Wednesday, January 21, 1976.

The Fifth regular meeting of the Senate of The University of British Columbia for the Session 1975-76 was held on Wednesday, January 21, 1976 at 8.00 p.m. in the Board and Senate Room, Administration Building.

Present: President D. T. Kenny (Chairman), Chancellor D. F. Miller, Dean J. H. M. Andrews, Mrs. M. F. Angus, Dr. C. S. Belshaw, Mr. Justice J. C. Bouck, Dr. C. B. Bourne, Dr. K. T. Brearley, Mr. D. M. Brousson, Dr. T. H. Brown, Rev. P. C. Burns, Dr. R. M. Clark, Mr. W. L. Corscadden, Dr. J. D. Dennison, Dr. P. J. Dooling, Mr. B. G. Dougherty, Mr. R. P. Dumont, Dr. B. A. Dunell, Ms. B. Gene Errington, Mrs. F. Field, Dean W. D. Finn, Dr. C. V. Finnegan, Dean E. M. Fulton, Mr. G. S. Funt, Mr. F. K. H. Gagne, Dean J. A. F. Gardner, Miss C. V. Goulet, Dr. D. Haley, Dr. J. M. Houston, Dr. R. F. Kelly, Dr. W. D. Kitts, Dr. L. Kraintz, Mr. B. A. Krasselt, Mrs. W. T. Lane, Dr. P. A. Lusztig, Dean A. J. McClean, Mrs. H. McCrae, Dr. D. J. MacDougall, Dr. C. A. McDowell, Dr. M. F. McGregor, Rev. J. P. Martin, Mr. G. R. Moore, Dr. B. N. Moyls, Dr. M. Pernarowski, Dr. M. E. Prang, Dr. J. F. Richards, Dean B. E. Riedel, Dr. V. C. Runeckles, Miss J. S. Ryan, Mr. J. M. Sehmer, Vice-President M. Shaw, Dr. R. A. Shearer, Mr. A. F. Sheppard, Mr. G. B. Sundeen, Mr. G. A. Thom, Dean G. M. Volkoff, Mr. R. M. Walls, Miss C. L. V. Warren, Dean R. M. Will, Dr. J. L. Wisenthal.

Observers: Mr. J. A. Banham, Mr. T. A. Myers, Dr. W. A. Webber.

Messages of regret for their inability to attend were received from Dean D. V. Bates, Dr. D. H. Copp, Dr. R. F. Gray, Dean N. A. Hall, Mr. B. J. Higgins, Dr. R. H. Hill, Dr. W. M. Keenlyside, Dean P. A. Larkin, Dean S. W. Leung, Mrs. N. B. Noble, Mr. R. F. Osborne, Mr. T. R. Pascuzzo, Dr. R. F. Sharp, Dr. M. J. A. Smith, Mr. B. Stuart-Stubbs, Dr. M. Uprichard.

Minutes of the previous meeting

Dr. Brearley)
Dr. McGregor) *That the Minutes of the Fourth regular meeting of Senate for the Session 1975-76, having been circulated be taken as read and adopted.*

Carried

Business arising from the Minutes

Notices of motion

(i) Notice of motion by Dr. Copp: -

"That the regulation that classes not be held on Thursdays between 12.30 p.m. and 2.30 p.m. shall not apply to Graduate courses."

(ii) Notice of motion by Dr. Gray: -

"That, henceforth, wherever a candidate for degree is recommended to Senate who has not completed all of the major requirements, the Senate shall be informed as to which requirements have been set aside together with the reasons therefor."

(iii) Discussion on granting baccalaureate degrees which do not involve a period of residence.

Due to the absence of Dr. Copp and Dr. Gray it was agreed that the above items would be placed on the agenda for the February 18, 1976 Senate meeting.

Standards in English

Dr. Belshaw raised a query concerning the recommendation of the Senate ad hoc Committee on Standards in English outlined on pages 6468-9 of the Senate minutes. It was pointed out that there was no mention of Board approval of this recommendation under the heading "From the Board of Governors" on pages 6478-9.

Vice-President Shaw explained that the estimated cost of implementing the recommendation was not included in the budget estimates for the 1976-77 session and that the Chairman of the committee and the Head of the Department of English had been notified that the cost would be entered for consideration in the budget estimates for the academic year 1977-78.

Committee on Prizes, Scholarships and Bursaries

Dean Riedel)
Dr. Kitts)

That the new awards listed in Appendix 'A' be accepted subject to the approval of the Board of Governors, and that letters of thanks be sent to the donors.

