.

The College operates seven guild homes in the southeast section of the city. These provide housing for freshman women students. These homes are under the direct control of the Dean of Women and each is under the personal supervision of a housemother. Each student works out part of her room and board. Net expenses amount to \$215 per semester in those in which meals are served; in those in

which meals are not served, the room cost is \$75 per semester and the food cost at the Commons approximately \$180 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 Office of the Dean of Women 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 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.

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.

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 \$250.00 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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1. (a) The Faculty of Calvin College will select and appoint the winner.
- (b) If, in the opinion of the Faculty of Calvin College, no suitable candidate is available, no award shall be made in that particular year.

- (c) The Faculty always reserves the right, for reasons of its own, to reject any candidate who may be recommended for this scholarship.
2. The recommendation shall be on the basis of scholarship, Christian character, personality, and promise of growth. Only students of high scholarship rank who may be expected to maintain a good record in college should be nominated by the high school faculty.
 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 \$250.00 to a member of the graduating class in each of *five* accredited public 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, 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 consult the Registrar before Jan. 15. Final award need not necessarily be limited to the student who has made formal application.

FULBRIGHT SCHOLARSHIP. 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.
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.

The Keeler Brass Scholarships

The Keeler Brass Company of Grand Rapids, Michigan is presenting five scholarships of \$150.00 each to be awarded to five students who have completed at least one year at Calvin College. The scholarships are limited to men students, preferably Michigan residents.

Selecting of the winners for these awards shall be made by the Faculty, on recommendation of its Scholarship Committee, on the basis of (1) previous evidence, while a student at Calvin College, of earnestness of purpose, (2) scholarship and character and (3) financial need. Men students who plan to enroll as Sophomores, Juniors, or Seniors in September 1954 are eligible.

Students interested should file application with the Registrar on or before April 1, although final award need not necessarily be limited to the student who has made formal application. Announcement of the winners will be made at the commencement exercises.

Prizes and Awards

ALUMNI PRIZE.—The Alumni Association offers an annual prize of \$150.00 based upon scholarship. The award is made for excellence in a different department each year.

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 1953-54, 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 typewritten 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 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 1953-54 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 Oratorical 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. 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.

ZONDERVAN PEACE ORATORICAL PRIZES

THROUGH 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.

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 attending Calvin College and Seminary, who are too far from home to attend services there, are expected to transfer their membership to a local church of their own choice; or retain their membership with their home church, but place themselves under the temporary care of one of our Grand Rapids churches. The latter can be done by means of student certificates supplied by the student's own consistory. Either plan must be effected during the first eight weeks of school.

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 misdemeanor and 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 50,000 volumes, to which about 3,500 are added yearly. More than 350 different periodicals are received. The recently-enlarged building provides seating for some 225 students, and houses the Cayvan Collection of 7,000 phonograph records. The library is open from 7:45 A.M. to 9:30 P.M., Monday through Friday, and from 7:45 A.M. to 12:15 P.M. on Saturday, during the school year. Vacation hours from 8:00 A.M. to 5:00 P.M., Monday through Friday.

Physical Education

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

Health Center

THE college provides limited health and medical service for all students. The fee for this service is incorporated in the tuition charge. The Health Center is located on the ground floor of the Dormitory Building. Its facilities consist of examination room, dispensary, men's sick bay, and women's sick bay. The health service is staffed by the College Nurse and by the College Physician. The former is on full-time duty; the latter will schedule three consultation hours per week. The service is limited to out-patient treatment. All serious medical problems will be referred to the student's family physician (in the case of in-town students) or to a physician of the student's own choice.

Attendance

THE school year of thirty-six weeks is divided into two semesters of eighteen weeks each. A summer session of six weeks is offered each summer.

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

Grades and Honor Points

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

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

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

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

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

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

The mark Inc. signifies the absence of a certain amount of reading to be completed, or of papers to be handed in. This mark is given only in cases of prolonged illness and in emergencies, i.e., in circumstances which may reasonably prevent a student from completing his work on time, such as 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 of the College 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.

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 of the College. 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 of the College.

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.

Use of Automobiles

PARKING accommodations at the college are limited. All students driving automobiles to the college are required to register the license numbers of all vehicles they may drive with the office of the Dean of Students. Failure to register or late registration of licenses and improper parking are subject to stringent action by the Discipline Committee.

Students are not permitted to park on campus on school days before 4:30 P.M. The college maintains a parking lot east of the campus on Franklin Street for student use. Parking is also permitted on limited areas of the streets around the college and Franklin Park. Students are held responsible for knowledge of the parking regulations which are posted in the office of the Dean of Students and on several bulletin boards.

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, fulfil the requirements of the course from which he elects to graduate. The requirements in each course are listed below.

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

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

All prescribed freshman and sophomore courses must be completed in the first two years.

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, Biology 109, 110 and Physical Science 205, 206	12 hours
Foreign Language	

(see following explanation)

Requirements for Graduation

FOREIGN LANGUAGE REQUIREMENTS

- a Students will be required to complete the equivalent of two years (four semesters) of one foreign language and one year (two semesters) of a second foreign language. One of these must be an ancient language and the other a modern 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 of the College.
- d The foreign language requirements must be completed by the end of the sophomore year.

4. DISTRIBUTION OF WORK. MAJORS AND MINORS.

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 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, 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. 45.)

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. 46.)

Pre-Seminary

(See note regarding Pre-Seminary entrance requirements under Plan A, page 21 NOTE.)

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

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

	<i>Hours</i>		<i>Hours</i>
Bible 201, 202, 301, 302.....	8	Greek 101, 102, 201, 202,	
Biology 210, 306	4	313, 314	20
Phys. Science 205, 206.....	6	History 101, 102	6
Dutch Language	20	Latin 201A, 202A, or 307, 308	6
Dutch History 326.....	3	Philosophy 300, 301, 302.....	9
Economics 201, 202.....	6	Psychology 201	3
Education 301	3	Phil. 200 (Logic).....	3
English incl. 103, 104.....	12	Speech 103, 104, 205.....	6
		Sociology 203	3

Schedule for the year 1953-1954

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

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
English 103	3	English 104	3
*German 101	4	*German 102	4
History 101	3	History 102	3
Latin (see page 83) 3 or.....	4	Latin (see page 83) 3 or.....	4
Speech 103	2	Speech 104	2
	16		16

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Bible 201	2	Bible 202	2
Phys. Science 205.....	3	Phys. Science 206.....	3
Dutch 101	4	Dutch 102	4
Greek 101	4	Greek 102	4
Psychology 201	3	Philosophy 200	3
	16		16

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Biology 210	2	Biology 306	2
Dutch 201	3	Dutch 202	3
English 207 (or other		Dutch History 326	3
English elective	3	English (continued)	3
Greek 201	3	Greek 202	3
Sociology 203	3	Philosophy 300	3
Speech 205	2		
	16		17

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

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
	Hours		Hours
Bible 301	2	Bible 302	2
Dutch 305	2	Dutch 306	2
Economics 201	3	Economics 202	3
Education 301	3	Greek 314	3
Greek 313	3	Philosophy 302	3
Philosophy 301	3		
	16		13

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.

Courses of study preparatory to work in special fields of Education may be planned with the Dean of the College.

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 105-6, 201-2, 301	10 hours
(4) Biology 109 and 110	6 hours
(2) English 103-4	6 hours
(3) History	6 hours

SEE INSERT
 1
 5 SACRED 103 OR 104 2 HRS
 5 US HISTORY 201 3 HRS

- (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.

This foreign language requirement must be completed by the end of the sophomore year.

- (6) Education courses20 hours
 (a) Psychology 201 and 202
 (b) Education 203
 (c) Education 314
 (d) One methods course from Education 307, 310, 324, 328, 340, 330m.....2 or 3 hours
 (e) Speech 103 or 104
 (f) Education 342: Observation
 (g) Education 344: Directed Teaching

Prerequisites for Education 344, Directed Teaching:

- (a) Grade of work equivalent to C+
 (b) Principles of Education (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. 45. 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 105-6, 201-2, 301.....10 hours
 (2) Biology 109, 110 6 hours
 (3) English 103-4 6 hours
 (4) History 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.

This foreign language requirement must be completed by the end of the sophomore year.

- (6) Education courses20 hours
 - (a) Psychology 201 and 202
 - (b) Education 203
 - (c) Education 315 or 317
 - (d) One methods course from 220, 307, 310, 324, 340, 3222 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 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 21, 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

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

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
Biology 201	4 hours	Biology 208	4 hours
Chemistry 201	4 hours	Chem. 202 or elective.....	4 hours
French or German.....	4 hours	French or German.....	4 hours
Physics 201	4 hours	Physics 202	4 hours
	<hr/>		<hr/>
	16 hours		16 hours

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 201	2 hours	Bible 202	2 hours
Bible 301	2 hours	Biology 306	2 hours
Biology 207	3 hours	Biology 312	3 hours
Biology 311	2 hours	Chemistry 302	4 hours
Chemistry 301	4 hours	Elective	4 hours
Psychology 201	3 hours		
	<hr/>		<hr/>
	16 hours		15 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 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 or dental 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. Or on the combined curriculum plan in letters and dentistry. He will receive this degree after one year of successful work in a recognized medical or dental 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.