Carried

Reports of Committees of Senate

Admissions Committee

1) Dr. Finnegan outlined current policy on the admission of students from Grade 12. He explained that screening of applicants whose cumulative records were in the C to C+ range would be intensified. He stated that the Admissions Committee would be reporting to Senate from time to time on its interpretation and enforcement of admissions policy.

2) Faculty of Medicine

A revised Calendar statement on admission to the Faculty of Medicine had been reviewed by the committee and was circulated for information.

Dr. Finnegan explained that much of the revision was editorial. A paragraph concerning reapplication had been added informing students that candidates who had already applied unsuccessfully for admission to the Faculty on three previous occasions would not normally be accepted.

Curriculum Committee

Dr. Shearer presented the report. He advised Senate that the committee had attempted to obtain information on budgetary implications of new programs. It was the intention of the committee that this information be submitted to the Budget Committee at the same time as the proposals were sent to the Board of Governors in order that the President might be advised on the budgetary implications.

Reports of Committees of Senate

Curriculum Committee (continued)

Faculty of Agricultural Sciences (See Appendix 'B')

Dr. Shearer)
Dr. Kitts)

That new courses and course changes recommended by the Faculty of Agricultural Sciences be approved.

Carried

Dr. Shearer)
Dr. Kitts)

That the proposal of the Department of Plant Science to offer a new program in Rangeland Resources as recommended by the Faculty of Agricultural Sciences be approved.

Carried

Faculty of Applied Science (See Appendix 'B')

Dr. Shearer)
Dean Finn)

That new courses, course and program changes in Chemical Engineering, Civil Engineering, Geological Engineering, Mechanical Engineering, Metallurgy and Physics recommended by the Faculty of Applied Science be approved.

Carried

Faculty of Arts (See Appendix 'B')

Dr. Shearer)
Dean Will)

That the Diploma in Film/Television Studies recommended by the Faculty of Arts be approved.

Carried

Dr. Shearer)
Dean Will)

That program changes for the major in Theatre and the major in Film/Television Studies recommended by the Faculty of Arts be approved.

Carried

Dr. Shearer)
Dean Will)

That new courses and course changes in Anthropology and Sociology, Classics, Creative Writing, English, Fine Arts, Hispanic and Italian Studies, History, Music, Psychology and Slavonic Studies recommended by the Faculty of Arts be approved.

Carried

Reports of Committees of Senate

Curriculum Committee

Faculty of Arts (See Appendix 'B') (continued)

Dr. Shearer)
Dean Will)

That new courses and course changes in English, Fine Arts, History, Linguistics, Mathematics, Religious Studies and Theatre recommended by the Faculty of Arts be approved.

Carried

Dr. Shearer)
Dean Will)

That new courses and course changes in English and a change in the requirements for a Major for the degree of Bachelor of Arts recommended by the Faculty of Arts be approved.

Carried

Dr. Shearer)
Dean Will)

That the proposal of the Faculty of Arts to offer new courses in German and a Diploma in Translation through the Department of German be approved.

Carried

Faculty of Commerce and Business Administration (See Appendix 'B')

Category B changes submitted by the Faculty of Commerce and Business Administration are listed in Appendix 'B'.

Faculty of Education (See Appendix 'B')

Dr. Shearer)
Dean Andrews)

That course and curriculum changes recommended by the Faculty of Education be approved.

Carried

Dr. Shearer)
Dean Andrews)

That course changes recommended by the Faculty of Education be approved.

Carried

Reports of Committees of Senate

Curriculum Committee

Faculty of Education (See Appendix 'B') (continued)

Dr. Shearer)
Dean Andrews) *That the Diploma in English Education (Elementary) recommended by the Faculty of Education be approved.*

Carried

Dr. Shearer)
Dean Andrews) *That the proposal to reduce the unit value from 24 to 18 for the Diploma in Counselling recommended by the Faculty of Education be approved.*

Carried

Faculty of Forestry (See Appendix 'B')

Category B changes submitted by the Faculty of Forestry are listed in Appendix 'B'.

Faculty of Graduate Studies (See Appendix 'B')

Dr. Shearer)
Dr. Moyls) *That course changes in Animal Science, Civil Engineering, Geological Sciences, Commerce, Plant Science, Biochemistry, Health Care & Epidemiology, Classics, Mechanical Engineering, Pharmaceutical Sciences, Economics, Education, and Creative Writing, recommended by the Faculty of Graduate Studies be approved.*

Dr. Shearer stated that the Faculty of Education had agreed to the request of the committee that the unit value for Education 561 and 598 remain ($1\frac{1}{2}$-3).

The motion was put and carried.

Reports of Committees of Senate

Curriculum Committee

Faculty of Graduate Studies (See Appendix 'B') (continued)

Dr. Shearer)
Dr. Moyls)

That new courses and course changes in Animal Science, Asian Studies, Creative Writing, Education, Fine Arts, French, Geological Sciences, Geophysics and Astronomy, Health Care & Epidemiology, Mechanical Engineering, Community & Regional Planning (excluding Planning 425), Plant Science and Slavonic Studies, recommended by the Faculty of Graduate Studies be approved.

Carried

Faculty of Medicine (See Appendix 'B')

Approval of a new course INDE 402 was withheld pending consultations with the Department of Psychology. Category B changes for HC/E 475 were submitted for information.

Faculty of Pharmaceutical Sciences (See Appendix 'B')

Dr. Shearer)
Dean Riedel)

That a new course recommended by the Faculty of Pharmaceutical Sciences be approved.

Carried

Faculty of Science (See Appendix 'B')

Dr. Shearer)
Dean Volkoff)

That new courses and course changes in Biochemistry, Botany, Computer Science, Geophysics and Astronomy, Mathematics, Microbiology, Oceanography, Physics, and Zoology recommended by the Faculty of Science be approved.

Dr. Shearer informed Senate that the Department of Computer Science had agreed to a statement being inserted in the Calendar noting that credit may not be obtained for both Computer Science 115 and 118, and that Computer Science 101 and 115 may not both be taken for credit.

Reports of Committees of Senate

Curriculum Committee

Faculty of Science (See Appendix 'B') (continued)

The motion was put and carried.

Dr. Shearer)
Dean Volkoff) *That new programs and program changes recommended by the Faculty of Science be approved.*

Carried

Agenda Committee

The following resolution was passed by Senate at its meeting of November 12, 1975: -

"That Senate request the Provincial Government to make appropriate changes to the Universities Act, 1974, to allow student senators and student Board of Governors representatives to serve two-year terms so long as they remain full-time students at U.B.C."

Subsequently the Alma Mater Society Student Council requested the Board not to approve two-year terms for student representatives on the Board of Governors. The Agenda Committee therefore recommended that the resolution passed at the meeting of November 12, 1975 be rescinded.

Dr. McGregor)
Dean Riedel) *That the resolution to request the Provincial Government to make appropriate changes to the Universities Act, 1974, to allow student senators and student Board of Governors representatives to serve two-year terms so long as they remain full-time students at U.B.C. be rescinded.*

Senate was informed that the A.M.S. had originally supported two-year terms for student senators. However, due to the approval of a new constitution

Reports of Committees of Senate

Agenda Committee (continued)

whereby Senate and Board representatives would sit as voting members of the Students' Representative Assembly (the Board of Directors of the A.M.S.) the Student Council voted 10 to 8 to reject the two-year term.

It was the opinion of some student senators that the one-year term was not long enough and in view of the fact that the Student Council was divided in its support of the one-year term it was felt that the motion should not be rescinded at this time.

Mr. Brousson)
Miss Warren)

That the motion to rescind be tabled for one month or until there has been some discussion with the A.M.S. Council.

Carried

Report on Registration 1975-76

The report on registration for 1975-76 was circulated for information.

Faculty of Education (See Appendix 'B')

A list of extra-sessional credit course proposals was circulated for information.

Other Business

Notices of motion

1. Notice of motion by Mr. Funt: -

"That Senate recommend to the Board of Governors that an ad hoc committee be estabiished to investigate tenure at U.B.C. with specific attention directed to the following:

(i) the criteria used in granting tenure;
(ii) the relative weights placed upon these criteria; and
(iii) the methods utilized in ascertaining performance."

Other Business

Notices of motion (continued)

2. Notice of motion by Mr. Walls: -

"That Senate strike an ad hoc committee to examine the needs for, and make specific recommendations concerning the implementation of a uniform procedure for evaluating the effectiveness of Faculty members in teaching situations."

3. Notice of motion by Mr. Walls: -

"That Senate request the Curriculum Committee to examine the feasibility of establishing a credit course in basic emergency Medicine which would be available as an elective to students in all disciplines."

4. Notice of motion by Dr. Belshaw: -

"That the Senate Budget Committee be directed to report to Senate at least once a year, and that it specifically include in such reports an account of the financial provisions made by the Board to give effect to specific academic decisions of Senate."

5. Notice of motion by Dr. Belshaw: -

"That prior to signature, proposed Union agreements be placed before the Senate Budget Committee for advice on the implications for the academic goals of the University and that existing arrangements be reviewed to determine whether there are adverse effects on those academic goals."

Dr. Belshaw stated that in the event that Senate decided that the Senate Budget Committee was not the appropriate body to deal with this matter he would reserve the right to introduce the following motion: -

"That a standing Senate committee on the academic implications of financial and administrative arrangements be struck to review and report to Senate upon any matters coming under the purview of its title which are not the primary responsibility of other Senate committees."