3. **PRESCRIBED WORK.**

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

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

4. **DISTRIBUTION OF ELECTIVES.** The number of electives will vary according to the nature of the student's high school preparation in French and German. Not less than 12 hours of his elected courses over and above the courses prescribed under 3 (above), but including Philosophy, must be in Groups I and III. The student is urged to elect Biology 307 and Chemistry 202 and 308m.

Three-Year Pre-Law

(See note regarding pre-Law entrance requirements under Plan A, page 21, 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:

Freshman Year

FIRST SEMESTER	SECOND SEMESTER
Bible 101 or 105.....	Bible 102 or 106.....
2 hours	2 hours
English 103.....	English 104.....
3 hours	3 hours
Mathematics or Science....	Mathematics or Science....
3 hours	3 hours
Political Science.....	Philosophy 200, Logic.....
3 hours	3 hours
Psychology 201.....	Political Science.....
3 hours	3 hours
Speech.....	Speech.....
2 hours	2 hours
16 hours	16 hours

Sophomore Year

FIRST SEMESTER	SECOND SEMESTER
Bible 201.....	Bible 202.....
2 hours	2 hours
Economics 201.....	Economics 202.....
3 hours	3 hours
French or German.....	French or German.....
4 hours	4 hours
Hist. 313, Eng. Const.....	Hist. 314, Eng. Const.....
3 hours	3 hours
Political Science.....	Political Science.....
3 hours	3 hours
15 hours	15 hours

Junior Year

FIRST SEMESTER	SECOND SEMESTER
Bible 301.....	Economics 306.....
2 hours	4 hours
Economics 305.....	English.....
4 hours	3 hours
English.....	History 302.....
3 hours	3 hours
History 301.....	History 312.....
3 hours	3 hours
*Political Science 303.....	Political Science 304.....
4 hours	3 hours
16 hours	16 hours

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

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

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

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

6. DEGREE. On satisfactorily completing this course with a record of not less than 125 honor points received in the required

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

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

(See note regarding pre-Law entrance requirements under Plan A, page 21, Note.)

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

FIRST SEMESTER		SECOND SEMESTER	
Bible 101 or 105.....	2 hours	Bible 102 or 106.....	2 hours
English 103	3 hours	English 104	3 hours
History 101 or 205.....	3 hours	History 102 or 206.....	3 hours
*Mathematics 101	3 hours	Political Science	3 hours
Political Science	3 hours	Psychology 201	3 hours
Speech 103	2 hours	Speech 104	2 hours
	16 hours		16 hours

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
Economics 201	3 hours	Economics 202	3 hours
English	3 hours	English	3 hours
**French or German.....	4 hours	**French or German.....	4 hours
Phil. 200, Logic	3 hours	Phil. 300, Ancient.....	3 hours
Science	3 or 4 hours	Science	3 or 4 hours
	16 or 17 hours		16 or 17 hours

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 201	2 hours	Bible 202	2 hours
Econ. 305	4 hours	Econ. 306	4 hours
Hist. 307 or 203 or 301 or 303.....	3 hours	Hist. 308 or 204 or 302 or 304.....	3 hours
Hist. 313	3 hours	Hist. 314	3 hours
Pol. Science 303.....	3 hours	Pol. Science 304.....	3 hours
	15 hours		15 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.

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 301	2 hours	Hist. 316	3 hours
Econ. 303	3 hours	Hist. 312	3 or 4 hours
Hist. 315	3 hours	***Math. 206	3 hours
Hist. 311	3 hours	Phil. 302	3 hours
Phil. 305	3 hours	Soc. 203, 304, or 306..	3 hours
Speech	2 hours		
	16 hours		15 or 16 hours

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

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 and a summer session or five semesters of work at a recognized school of engineering, in addition to the three year course here outlined, are necessary to finish a regular engineering course.

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

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

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

THREE-YEAR GENERAL PRE-ENGINEERING COURSE

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Chemistry 103	4	Engineering 102 (Drawing)	3
Engineering 101 (Drawing)....	3	Chemistry 104	4
English 103	3	English 104	3
Mathematics 201	5	Mathematics 202	5
	<hr/>		<hr/>
	15		15

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Bible 101 or 105.....	2	Bible 102 or 106.....	2
Economics 201	3	Economics 202	3
Mathematics 301	5	Mathematics 302	5
Physics 201E	5	Physics 202E	5
Physics 203	1	Physics 204	1
	<hr/>		<hr/>
	16		16

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Engineering 201 (Drawing)..	2	Bible 301	2
Economics 301	3	Engineering 302 (Dynamics)	3
Engineering 301 (Statics)....	3	English or Elective.....	3
*Engineering 207 (Surveying)	2 or 3	**Mathematics 304 or	
or Elective	2 or 3	Elective	2
Elective	5 or 6	Physics 304	3
	<hr/>	Speech 103	2
	16	Elective	1
			<hr/>
			16

THREE-YEAR CHEMICAL PRE-ENGINEERING COURSE

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Chemistry 103	4	Chemistry 104	4
Engineering 101 (Drawing)....	3	Engineering 102 (Drawing)	3
English 103	3	English 104	3
Mathematics 201	5	Mathematics 202	5
	<hr/>		<hr/>
	15		15

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Bible 101 or 105.....	2	Bible 102 or 106.....	2
Chemistry 201	4	Chemistry 202	4
Mathematics 301	5	Mathematics 302	5
Physics 201E	5	Physics 202E	5
Physics 203	1	Physics 204	1
	<hr/>		<hr/>
	17		17

* Civil Engineering students should take three hours of Surveying.
 ** Electrical Engineering students should take Mathematics 304.

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
	<i>Hours</i>		<i>Hours</i>
Chemistry 301	5	Bible 301	2
Engineering 201 (Drawing)....	2	Chemistry 302	4
Economics 201	3	Engineering 302 (Dynamics)	3
English or Other Elective.....	3	Economics 202	3
Engineering 301 (Statics).....	3	Modern Physics 304.....	3
	—	Speech 103	2
	16		—
			17

NOTE: Pre-Engineering students are urged to complete Advanced Algebra and Trigonometry in high school to avoid delaying the above programs.

Electives must be chosen in consultation with the Dean.

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

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

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

FIRST SEMESTER		SECOND SEMESTER	
Bible 101 or 105.....	2 hours	Bible 102 or 106.....	2 hours
Economics 103	3 hours	Economics 104	3 hours
English 103	3 hours	English 104	3 hours
Lab. Science	3 or 4 hours	Lab. Science	3 or 4 hours
History or Mathematics	3 hours	History or Mathematics	3 hours
	—		—
	14 or 15 hours		14 or 15 hours

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 201	2 hours	Bible 202	2 hours
Economics 201	3 hours	Economics 202	3 hours
English 201 or 207.....	3 hours	English 202 or 208.....	3 hours
Mathematics 205	3 hours	Mathematics 206	3 hours
Psychology 201	3 hours	Philosophy 200, Logic.....	3 hours
Speech 103	2 hours	Speech 104	2 hours
<hr/>		<hr/>	
16 hours		16 hours	

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
Economics 301	3 hours	Bible 301	2 hours
Economics 303	3 hours	Economics 302	3 hours
Economics 305	4 hours	Economics 306	4 hours
Economics 309	3 hours	Pol. Science 304	3 hours
Pol. Science 303	3 hours	Elective	3 hours
<hr/>		<hr/>	
16 hours		15 hours	

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

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

Major in Business Administration

Candidates for a bachelor's degree from the General College Course may select their subjects with a view to obtaining a major in Business Administration. They should complete the subjects prescribed for the General College Course (see p. 41). 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. 42). 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.

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. 41) or the Education Course (see

P. 45). 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 five different fields of concentration (see below). By the end of the first year of study the candidate should make a choice of one of the five programs. Music Majors are urged to elect Music Theory 103-104 during the Freshman year since this course is a prerequisite for all succeeding courses. Music Education students should plan their program in such a way as to take the required Music Methods courses no later than the Junior year, since no student will be allowed to engage in practice teaching without first satisfying Methods course requirements.

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: (solo instrument or voice):

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	16 hours
Electives in Theory or History to complete 40 to 42 hours.	

D. For concentration in applied music (Instrumental Music Education):

NOTE: Students planning to prepare for teaching in the field of instrumental music education must play one orchestral instrument well

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

before entering College, and must have had high school experience in instrumental music ensembles. In addition, he should be able to pass the minimum sight-reading examination in piano upon entrance. If he cannot pass the minimum piano examination he must begin to study piano in his first year at Calvin College.