Christmas examination period

Attention was drawn to the statement of policy that forbids the holding of any examination, formal or informal, during lecture periods in the two weeks preceding

Other Business

Christmas examination period (continued)

the formally scheduled examinations. It was stated that an examination for Anthropology 200 was given on December 1.

It was agreed that this matter be referred to the Senate ad hoc Committee on Examinations.

The meeting adjourned at 10.15 p.m.

The next regular meeting of Senate will be held on Wednesday, February 18, 1976.

Secretary

Confirmed,

Chairman

APPENDIX 'A'

New Awards Recommended to Senate

The B.C. Dentists' Wives' Association Scholarships - In view of International Women's Year, three scholarships of $100 each will be awarded to dental hygiene students of high academic standing at the completion of their first year of study. The award will be made on the recommendation of the Director of Dental Hygiene.

The John L. Catterall Scholarship in Classics - A scholarship in the amount of approximately $350 will be awarded to a student who is completing second year and who intends to read for honours in Classics, Greek or Latin. The award will be made on the recommendation of the Head of the Department of Classics.

The Reubart-Rogers Scholarship - A scholarship in the amount of $100 will be awarded annually to the most outstanding keyboard performance major entering first year in the Department of Music. The award will be made on the recommendation of the Department.

Wm. and Emily Ross Fund - This fund of the Vancouver Foundation provides bursaries for physically handicapped students.

The Colin A. Sands Memorial Book Prize - A fund, established in memory of Colin A. Sands by his friends and colleagues, provides an annual book prize in the amount of about $50. The award will be made to a student in Anaesthesia on the recommendation of the Head of the Department of Anaesthesiology.

The Adam F. Szczawinski Book Prize in Botany - A book prize honouring Dr. Adam F. Szczawinski has been made available by his friends and colleagues. Dr. Szczawinski was the first U.B.C. student to receive a Ph.D. in the Department of Botany. The award is made in recognition of Dr. Szczawinski's special interst in mushrooms and his significant contribution to the botany of the Province while Curator of Botany at the British Columbia Provincial Museum from 1955 until his retirement in 1975. The award will be made to an undergraduate student of high academic standing in the field of mycology.

APPENDIX 'A'

New Awards Recommended to Senate (continued)

The Gibb G. Henderson Prize in Pharmaceutical Sciences - This prize of $100, donated by The College of Pharmacists of British Columbia, recognizes the long and distinguished service to the profession of pharmacy, both as a practitioner and as an Executive Officer of the College, of Mr. Gibb G. Henderson. It will be awarded to the student in the graduating class in Pharmaceutical Sciences who has attained the highest standing in the pharmacology courses.

The Louise and Garfield Thomson Memorial Scholarship in Mathematics - A scholarship in the amount of $200 will be available in the 1976/77 academic year for a woman student in the Faculty of Science, majoring in mathematics. The award has been made possible by donations from friends and relatives of Louise and Garfield Thomson to the University Women's Club Trust Fund for Education. In making the award, the financial circumstances of the applicant will be considered.

The Louise and Garfield Thomson Memorial Bursary in Medicine - A bursary in the amount of $600 will be available in the 1976/77 academic year for a woman student in the Faculty of Medicine. The award has been made possible by donations from friends and relatives of Louise and Garfield Thomson to the University Women's Club Trust Fund for Education. The award will be made available on the recommendation of the Faculty of Medicine to a woman in either the penultimate or the final year.

APPENDIX 'B'

Course and Curriculum Proposals

A = new courses or substantial changes
B = minor changes

FACULTY OF AGRICULTURAL SCIENCES

Agricultural Mechanics

B Changes — AGME 300, 301, 401 - change in description

Animal Science

A New courses — ANSC 416 (1½) Equine Biology, Health and Nutrition
ANSC 424 (1½) Animal Interactions and Rangelands

B Changes — ANSC 313 - change in prerequisite
ANSC 421 - change in description

Food Science

B Change — FOOD 412 - change in hours

Plant Science

A New courses — PLNT 199 (3) Introduction to Landscape Technology
PLNT 404 (1½) Ecology and Management of North American Range Plant Communities
PLNT 405 (1½) Rangeland Systems
PLNT 411 (1½) Small Fruit Culture
PLNT 412 (1½) Tree Fruit Production

B Changes — PLNT 404 - change in number and title; now reads:
PLNT 304 (1½) Introduction to Range Management
PLNT 405 - change in number; now reads:
PLNT 305 (1½) Forage and Turf
PLNT 320 - change in title and description; now reads:
PLNT 320 (1½) Field Studies and Practices in Agronomy, Horticulture, Crop Protection or Range Science
PLNT 313 - change in prerequisite

Landscape Horticulture Honours Program
First and Second Years
- change in description

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF AGRICULTURAL SCIENCES

Plant Science (continued)

A New program — Rangeland Resources - Third and Fourth Years
Plant Science 304, 305, 320, 404, 405, Animal Science 322, 421, 424, Soil Science 416, Geography 370 or Forestry 442, electives $7\frac{1}{2}$ or $13\frac{1}{2}$

Poultry Science

A Changes — POUL 306 - split into two courses; now reads:
POUL 307 ($1\frac{1}{2}$) Experimental Embryology I
POUL 308 ($1\frac{1}{2}$) Experimental Embryology II

A Deletion — POUL 306

B Changes — Poultry Science Honours Requirements
Third and Fourth Years
- change in description
Poultry Science Majors Requirements
Third and Fourth Years
- change in description

POUL 313 - change in prerequisites

Soil Science

B Changes — SOIL 300 - change in title and description; now reads:
SOIL 300 ($1\frac{1}{2}$) Soil in Man's Environment
SOIL 301 - change in title and description; now reads:
SOIL 301 ($1\frac{1}{2}$) Soils in Natural Resource Management
SOIL 314 - change in description
SOIL 404 - change in description

Agricultural Sciences

B Change — Requirement for the B.Sc. (Agr.) degree
Third Year

change in the Plant Science 321 requirement

APPENDIX 'B'

Course and Curriculum Proposals (continued)

FACULTY OF APPLIED SCIENCE

Chemical Engineering

A Deletion — CHML 350 (3) Unit Operations and Heat and Mass Transfer

Civil Engineering

A New course — CIVL 481 (2) Urban Engineering

B Changes — CIVL 471 - change in title and description to read:
CIVL 471 (1) Traffic Engineering I
CIVL 515 - change in number to 492

Geological Engineering

B Change — Third Year Geological Engineering
Rephrase the Third Year requirement to read:
"Electives to bring course total to approximately 26 hours per week, selected in consultation with the Program Director, Geological Engineering".

Mechanical Engineering

A New courses — MECH 460 (1) Fluid Power Engineering
MECH 474 (1) Solar Energy Utilization
MECH 477 (1) Nuclear Energy Conversion

A Deletion — MECH 367

B Changes — MECH 363, 398, 458, 491, 498 - change in description

Metallurgy

A Change — Revised Third Year Metallurgical Engineering Curriculum as follows (effective 1976/77):

(a) Delete from the core courses: CHML 350, METY 351, METY 371
(b) Add to the core courses: METY 360, METY 378
(c) Change list of elective courses. This involves basically an increase in the elective component from 2 to approximately 4 units depending on the courses elected.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF APPLIED SCIENCE

Metallurgy

A Change (continued)

Revised Fourth Year Metallurgical Engineering Curriculum as follows (effective 1977/78):

(a) Delete from the core courses: METY 451, 452, 453, 455, 471, 474

(b) Add to core courses: METY 495, 499

(c) Change list of electives. This involves basically an increase in the elective component from 6 units to 14 units.

Course and Curriculum Changes for the 1976/77 Session

A New courses

METY 360 (1) Heat Transfer
METY 374 (1½) Deformation Processes
METY 378 (1) Diffusion and Phase Transformation

B Changes

METY 350 - unit value reduced from (2) to (1½)
METY 352 - change in unit value and title to read:
METY 352 (2½) Process Metallurgy
METY 353 - change in title and description to read:
METY 353 (1) Material and Heat Balances
METY 370 - change in unit value and title to read:
METY 370 (1) Structure of Metals
METY 376 - change in title and hours to read:
METY 376 (2) Structure and Properties of Steel
(3-3*-0; 0-0-0)
METY 382 - change in hours from
(2-3-0; 0-0-0) to (0-0-0; 2-3-0)
METY 390 - reduction in unit value from (1) to (½)
METY 398 - reduction in unit value from (2) to (1)

A Deletions

METY 351, 371, 377, 383

Course and Curriculum Changes for the 1977/78 Session

A New courses

METY 464 (1) Energy and Fuels
METY 466 (1) Metallurgical Engineering Economics
METY 475 (2) Fabrication of Metals
METY 488 (1) Dislocation Theory

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF APPLIED SCIENCE

Metallurgy

Course and Curriculum Changes for the 1977/78 Session (continued)

A Changes

METY 470 - change in unit value, title and description to read: METY 470 (1) Engineering Alloys
METY 472 - change in unit value, title and description to read: METY 472 (1½) Welding and Joining