It is recommended that the 16 hours of applied music credit allowed under the music major program be distributed as follows:

Ensembles, each semester.....	8 hours
Stringed instruments, 2 semesters.....	2 hours
Woodwind instruments, 2 semesters.....	2 hours
Brass instruments, 2 semesters.....	2 hours
Percussion instruments, 1 semester.....	1 hour
Voice class, 1 semester.....	1 hour

NOTE: If a student shows sufficient proficiency in one orchestral instrument, he may be given permission to substitute credit for piano taken at the college for the credit allowed for that instrument.

The remaining courses in the Music Major program should be distributed as follows:

Theory 103-104	6 hours
Theory 203-204	6 hours
Arranging and Conducting 315-316.....	6 hours
History of Music 305-306.....	6 hours
Elective	2 hours

E. For concentration in applied music (Vocal Music Education) :

It is recommended that the 16 hours of applied music credit allowed under the Music Major program be distributed as follows:

Ensembles, each semester.....	8 hours
Voice study (either solo or class).....	4 hours
*Piano, 4 semesters	4 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 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

* Note: If a student can pass the minimum piano examination upon entrance to Calvin College, he may use the 4 hours of piano credit towards other music electives.

Concerts and Tours

There are several musical organizations at Calvin College, offering the student opportunity for singing or ensemble playing.

The Oratorio Society, 400 to 500 voices, has a long tradition of presenting Handel's *Messiah* at Christmas time, and another oratorio such as the *Elijah* or the *Creation* each spring.

The college orchestra plays the orchestral accompaniment to these oratorios and in addition plays a full concert at least once during the school year.

The college concert band plays many concerts in and around Grand Rapids and usually goes on a tour to the East or West during the spring vacation.

The A Cappella Choir of 65 selected voices is well known in the East and Middle West through the annual tours taken during spring vacation. Usually the choir appears in fifteen or more concerts.

The Radio Choir is nationally known for its singing on the "Back to God Hour" broadcasts each Sunday. This choir also engages in an annual tour.

Pre-Agriculture, Pre-Forestry, Pre-Home Economics, and Pre-Occupational Therapy

STUDENTS interested in specializing in the fields mentioned above should see the Dean. Curricula can be arranged to enable such students to remain at Calvin for one or two years.

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	SECOND SEMESTER
Bible 1012 hours	Biology 1062 hours
Biology 1053 hours	English 1043 hours
English 1033 hours	Psychology 2013 hours
Chemistry 101N4 hours	Nutrition3 hours
Nursing Arts including	Pharmacology1 hour
Hygiene (Hospital)2 hours	Nursing Arts
Biology 107 4 hours	(Hospital)2 hours
	Prof. Adjust. I
	(Hospital)1 hour
—	Physical Education
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 Registra-

tion 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	Biology 109, 110.....	6 hours
English Composition	6 hours	Speech	4 hours
European History	3 hours	Sociology	3 hours
Psychology 201	3 hours	Electives	4 hours

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

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

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

Bachelor of Science in Nursing, 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:

Bible	6 hours
English Composition and Rhetoric.....	6 hours
English or American Literature.....	6 hours
History	6 hours
Psychology	6 hours
Sociology, Intro.	3 hours
Sociology, Problems or The Family.....	3 hours
Philosophy (not incl. Psych. or Logic).....	3 hours
*Ancient Language	8 hours
Chemistry (Inorganic)	8 hours
Organic and Biochemistry.....	8 hours
Human Anatomy and Physiology.....	5 hours
General Biology	6 hours
Microbiology	4 hours

Introduction to Embryology.....	4 hours
Biological Problems	2 hours
Pharmacology	1 hour
Nutrition	3 hours
	<hr/>
	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 highschool credits Algebra, Geometry, and Chemistry or Physics;
2. Successfully complete 94 semester hours of pre-professional subjects considered fundamental in any liberal arts program;
3. Complete an additional 12 months of training at an accredited school of Medical Technology.

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

The required college courses in the program are the following:

Bible (including 301).....	6 hours
English Composition and Rhetoric.....	6 hours
English or American Literature.....	6 hours
History	6 hours
Psychology	6 hours
Sociology (Introduction or Problems).....	3 hours
Philosophy (Introduction to).....	3 hours
*Ancient Language	8 hours
Chemistry (Inorganic) 103 and 104.....	8 hours
Organic and Biochemistry.....	8 hours
Human Anatomy and Physiology.....	5 hours
General Biology	6 hours
Microbiology	4 hours
Microscopic Technique	1 hour
Biological Problems	2 hours
Histology	4 hours
Parasitology	4 hours
Physical Science 205 and 206.....	6 hours
Elective	2 hours
	<hr/>
	94 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.

SUGGESTED PROGRAM

Freshman Year

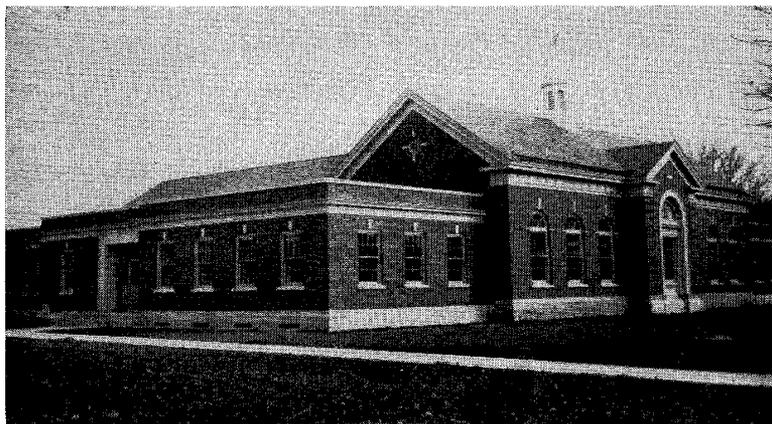
FIRST SEMESTER		SECOND SEMESTER	
Biology 105	3 hours	Biology 106	2 hours
Biology 109	3 hours	Biology 110	3 hours
English 103	3 hours	English 104	3 hours
Latin or Greek 101.....	4 hours	Latin or Greek 102.....	4 hours
Physical Science 205.....	3 hours	Physical Science 206.....	3 hours
	<hr/>		<hr/>
	16 hours		15 hours

Sophomore Year

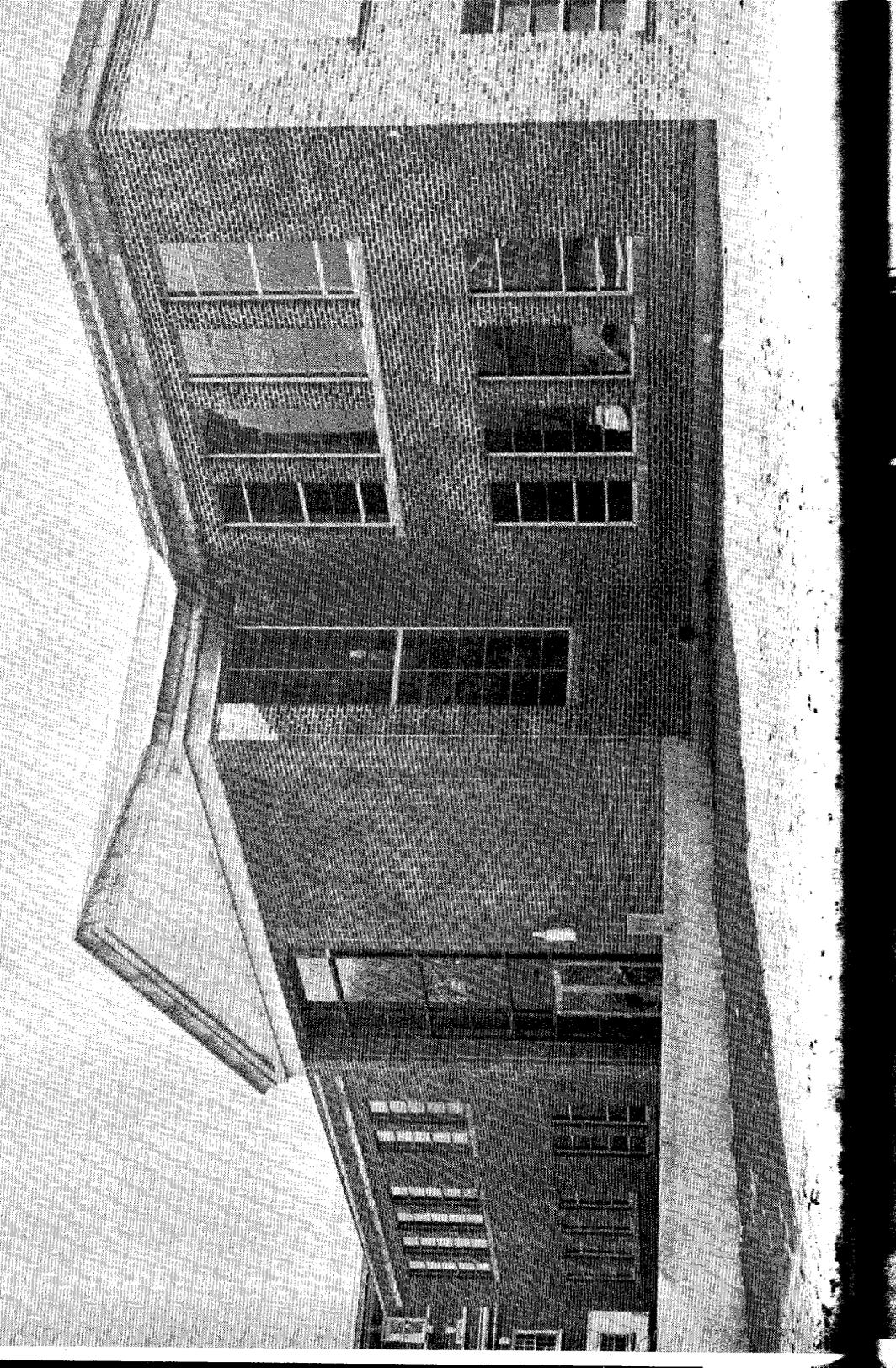
FIRST SEMESTER		SECOND SEMESTER	
Bible 201	2 hours	Bible 202	2 hours
Biology 107	4 hours	Biology 304	1 hour
Chemistry 103	4 hours	Elective	2 hours
History 101	3 hours	Chemistry 104	4 hours
Psychology 201	3 hours	History 102	3 hours
	<hr/>	Sociology 204	3 hours
	16 hours		<hr/>
			15 hours