A New courses

METY 468 (1) Thermodynamics Problems
METY 476 (1) Casting and Solidification
METY 484 (1½) Ceramic Processing
METY 495 (1½) Metallurgical Laboratory

B Changes

METY 450 - change in description and lecture hours from (2-0-0; 2-0-0) to (3-0-2; 0-0-0)
METY 452 - to be split into two 1-term courses:
METY 452 (1) Iron and Steelmaking
METY 454 (1) Reactive Metal Processing
METY 455 - change in number to 499
METY 458 - change in number to 456
METY 458 - new title - METY 458 (1) Hydrometallurgy
METY 460 - split into two 1-term courses:
METY 460 (1) Mass Transfer
METY 462 (1) Process Modelling
METY 461 - change in number to 486
METY 474 - change in unit value, title and description to read: METY 474 (1) Mechanical Working
METY 482 - unit value reduced from (2) to (1½); change in description
METY 490 - unit value reduced from (1) to (½)
METY 498 - unit value reduced from (2) to (1)

A Deletions

METY 451, 453, 471

Physics

A Deletions

PHYS 250 and 253

B Change

Fourth Year Engineering Physics Metallurgical Option
METY 370, 373, 470 will be replaced by:
METY 370, 374, 376, 378

APPENDIX 'B'

Course and Curriculum Proposals (continued)

FACULTY OF ARTS

Anthropology & Sociology

B Changes

ANTH 325 - change in title and description; now reads:
ANTH 325 (3) Introduction to Physical Anthropology
SOCI 260 - change in title; now reads:
SOCI 260 (3) Introduction to Sociological Theory and Research: Qualitative

Classics

B Changes

GREK 305 - change in number; now reads:
GREK 405 (3) Epic Poetry
GREK 306 - change in number; now reads:
GREK 408 (3) Greek Historians
GREK 309 - change in number; now reads:
GREK 409 (3) Greek Oratory

Creative Writing

B Changes

CRWR 301, 405, 407, 408, 409, 410, 495, 496, 497, 498 - change in hours
CRWR 406 - change in title and hours; now reads:
CRWR 406 (3) Writing of Drama for Screen and Television

English

B Changes

Numbers changed as follows:
ENGL 202 - ENGL 201
ENGL 205 - ENGL 202
ENGL 315 - ENGL 311
ENGL 335 - ENGL 313
ENGL 308 - ENGL 320
ENGL 411 - ENGL 322
ENGL 412 - ENGL 323
ENGL 352 - ENGL 325
ENGL 309 - ENGL 329
ENGL 320 - ENGL 331
ENGL 329 - ENGL 332
ENGL 354 - ENGL 350
ENGL 440 - ENGL 420
ENGL 442 - ENGL 421
ENGL 470 - ENGL 440

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS

English

B Changes (continued)

ENGL 429 - change in number and title; now reads:
ENGL 410 (3) Contemporary British Literature
ENGL 420 - change in number and title; now reads:
ENGL 400 (3) Early Modern British Literature
ENGL 355 - change in unit value
ENGL 375 - change in unit value
ENGL 204 - change in unit value
ENGL 325 - change in number and unit value; now reads:
ENGL 335 (1½-3) Studies in Major Authors
ENGL 350 - change in number and unit value; now reads:
ENGL 340 (1½-3) Old English
ENGL 452 - change in number, title, hours and unit value; now reads:
ENGL 431 (1½) American Poetry to 1900
ENGL 452G - change in number, title, hours and unit value; now reads:
ENGL 432 (1½) American Poetry of the Twentieth Century
ENGL 452 - change in number and title; now reads:
ENGL 435 (1½) American Fiction in the Twentieth Century
ENGL 450 and 451 - change in number, title and description; now reads:
ENGL 430 (3) A Survey of American Literatures
ENGL 371 - change in title, units, description and hours; now reads:
ENGL 371 (1½) Poetry of the Earlier Seventeenth Century
ENGL 367 - change in description and units
ENGL 366 - change in title, units, description and hours; now reads:
ENGL 366 (1½) Studies in Shakespeare
ENGL 321 - change in number, title and units; now reads:
ENGL 312 (1½-3) Studies in Poetry
ENGL 206 - change in title, units, description and hours; now reads:
ENGL 206 (1½) Introduction to Drama

A New courses

ENGL 205 (1½) Introduction to Poetry
ENGL 207 (1½) Introduction to the Novel
ENGL 314 (1½-3) Studies in Fiction

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS

English

A New courses (continued)