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
Bible 301	2 hours	Biology 306	2 hours
Biology 307	4 hours	Biology 308.....	4 hours
Chemistry 303	4 hours	Chemistry 304	4 hours
English 201	3 hours	English 202	3 hours
Philosophy 203	3 hours	Psychology 312	3 hours
	<hr/>		<hr/>
	16 hours		16 hours

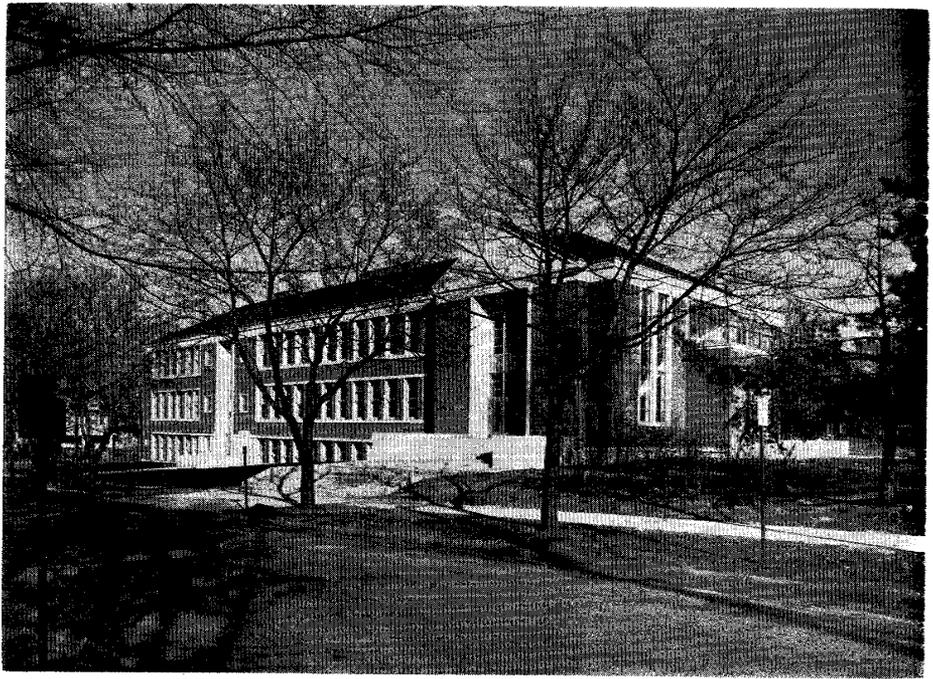


LIBRARY

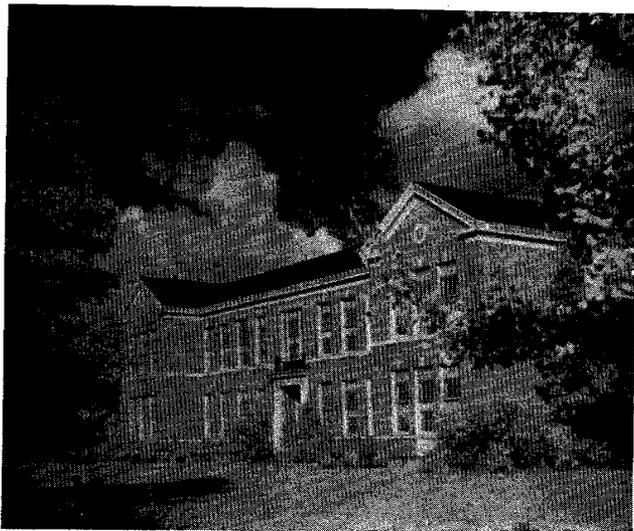




DORMITORY



SCIENCE BUILDING



SEMINARY

DESCRIPTION OF COURSES

Art

INSTRUCTOR VAN LAAR

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. HANDICRAFT *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.
228. PENMANSHIP
Manuscript and cursive writing. Theory and practice. No credit. For prospective teachers in elementary grades. Not required of veterans.
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 1953-54.
232. AN INTRODUCTION TO THE HISTORY OF THE FINE ARTS *Three hours*
Continuation of 231. (1600 to the present.) Not offered in 1953-54.
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. Not offered in 1953-54.
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. Not offered in 1953-54.

Bible

PROFESSOR MEETER; ASSOCIATE PROFESSORS BRATT, VAN TIL,
AND WEIDENAAR

101. INTRODUCTION TO THE BOOKS OF THE BIBLE *Two hours*
A general introduction to the Bible as a whole, in which its origin, nature, canonicity, authority, organic unity, revelation and inspiration, and related subjects are investigated. A specific introduction, inquiring into the contents, historical setting, literary form, and especially the permanent ethical and religious values of a few of the individual books.

102. INTRODUCTION TO THE BOOKS OF THE BIBLE *Two hours*
Continuation of 101.
105. OLD TESTAMENT HISTORY *Two hours*
A survey, from the standpoint of special revelation, of the principal characters and the trend of events from the creation of the world to the return of the Jews from captivity. Special attention is given to the preparation for the coming Saviour. Some of the problems pertinent to Old Testament history are discussed and the significance of the various events is indicated. Lectures and collateral readings.
106. NEW TESTAMENT HISTORY *Two hours*
A companion course to 105. Events of the intertestamentary period are sketched with particular reference to the coming Messiah; the principal events and teachings of Christ as recorded in the gospels are treated; and the origin and early expansion of the Christian Church in apostolic times is surveyed. Lectures and collateral readings.
201. REFORMED DOCTRINE *Two hours*
An advanced course of study in the doctrine of the Christian religion as contained in the Bible and as reflected in the confessional standards of the Reformed Churches.
202. REFORMED DOCTRINE *Two hours*
Continuation of 201.
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.
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-ecclesiastical spheres. Not offered in 1953-54.
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 inclusivistic 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 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. Open to Juniors and Seniors who have taken 201 and 202. Offered second semester only.

Biology

PROFESSORS VAN HAITSMAN AND MONSMA; ASSOCIATE PROFESSOR KARSTEN; ASSISTANT PROFESSOR BENGELINK

A. *General Biology Major*. For students preparing to teach Biology the following College courses are required:

General College requirements (see p. 41), omitting Physical Science 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 202.

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. 41), omitting Physical Science 205 and 206.

Biology, 109 and 110, 103, 105 and 106, 107 or 201 or 207 and 306, 206, 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, 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. 41), omitting Physical Science 205 and 206.

Education requirements (see pp. 45 and 46).

Biology, 109 and 110, 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 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** *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. 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 BIOLOGY** *Three hours*
 Continuation of Biology 109. Lectures and quizzes.
111. **GENERAL BOTANY** *Four hours*
 Anatomy and physiology of seed plants. 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 FOR PRE-SEMINARY STUDENTS *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 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 microscopic structure and function will be emphasized. Three lectures and one laboratory period a week. Laboratory fee, \$3.00
311. VERTEBRATE ZOÖLOGY *Two hours*
An introduction to the study of vertebrates with emphasis on their comparative anatomy. Evolution problems are discussed. One lecture and one laboratory period a week. Laboratory fee, \$3.00.
312. VERTEBRATE ZOÖLOGY *Three hours*
A continuation of 311. Two lectures and one laboratory period a week. Laboratory fee, \$3.00.
- 330m. TEACHING BIOLOGY *Two hours*
Points of view, contents, and methods of teaching biology, and human physiology and hygiene. Prerequisite: twenty hours of Biology.

Chemistry

PROFESSORS DE VRIES AND DIRKSE; ASSOCIATE PROFESSOR WOLTHUIS

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. Students planning to enter graduate school should have a reading knowledge of both German and French.

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.

103. GENERAL INORGANIC CHEMISTRY *Four hours*

A discussion of the basic laws of inorganic chemistry, accompanied by an emphasis on the periodic table and atomic and molecular structure. Three hours in classroom and one three-hour laboratory period per week. Laboratory fee, \$3.00. Breakage fee, \$5.00. No prerequisite, although a knowledge of high school chemistry or physics is desirable.

104. GENERAL INORGANIC CHEMISTRY *Four hours*

Continuation of 103 plus some descriptive material on non-metals. Hours, texts and fees the same.

201. QUALITATIVE ANALYSIS *Four hours*

Three hours of classroom work and one three-hour laboratory period each week. The classroom work consists of a study of the elements and their compounds. The laboratory work is concerned with the separation and identification of the more common cations and anions. Laboratory fee, \$3.00. Breakage fee, \$7.00. Prerequisites: 103 and 104, and Mathematics 101.

202. QUANTITATIVE ANALYSIS *Four hours*

Two hours of classroom work and seven hours of laboratory each week. This course consists of a study of the theory and practice of acidimetry, alkalimetry, permanganometric and iodometric analyses, and gravimetric determinations. Some of the more specialized methods of analysis are also discussed. Laboratory fee, \$3.00. Breakage fee, \$7.00. Prerequisite: 201.

301. ORGANIC CHEMISTRY *Four hours*

A study of the various homologous series of organic compounds. Emphasis is placed on aliphatic compounds in this course. Three hours in classroom and one four-hour laboratory period per week. Laboratory fee, \$3.00. Breakage fee, \$7.00. Prerequisite: Chemistry 103-104. Chemistry 201 is desirable.

302. ORGANIC CHEMISTRY *Four hours*

Continuation of 301, with emphasis on aromatic compounds and isolated topics. Hours and fees the same. Prerequisite: Chemistry 301.

303. ORGANO-BIOCHEMISTRY *Four hours*

A study of organic compounds, with special emphasis on their bio-chemical significance. Includes a study of bio-chemistry—carbohydrates, liquids, proteins, digestion, metabolism, etc. For pre-nursing, pre-medical technology students, and for teachers with a minor in chemistry. Three hours of classroom work and three to four hours of laboratory per week. Laboratory fee, \$3.00. Breakage fee, \$7.00. Prerequisites: Chemistry 103 and 104.

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. Two 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*
 Two hours of lectures and two to three laboratory periods per week. This course is based on Shriner and Fuson's text. Prerequisite: Chemistry 302. Laboratory fee, \$3.00. Breakage fee, \$7.00.
320. **CHEMICAL RESEARCH.** *One hour*
 Library and laboratory research or an assigned problem. Only for approved seniors majoring in chemistry. Offered both semesters.
321. **CHEMICAL RESEARCH** *One hour*
 Continuation of 320.
- 330m. **TEACHERS' COURSE** *One hour*
 Methods of teaching chemistry in secondary schools. Prerequisite: two years of chemistry.

Dutch

INSTRUCTOR LAGERWEY; ASSISTANT KINGMA (on leave of absence, first semester 1953-54)

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

305. MODERN LITERATURE *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. MEDIÆVAL AND DUTCH HISTORY

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

325. THE RENAISSANCE IN FLANDERS AND ITALY (1350-1550)
(Not offered in 1953-54.) *Three hours*
326. DUTCH HISTORY (1500-1815)
(Not offered in 1953-54.) *Three hours*

C. DUTCH ART

331. FLEMISH PAINTING *Three hours*
The Flemish and Dutch Primitives and Italianizers between 1400 and 1600 Rubens and Van Dyck and their schools. The course is analytical as well as historical. Not offered 1953-54.
332. DUTCH PAINTING *Three hours*
The Dutch Renaissance (1600-1700) and the modern Dutch painters. Not offered 1953-54.

Economics

PROFESSOR RYSKAMP; ASSISTANT PROFESSOR VANDEN BERG (on leave of absence, first semester 1953-54); INSTRUCTOR DE WIT;
ASSISTANT VAN LONKHUYZEN

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.
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.
201. PRINCIPLES OF ECONOMICS *Three hours*
A review of the fundamental principles underlying modern economic life. Not open to Freshmen except by special permission. Students electing 201 are expected to take 202.
202. PRINCIPLES OF ECONOMICS *Three hours*
A continuation of the principles of economics and an application of the same to current industrial problems and institutions.
205. BUSINESS MATHEMATICS *Three hours*
For description of this course, see under Mathematics 205.

206. STATISTICS *Three hours*
For description of this course, see under Mathematics 206.
301. MONEY AND BANKING *Three hours*
A study of the nature and functions of money, with a view to the understanding of the complex rôle of currency systems in our national and international life. A detailed study of the functions of banking, the Federal Reserve, private financial institutions, foreign trade, and so forth. Prerequisite: 201 and 202 or their equivalents.
302. FINANCIAL PRINCIPLES *Three hours*
A continuation of 301. The financial promotion of corporations and of trusts. The trust problem.
303. LABOR PROBLEMS AND TRADE UNIONISM *Three hours*
The historical background of the modern labor movement, the controversies between capital and labor, and the various solutions offered. A careful study of the history, nature, and problems of trade unionism. Prerequisite: 201 and 202.
305. ESSENTIALS OF ACCOUNTING *Four hours*
An introductory course in accounting. Intended to give students the necessary accounting background for entrance into schools of business administration or for business uses when graduating from Calvin. Emphasis is placed on the principles of accounting and the accounting procedure in corporations. A laboratory period is held each week for application of the material. Prerequisite: 201 and 202 or their equivalents.
306. ESSENTIALS OF ACCOUNTING *Four hours*
Continuation of 305.
308. PRINCIPLES OF MARKETING *Three hours*
A study of the marketing functions, the marketing of particular commodities, the functions and modes of operations of middlemen, associate activities affecting marketing, price policies, etc.
309. BUSINESS LAW: CONTRACTS *Three hours*
Deals with the main principles of contract: offer, acceptance, consideration, capacity of the parties, legality of object, the formal requisites of agreements under the statute of frauds, the operation of contracts in business and their interpretation by the courts. Open to Seniors, and to Juniors only by special permission.
312. COST ACCOUNTING *Three hours*
A beginning course in the principles of cost accounting. A laboratory period is held each week for the application of the material.

Education

PROFESSORS FLOKSTRA AND JAARSMA; ASSOCIATE PROFESSORS DE BEER AND VAN BRUGGEN; INSTRUCTOR VAN LAAR

Students who plan to meet teacher certificate requirements will find detailed information on pages 45 to 47.

A. PSYCHOLOGY

(See description of courses under department of Psychology.)

B. HISTORY

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

305. HISTORY OF EDUCATION *Three hours*
A survey of the growth of educational theory and practice during the ancient and medieval periods.
306. HISTORY OF EDUCATION *Three hours*
A continuation of 305 covering the modern period.
309. EDUCATIONAL SOCIOLOGY *Three hours*
A study of the social structure and educational practice with emphasis on present-day problems. Credit also for Sociology. *Not offered for both. Both semesters. Not offered in 1953-54.*

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 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. Not offered in 1953-54.

- 32. TEACHING READING IN ELEMENTARY SCHOOLS** *Three hours*
Both semesters.
- 34. 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.
- 36. TEACHING ENGLISH IN SECONDARY SCHOOLS** *One, two or three hours*
Content as well as method receives attention. Same as English 330*m*. Two hours devoted to content; one to method.
- 38. TEACHING LATIN** *Three hours*
Same as Latin 327 and 330*m* combined.
- 39. REMEDIAL READING** *Three hours*
- 40. CURRICULUM** *Two hours*
A study of curriculum requirements for grades four through six, and of the fundamental teaching procedures applying to children of later childhood. Observation required.
- 341. DIRECTED OBSERVATION OF TEACHING AND LESSON PLANNING** *Two or three hours*
About eighteen hours are spent in the schools of Grand Rapids with specific instructions for directed observation. For students planning to teach in the elementary schools. To be taken simultaneously with Educ. 343.
- 342. DIRECTED OBSERVATION AND LESSON PLANNING** *Two or three hours*
This course is like Education 341 and is for students looking for positions in the junior and senior high schools. To be taken simultaneously with Educ. 344.
- 343. DIRECTED TEACHING** *Five hours*
To be taken simultaneously with Education 341. For students planning to teach in the elementary schools. Offered both semesters. See prerequisites listed earlier in this catalogue under Education.
- 344. DIRECTED TEACHING** *Five hours*
To be taken simultaneously with Educ. 342. For students planning to teach in junior or senior high school. Offered both semesters. See prerequisites listed earlier in this catalogue under Education.
- 330*m*. 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

PROFESSOR WASSINK

- 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 lines; traverse survey; computing areas; leveling; profile; grade stakes; note keeping. Lectures, text assignments, one recitation, and one four-hour field period. Prerequisite: Mathematics 104.
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.
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

PROFESSORS ZYLSTRA (on leave of absence) AND TIMMERMAN; ASSISTANT PROFESSOR SLINGERLAND; INSTRUCTORS HARPER AND JANSSEN; VISITING INSTRUCTOR VANDER WEELE; ASSISTANT VANDER MEY

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

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

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

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

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

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

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 poems and plays of Shakespeare. Textbook, collateral reading, and reports.