ENGL 315	(1½-3)	Studies in Non-Fictional Prose
ENGL 316	(1½)	Studies in Literature and the other Arts
ENGL 317	(1½)	Studies in Comparative Aspects of English
ENGL 318	(1½)	Children's Literature
ENGL 319	(1½-3)	Studies in the Intellectual Backgrounds of Literature
ENGL 326	(1½)	Studies in the English Language
ENGL 336	(1½)	Studies in Criticism, Rhetoric and Bibliography
ENGL 345	(1½)	Old English
ENGL 351	(1½)	English Poetry from the Norman Conquest to 1500
ENGL 353	(1½)	Early English Drama
ENGL 361	(1½)	Poetry of the Age of Elizabeth
ENGL 373	(1½)	Restoration and Eighteenth-Century Drama
ENGL 381	(1½)	Poetry of the Age of Dryden and Pope
ENGL 382	(1½)	Poetry of the Middle and Late Eighteenth Century
ENGL 384	(1½)	The English Novel in the Eighteenth Century
ENGL 394	(1½)	The Victorian Novel
ENGL 403	(1½)	Modern British Drama
ENGL 404	(1½)	The Modern British Novel
ENGL 411	(1½)	Twentieth-Century British Poetry
ENGL 413	(1½)	Contemporary British Drama
ENGL 414	(1½)	Contemporary British Novel
ENGL 426	(1½)	Studies in Canadian Literature
ENGL 429	(1½-3)	Backgrounds of Canadian Literature
ENGL 433	(1½)	American Drama
ENGL 434	(1½)	American Fiction to 1900
ENGL 436	(1½-3)	Studies in American Literature
ENGL 446	(1½)	Studies in Literatures of the Commonwealth
ENGL 450	(3)	A Critical History of English Literature
ENGL 490	(1½)	Introduction to Methods of Literary Research

A Deletions ENGL 201, 300, 305, 311, 316, 340, 341, 385, 393, 425, 451, 452

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS

English (continued)

A Changes

ENGL 331 - change in number, title and description; now reads:
ENGL 363 (3) Tudor and Stuart Drama

ENGL 441 - change in number, title and description; now reads:
ENGL 424 (3) Canadian Fiction

ENGL 300 - change in number, title and description; now reads:
ENGL 330 (1½-3) Practical Criticism

Requirements for the degree of Bachelor of Arts
Major - change to read as follows:

First and Second Years
English 100 or Arts I
3 units of second-year courses in English Literature

Third and Fourth Years
At least 15 units in English courses numbered 304 and above
The student must complete a minimum of 1½ units in each of five of the following seven categories:
1. Mediaeval English Literature (including Chaucer)
2. Sixteenth Century (including Shakespeare)
3. Seventeenth Century (including Milton)
4. Eighteenth Century
5. Nineteenth Century
6. Twentieth Century British, Canadian Literature, American Literature, Commonwealth Literatures
7. English Language, Criticism, Bibliography

Fine Arts

B Changes

FINA 327 - cross listed; also listed as RELG 300
FINA 359 - cross listed with RELG 341
FINA 333 - change in description and units
FINA 331 - change in description
FINA 335, 337, 339, 347, 351, 353, 355, 365, 367, 429, 431, 433, 435, 437, 439, 451, 453, 455, 461, 463, 465 - change in units to (3)

German

A New courses

GERM 424 (1½) Translation Seminar
GERM 425 (3) Advanced Translation: German to English

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS

German

A New courses (continued)

GERM 426 (3) Advanced Translation: English to German
GERM 427 (1½) Special Problems in Translation
GERM 429 (3) Translation Project

A New program — Diploma in Translation

Prerequisites: A Bachelor's degree including GERM 323 (or equivalent); a reading knowledge of French.

Course of Study

The program consists of fifteen units of work which may be completed in one year of full-time study.

GERM 423, 424, 425, 426, 427, 429.

With the permission of the German Department Linguistics 425, Creative Writing 415 or 495 may be taken in lieu of 3 units of the above courses.

Hispanic & Italian Studies

A New courses — ITAL 120 (3) First-Year Italian
ITAL 220 (3) Second-Year Italian

A Deletion — ITAL 223 (3) Advanced Conversation

B Changes
ITAL 100 - change in description and hours
ITAL 200 - change in hours
SPAN 100 - change in hours
SPAN 110 - change in hours

History

A Deletion — HIST 311 (3) Expansion of Europe - Southeast Asia and the Pacific Area

B Changes
HIST 305 - change in title; now reads:
HIST 305 (3) The Expansion of Europe
HIST 331 - change in title; now reads:
HIST 331 (3) The Political History of Early Modern Europe

Linguistics

A New course — LING 310 (1½) Phonetics Practicum

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS (continued)

Mathematics

B Changes

Degree Studies - amend List A to include MATH 100, 101, 105, 130

Degree Studies - amend List B to include MATH 200, 201, 202, 205, 220, 221, 315

Recommendation: If the changes in Mathematics are approved, some changes will be made in Mathematics requirements in Economics, Geography, Psychology and Home Economics. For the B.Sc. degree in Geography and Psychology, this has already been done.