208. LITERATURE OF THE SEVENTEENTH CENTURY

Three hours

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

210. LITERATURE OF THE EIGHTEENTH CENTURY

Three hours

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

301. LITERATURE OF THE ROMANTIC PERIOD

Three hours

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

Three hours

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

304. CONTEMPORARY ENGLISH POETRY *Three hours*
A study of the lyric and dramatic poetry of England, in its continental relations, from 1890 to the present time. Textbook, collateral reading, and reports.
306. ADVANCED COMPOSITION *Three hours*
A practical course in the writing of such types of composition as the formal and informal essay, the informative and feature article, the editorial and book review, the short story, lyric poem, and the like. Some collateral reading and much student writing. Open, by permission only, to students who have ability or unusual interest in creative writing.
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.
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 Chaucers' 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 pursued. Analysis of the principal contributions to Western literary 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 having achieved on his own a mastery of the essentials of grammar.

French

INSTRUCTOR A. OTTEN

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.
- 201.** LITERATURE OF THE NINETEENTH CENTURY *Three hours*
A study of romanticism, realism, and naturalism in nineteenth century France, by way of a critical analysis of works of authors representing these movements, collateral reading, and reports.
- 202.** CONTEMPORARY FRENCH LITERATURE *Three hours*
A study of French literature from 1870 to the present time. Texts, collateral reading, and reports.
- 203.** 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. Not offered 1953-54.
- 204.** LITERATURE OF THE SEVENTEENTH CENTURY *Three hours*
Continuation of 303, with special attention to La Fontaine, Boileau, and Racine. Not offered 1953-54.
- 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

PROFESSOR FLOKSTRA; DEAN VAN OPYNEN

- 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. Not offered in 1953-54.
- 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.
- 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

ASSOCIATE PROFESSORS BOERSMA AND FRIDSMA

101. **ELEMENTARY GERMAN** *Four hours*
Pronunciation, elementary grammar and composition. Graded readings.
102. **ELEMENTARY GERMAN** *Four hours*
Continuation of 101.
201. **INTERMEDIATE GERMAN** *Three hours*
Selected prose readings. Grammar review, composition, and collateral reading reports. Prerequisite: 101 and 102.
202. **INTERMEDIATE GERMAN** *Three hours*
More advanced readings in prose and/or poetry. Grammar review and composition continued. Collateral reading reports. Prerequisite: 201.
301. **CLASSICISM** *Three hours*
The origins of the classical ideal during the seventeenth and early eighteenth centuries. Readings from Klopstock, Lessing, Goethe, and Schiller. Prerequisite for either semester: 202. Not offered in 1953-54.
302. **CLASSICISM** *Three hours*
Continuation of 301. Not offered in 1953-54.
303. **ROMANTICISM** *Three hours*
The literary theory and philosophical-religious basis of the German romantic movement as reflected in representative works of both the earlier and later Romanticists. Prerequisite: 202. Not offered in 1953-54.
304. **REALISM** *Three hours*
Readings in the literary prose of the latter half of the nineteenth century. A survey of the intellectual and cultural changes immediately preceding this era and an analysis of some literary works characteristic of the period. Prerequisite: 202. Not offered in 1953-54.
305. **EARLY NINETEENTH CENTURY DRAMA** *Three hours*
A comprehensive study of the lives and works of leading German dramatists of the early nineteenth century. Assigned readings. Papers on related subjects. Prerequisite: 202.
306. **LATER NINETEENTH CENTURY DRAMA** *Three hours*
A study of Hebbel and Hauptmann and their times. Assigned readings and reports. Prerequisites: 202 and 303.
320. **SCIENTIFIC GERMAN** *One hour*
Students wishing to take this course should confer with the professor in charge at the opening of the school year.
- 330m. **METHODS OF TEACHING MODERN FOREIGN LANGUAGES** *One hour*
Intended for prospective teachers in German in secondary schools. Prerequisite: six of the courses offered in this department.

Greek

PROFESSOR RADIUS; ASSISTANT BOERKOEL

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 time of the Roman conquest. 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. Not offered in 1953-1954.
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. Not offered in 1953-1954.
319. READINGS IN GREEK PROSE *Three hours*
Selected portions from one of the major Greek prose writers — Herodotus, Thucydides, Plato, Aristotle, Demosthenes — will be read. The choice will be determined by the needs of the class and the availability of texts. Prerequisite: two years of Greek.
320. GREEK DRAMA *Three hours*
One Greek play will be read in class in the original Greek. The choice will be determined as in Course 319. Several plays representative of the work of the three major dramatists — Aeschylus, Sophocles and Euripides — will be read in translation out of class. Assigned readings and class-room lectures and discussion dealing with the major features of Greek tragedy will round out the work. Special attention will be given to the religious and moral ideas expressed in Greek drama. Prerequisite: two years of Greek.

History

PROFESSORS HOEKSTRA AND DROST; ASSOCIATE PROFESSORS DE BEER AND STRIKWERDA; ASSISANT PROFESSOR IPPEL

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 AND GOVERNMENT 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 Course. Survey of U. S. history with European background to 1950. Includes the equivalent of one hour of work in Political Science.
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.
306. **LATIN AMERICAN HISTORY** *Three hours*
Continuation of 305.
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 offered in 1953-1954.
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 Napoleonic periods. Not offered in 1953-1954.
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. 311 and 312 are not offered in 1953-1954.
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 offered in 1953-1954.
326. **DUTCH HISTORY (1500-1815)** *Three hours*
A short review of the history of the Netherlands up to 1500. The Precursors of the Reformation and the Reformation in the Netherlands. The Eighty Years' War. The Dutch Golden Age and its influence on Europe. Dutch commerce and colonization. Wars between the Netherlands and other countries for religious and commercial purposes. The triumph of plutocracy and rationalism in the eighteenth century. The spirit of the French Revolution as manifested in Holland. The rebirth of Calvinism as a political and cultural power after 1815. Not offered in 1953-54.

Latin

PROFESSOR RADIUS; INSTRUCTOR R. OTTEN; ASSISTANT VAN VUGT

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 (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-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 *Three hours*
Continuation of 201.
- 201A. INTERMEDIATE LATIN FOR PRE-SEMINARIANS *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-SEMINARIANS *Three hours*
Continuation of 201A.
301. CICERO'S PHILOSOPHICAL ESSAYS *Three hours*
Reading of one or more of the following: *De Amicitia*, *De Senectute*, *Tusculanae Disputationes*.
302. READINGS IN LATIN PROSE AND POETRY *Three hours*
Selections drawn from the following Roman writers: Catullus, Cicero, Horace, Livy, Lucretius, Martial, Ovid, Pliny the Younger, Propertius, Tibullus and Vergil.
307. 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 its relation to the political. The decline of paganism and the rise of Christianity are viewed in their relation to each other.
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 1953-1954.

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 1953-1954.

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 1953-1954.

330m. TEACHERS' 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: 18 hours of Latin in College.

Mathematics

PROFESSOR MUYSKENS; ASSOCIATE PROFESSOR TULS; ASSISTANT DE HAAN

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. All courses have as prerequisite one year High School Algebra and one year Plane Geometry.

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.

302. CALCULUS *Five 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.
- 330m. TEACHER'S COURSE One hour
Methods of teaching high school mathematics.

Music

(See also page 55)

PROFESSORS SWETS AND BRUINSMA (on leave of absence); ASSOCIATE
PROFESSOR DE JONGE; INSTRUCTOR BALK; ASSISTANT HUIZENGA

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 I; Heller, Op. 46 or 47; Bach, Two-part Invention, and compositions which correspond in difficulty to:

Haydn, Sonata No. 11, G major No. 20 (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 arpeggii in rapid tempo, scales in parallel and contrary motion, in thirds and sixths and in various rhythms. His repertoire should include works of at least the following grades of difficulty:

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

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

Bach, Chromatic Fantasia and Fugue, toccatas, organ transcrip-
tions by Busoni, Tausig, Liszt, D'Albert;
Beethoven, later Sonatas such as Op. 53, 57 and a Concerto;
Brahms, Rhapsody B minor, Sonata F minor;

Chopin, Ballades, Polonaises, Scherzi, and a Concerto;
 Liszt, Rhapsodies, Paganini Etudes, a Concerto;
 Schumann, Carneval, Concerto;
 Compositions by standard American and foreign modern composers
 such as MacDowell, Grieg, Rubinstein, Moszkowski, Debussy,
 Ravel, Rachmaninoff, and others.

II. Concentrates in Voice.

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

III. Concentrates in Organ.

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

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

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

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

- Bach, Vol. IV (Schirmer), No. 4, Fantasia and Fugue, G minor;
- Vol. IV, No. 7, Prelude and Fugue, B minor;
- Vol. II, No. 12, Prelude and Fugue, D major;
- Book V, Sonatas;
- Franck, Chorales, Piece Heroique;
- Widor, Symphony, No. V;
- Guilmant, Sonata D minor, No. 1;
- Vierne, Symphony No. 1.
- Compositions for modern organ of same grade of difficulty by standard American and foreign composers.

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

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

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

THEORY

103. THEORY AND HARMONY

Three hours

The elements of music: tonality, notation, rhythm. A coordinated study of harmony through the ear, eye, and keyboard. Writing and harmonization of hymn tunes and chorales, sight-

singing, dictation using primary and dominant seventh chords. One hour laboratory period per week required.

104. **THEORY AND HARMONY** *Three hours*
Continuation of 103.
203. **THEORY AND HARMONY, ADVANCED** *Three hours*
Continuation of 103-104. Use of all diatonic triads and seventh chords, altered chords, color chords. Problems of composition involving smaller forms. Continuation of sight-singing and dictation. One hour laboratory period per week required. Not offered in 1953-54.
204. **THEORY AND HARMONY, ADVANCED** *Three hours*
Continuation of 203. Not offered in 1953-54.
303. **COUNTERPOINT, CANON AND FUGUE** *Three hours*
The principles of contrapuntal composition, including a study of species counterpoint and a detailed analysis of Palestrinian counterpoint. Not offered in 1953-54.
304. **COUNTERPOINT, CANON AND FUGUE** *Three hours*
Continuation of 303. Not offered in 1953-54.
315. **ARRANGING AND CONDUCTING** *Three hours*
The problems involved in writing for orchestra, band, and choir. A survey of the technical limitations of each instrument and of the human voice. Arrangements written by class members will be performed by student organizations whenever practical. One class period per week will be devoted to conducting, using class ensemble and recordings. Prerequisite: Music 103-104. Not offered in 1953-54.
- 315A. Students wishing to study conducting only may register for Music 315A after receiving permission of the instructor. One hour per week, one hour credit.
316. **ARRANGING AND CONDUCTING** *Three hours*
Continuation of 315.
- HISTORY AND LITERATURE**
211. **INTRODUCTION TO MUSIC LITERATURE (MUSIC APPRECIATION)** *Three hours*
General course designed to develop intelligent discrimination in the listener. Structural principles and aesthetic content of music with reference to the various forms and styles will be considered. The course is planned to give a general idea of the entire realm of music and is intended alike for the technical musician and those who wish to become merely intelligent listeners.
212. **MUSIC LITERATURE** *Three hours*
Continuation of 211.
219. **CHURCH MUSIC** *Two hours*
The history and practice of worship music from the Hebrews and early Christians to the present. The development of Church chant, the Lutheran chorale and the Genevan Dutch psalm-tunes.
Hymnody in Germany, England and America. The principles of sound worship music and a study of the literature for organ, choir and congregation. Opportunity to conduct hymns and anthems before the class. Not offered in 1953-54.
220. **CHURCH MUSIC** *Two hours*
Continuation of 219. Not offered in 1953-54.

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*
A study of the development of musical forms, beginning with the plain-song, masses, motets, madrigals, and continuing through early orchestral and instrumental compositions. The relationship of musical form to problems of tonality, rhythm, unity and variety.
308. FORM *Two hours*
Continuation of 307.
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 *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 orchestra and band instruments; evaluation of methods of class instruction; orchestra and band organization; repertoire. Must be taken no later than the Junior year.
343. PIANO METHODS *Three hours*
A semester course designed for piano concentrates including class piano instruction at the elementary school level; coordination of piano study with the elementary school administration and curriculum; repertoire for class and private piano teaching. During the last half semester one hour per week will be spent in observation of class piano teaching.

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.

- 117-118. **FIRST YEAR VOICE** *One hour*
 Classification of the voice, vocalizations for tone production. Simple Italian and old English classics to assist in tone production through articulation and diction. Easy oratorio arias. Fee, \$30 per semester.
- 217-218. **SECOND YEAR VOICE** *One hour*
 Continuation of technical studies for development of the necessary qualities of the individual voice. Additional Italian and English classics. German or French songs introduced. Additional recitatives and arias from oratorios. Fee, \$30 per semester.
- 317-318. **THIRD YEAR VOICE** *One hour*
 Study of songs with foreign text continued. Additional material from oratorios and selected material from the operatic repertoire. Technical studies likewise continued. Fee, \$30 per semester.
- 327-328. **FOURTH YEAR VOICE** *One hour*
 Preparation of program for graduation recital, selected from repertoire acquired in previous grades; public recital; appearance with orchestra upon recommendation of the music faculty. Fee, \$30 per semester.
- 109-110. **FIRST YEAR ORGAN** *One hour*
 Individual lessons in organ. Prerequisite: three years of piano. Fee \$30 per semester plus \$10 per semester for the use of the organ.
- 209-210. **SECOND YEAR ORGAN** *One hour*
 Individual lessons in organ. Fee \$30 per semester plus \$10 per semester for the use of the organ.
- 309-310. **THIRD YEAR ORGAN** *One hour*
 Individual lessons in organ. Fee \$30 per semester plus \$10 per semester for the use of the organ.
- PIANO**
- 141-2, 241-2, 341-2, 351-2 (4 years). Per semester one hour. Individual lessons in piano. Fee \$30 per semester.
- STRINGS** *One hour*
- 161-2, 261-2 361-2, 461-2
 Individual lessons in violin, viola, violoncello, bass violin. Fee as required.
- WOODWINDS** *One hour*
- 171-2, 271-2, 371-2, 471-2
 Individual lessons in flute, oboe, clarinet, bassoon, saxophone. Fee as required.
- BRASSES** *One hour*
- 181-2, 281-2, 381-2, 481-2
 Individual lessons in cornet, horn, baritone, trombone, bass horn. Fee as required.
- PERCUSSION** *One hour*
191.
 Individual lessons in snare drum and other percussion instruments. Fee as required.

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.

107-108. RADIO CHOIR*One hour*

Performs weekly as the Choir of the Back to God Hour, our denominational Sunday broadcast over the Mutual Network. Representative works in the field of Church music suitable for radio performance are used. Students are taught to participate according to modern radio broadcasting techniques.

107-8. 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*One hour*

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*One hour*

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

PROFESSORS JELLEMA AND DE BOER; ASSOCIATE PROFESSOR RUNNER

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*Three hours*

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, classic 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.

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.
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 "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 contemporary 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*
 Study of the *Critique of Pure Reason*. Second semester.
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

ASSISTANT PROFESSOR STEEN; ASSISTANT TUUK

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 106, or 105 and 102.

103. PERSONAL HYGIENE (Biol. 103)*Three hours*

The proper care of our bodies and approved practices for the prevention of disease are studied.

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.

103. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION*Two hours*

A study of the representative programs of Physical Education and evaluation of these programs.

104. 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.

105. 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.

106. 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

101. SPRING SPORTS FOR GIRLS*Three hours*

A study of the background, fundamentals, and coaching methods of Tennis, Golf, Badminton, Archery, and Softball.

102. 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.

Physical Science

PROFESSOR DE VRIES AND INSTRUCTOR ANDRÉ

105. 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 field of physics, chemistry, geology and astronomy. Emphasis is placed on the interrelation of these fields rather than a study of each unit by itself. Not open to students having had Chemistry 103-104 or Physics 201-202 or their equivalent.

106. INTRODUCTION TO PHYSICAL SCIENCE*Three hours*

Continuation of 205, which is also a prerequisite.

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

Physics

PROFESSOR WASSINK; INSTRUCTOR ANDRÉ

Students majoring in Physics are required to take the following courses: General College requirements must be met (see page 41), Biology 109 and 110; Chemistry 103 and 104; Mathematics 104, 201, 202, 301, 302, 304; Physics 201E, 202E, 203, 204, 304, 305, 306, 307, 308. They should take Advanced Algebra, Solid Geometry and Plane Trigonometry in high school, if possible, 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.

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, \$3.00.
- 202E. **GENERAL PHYSICS** *Five hours*
 Electricity and light. (Required of all engineering students.) A continuation of 201E. It takes up the fundamental phenomena and laws of electricity and light with ample class illustrations. Four recitations, and one two-to-three-hour laboratory period a week. Laboratory fee, \$3.00.
203. **PHYSICS PROBLEM COURSE** *One hour*
 Should be preceded by or accompany 201 or 201E. This course consists of the solution and discussion of problems in mechanics, sound, and heat. One recitation a week.
204. **PHYSICS PROBLEM COURSE** *One hour*
 A continuation of 203. One recitation a week.
 NOTE: Prerequisites for the following courses are Physics 202E and Mathematics 302.
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.
305. **HEAT** *Three hours*
 An introduction to the first and second laws of thermodynamics and to the kinetic theory of gases. Not offered in 1953-1954.
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. Not offered in 1953-1954.

- 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.
- 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.

Political Science

PROFESSOR HOEKSTRA: ASSISTANT PROFESSOR IPPEL

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

- 101. GOVERNMENT OF MODERN STATES** *Three hours*
The organization and operation of modern governments. Emphasis is placed on British and Continental European governments with a special regard for recent political developments in these countries. Lectures and collateral reading.
- 102. GOVERNMENT OF MODERN STATES** *Three hours*
Continuation of 101, which is prerequisite.
- 201. PRINCIPLES OF POLITICAL SCIENCE** *Three hours*
(Formerly Political Science 301 — Introduction to Political Science.)
An analysis of problems dealt with in Political Science, including the origin, nature, and essential functions of the state; the nature of sovereignty and law; and relations of government to the individual. Lectures and collateral reading. Not open to freshmen.
- 202. PRINCIPLES OF POLITICAL SCIENCE** *Three hours*
Continuation of 201, which is prerequisite.
- 303. AMERICAN NATIONAL GOVERNMENT** *Three hours*
Basic principles and their practical application to the operation of the Federal constitution. The interpretation of the constitution by the various branches and departments of government, and the extension of government into the socio-economic field.
- 304. AMERICAN NATIONAL GOVERNMENT** *Three hours*
Continuation of 303, which is prerequisite.
NOTE: *Foreign Relations.* See History 303 and 304.

Psychology

- J. WATERINK, Professor of Education and Applied Psychology, Member of the Humanities and Theological Faculties of the Free University at Amsterdam, The Netherlands, Visiting Professor of Psychology, second semester 1953-1954; PROFESSOR DALING; ASSOCIATE PROFESSOR PLANTINGA**
- 101. 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.
- 301. 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 environment, 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 psychology, 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, imagining 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 divergences in the interpretation of human nature. Readings and discussions.
302. **THEORIES OF LEARNING** *Three hours*
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.
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 the course.
310. **BASIC CONCEPTS OF CHRISTIAN PSYCHOLOGY** *Three hours*
This course will be taught by Professor Dr. J. Waterink, Professor of Education and Applied Psychology at the Free University at Amsterdam, the Netherlands; Visiting Professor of Education, Calvin College, second semester 1953-1954. Course description furnished upon request and will be publicized sometime during the first semester.

Sociology

PROFESSOR RYSKAMP; ASSOCIATE PROFESSOR BOUMA; DR. G. HEYNS;
ASSISTANT C. BRATT

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. 41) or the Education course (see p. 45). To complete the major group (Group III) requirements he should elect 24 hours in sociology. The 24 hours must include courses 203, 204, 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. 42) subject may be selected for the 12-hour sequence. (15 hours for a Teachers' 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, 303; 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 population problems, poverty, crime and delinquency, divorce, race and minority cleavages, and problems of farm and village. It is desirable, but not necessary, to precede this course with 203.

206. RURAL 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 considered as well as rural-urban relationships. 203 is a prerequisite except for those who are working towards a two-year State Limited 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 applied either as Sociology or Psychology.

303. LABOR PROBLEMS

Three hours

This course is described under Economics.

304. THE FAMILY

Three hours

This course will be adapted to suit the needs of the students. It aims, however, at an intensive study of the history of the family as a social and educational institution, and at a thorough discussion of the divorce problem and other problems connected with modern family life. Prerequisites: 203 and 204, or their equivalents.

305. THE FIELDS OF SOCIAL WORK

Three hours

A survey of the various types of social work, including individual case work, group work, and community organization. Agencies set up to work with deviate forms of behavior and situations are studied both theoretically and in operation. Should be valuable for teachers as well as those contemplating doing social work.

306. CRIMINOLOGY AND DELINQUENCY

Three hours

A study of the primary and secondary causes for, manifestations of, and ameliorative and preventive programs for criminal and delinquent behavior. Emphasis is placed on the implications for various community institutions, including school and church.

309. EDUCATIONAL SOCIOLOGY

Three hours

This course is offered in the department of Education. Not offered in 1953-1954.

315. **INTRODUCTION TO SOCIAL WORK** *Two hours*
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** *Two hours*
How to set up a problem for research, techniques of collecting data, sources of data, uses of tables and charts, and the preparation of research reports. Prerequisite: At least 12 hours of Sociology. Open to seniors only and by permission. Taught both semesters.
317. **SOCIAL ANTHROPOLOGY** *Three hours*
A study of the origin and development of culture with a critical survey of prevailing theories of cultural origins such as social evolution and cultural relativism. The course will include a comparative analysis of social institutions and culture patterns, those of the United States and of widely different societies, past and present.
318. **HISTORY OF SOCIOLOGY** *Three hours*
The development of sociology, including its European backgrounds and early beginnings in the Twentieth Century in America. Calvinistic appraisal of sociological pioneers.
- 330m. **METHODS OF TEACHING SOCIAL PROBLEMS** *One or two hours*
A study of the methods of teaching sociology, social problems and similar courses on the secondary level. Prerequisite: Five of the courses offered in this department. Offered first or second semesters to meet the convenience of the students interested.

STATISTICS

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

Speech

ASSISTANT PROFESSORS BERGHUIS AND DE KOSTER; INSTRUCTOR JANSSEN

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

PRACTICE-THEORY COURSES

103. **FUNDAMENTALS OF SPEECH — I** *Two hours*
Basic principles of public speaking on the college level, with the aim of developing proper mental, vocal, and physical habits.
104. **FUNDAMENTALS OF SPEECH — II** *Two hours*
Continuation of 103, with emphasis on longer speeches, motivation, and rhetoric. Panel discussions, symposiums, and different types of speeches will be presented. Prerequisite: Course 103.
106. **DICTION FOR THE FOREIGN STUDENT** *Non-Credit*
Particularly designed to aid the foreign student taking the pre-seminary course who has not completely mastered the English language. Intensive drill in phonetics. Open to others by permission. Not required of veterans.
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.
215. PRINCIPLES OF SPEECH CORRECTION *Two hours*
A one-semester course especially designed for the elementary and secondary school teachers. A detailed study will be made of the types, nature, and causes of speech defects, as well as of the principles and methods of speech correction.
301. ADVANCED SPEECH *Two hours*
A practice course, designed for pre-Seminary students. Open to others only by permission.
303. INTERPRETATIVE READING *Three hours*
The principles and techniques of interpretation and expression. Oral interpretation of prose and poetry. Intensive study of representative selections.
304. ADVANCED INTERPRETATION *Three hours*
Continuation of 303. Application of its principles to drama. Study of development from Greek to modern drama. Collateral reading.
309. SPEECH FOR THE CLASSROOM TEACHER *Three hours*
Designed to: (1) improve the prospective teacher's vocal habits; (2) train the student in the use of the International Phonetic Alphabet; (3) aid the prospective teacher of speech and coach of forensic programs. Open to juniors and seniors in Education, and others by permission.
311. ORAL DISCUSSION AND DEBATE *Two hours*
Theory and practice of discussion and debate in their various forms.

FORENSICS

209. INTERCOLLEGIATE PEACE ORATORY *One hour per year*
211. INTERCOLLEGIATE ORATORY *One hour per year*
213. INTERCOLLEGIATE EXTEMPORANEOUS SPEAKING *One hour per year*
220. THESPIAN PRODUCTIONS *One hour per year*
Membership in the Thespian group is limited and is determined annually by tryout. The members will be given training in the various practical aspects of the production of drama. Students may participate more than one year. The activity runs through the school year.

310.	INTERCOLLEGIATE INTERPRETATIVE READING	<i>One hour per year</i>
312.	INTERCOLLEGIATE DEBATING	
	League Debaters	<i>Two hours per year</i>
	Tournament Debaters	<i>One hour per year</i>

Bequests

Friends wishing to make donations, conveyances or bequests to Calvin College and Seminary may use the following legal form of bequest:

"I hereby give, devise, and bequeath unto Calvin College and Seminary, a corporation organized and existing under the laws of the State of Michigan, the sum of Dollars, to be paid out of any real or personal estate owned by me at my decease."

SUMMARY OF ENROLLMENT

Fall 1952 and Summer 1953

Seniors	203
Juniors	213
Sophomores	311
Freshmen	414
Unclassified	50
Summer School, 1953.....	280
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Total.....	1471

AERIAL VIEW OF CAMPUS