Requirements for the degree of Bachelor of Arts

Major - substitute the following:

Mathematics 100, 101, 200, 220, 221, 315 and an additional 16½ units of Mathematics, to be chosen from 201, 205, and courses numbered 300 or above. Although the student is advised to take Mathematics 100, 101, in his first year, and 200, 220, 221, 315 in his second year, it is possible to delay some of these courses until later. Students planning to take both 305 and 405 should take 205 in their second year. Students are advised to take Computer Science 115 (or an equivalent course) in first or second year. Since the program does not give explicit year-by-year outlines, students are advised to take special care that they are meeting faculty and university requirements. The departmental adviser should be consulted each year.

Honours

Mathematics 100, 101, 200, 220, 221, 315. Mathematics 320, and 19½ additional units of Mathematics, of which at least 6 must be from 300, 316, 321, 322, 345; and at least 9 from 400, 406, 418, 420, 421, 422, 423, 424, 425, 426.

Students are advised to take Computer Science 115 (or an equivalent course)* in first or second year. Those students intending to do graduate work in Mathematics should take at least two of 400, 420, 421, 422.

* In the 1976/77 session, Mathematics credit will be given for Computer Science 402.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS (continued)

Music

B Change — MUSC 428 - change in title and description; now reads:
MUSC 428 (3) Area Studies in Ethnic Music

Psychology

B Change — PSYC 312 - change in description
A Change — PSYC 404 - change in number, title and description; now reads:
PSYC 306 (3) Principles of Animal Behaviour

Religious Studies

B Changes — RELG 341 - change in description
RELG 327 - cross listed with FINA 333
RELG 326 - cross listed with FINA 331

Slavonic Studies

A New courses — SLAV 206 (1½-3) Major Russian Writers in Translation
SLAV 308 (1½-3) Tolstoy and Dostoyevsky in Translation
B Changes — SLAV 306 - change in description
SLAV 307 - change in description and unit value

Theatre

A New course — THTR 233 (1½) Principles of Film and Television Production

A New program — DIPLOMA IN FILM/TELEVISION STUDIES

Requirements for the Diploma in Film/Television Studies

1. Applicants must have completed a Bachelor's degree program in Arts, Sciences, or Commerce.
2. The program will take two years of study. No longer than five years should elapse between initial enrolment in the program and attaining the diploma.
3. Eighteen (18) units of course work are required as follows:

First Year	Second Year
Theatre 230	Theatre 431
Theatre 330	Theatre 433
Theatre 333	Theatre 334

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF ARTS

Theatre

A New program

DIPLOMA IN FILM/TELEVISION STUDIES
Requirements for the Diploma in Film/Television Studies
(continued)

4. Enrolment in the program will be limited and preference will be given to students with strong evidence of creative ability, either in film/television, or in one of the other fine arts.

B Program change

The Department offers programs of study that lead to the degrees of Ph.D., M.A., M.F.A., and B.A.

Two streams of study are offered within the Department of Theatre:

Requirements for the degree of Bachelor of Arts
Major
1. In Theatre
   (See current calendar copy)
2. In Film and Television:

   First and Second Years
   Theatre 230

   Third and Fourth Years
   Theatre 330, 333, 431, and 433
   Theatre 334 or 434
   Three units chosen from: Theatre 310, 320, 350, 400, 405, 410, 450 or 455.

   Students should note the special requirements for entering certain courses within the Department, with special attention to Theatre 333 and to prerequisites. Students not qualified to enrol in the Theatre 333 course should be prepared to enrol in the Theatre concentration or in another field of study of interest.

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION

B Change

COMM 471 - change in description

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION (continued)

B Program change

THIRD YEAR FINANCE-OPTION 4
Commerce 322, 331, 371
3 units from Commerce 374, 376, 378 or 379
9 units of electives (not to include Economics 345)

FACULTY OF EDUCATION

Elementary Division

A New program

Diploma in English Education (Elementary)

An in-service program designed to help teachers of Language Arts in the elementary school who are constructing curricula, or who wish to extend their knowledge of methods of teaching the various aspects of verbal communication.

Admission is based on a B.Ed. degree or a Bachelor's degree plus teacher-certification; a minimum of one year's teaching experience is also required.

The diploma program requires a minimum of 15 units at the 300 or 400 level. Each student will plan, in consultation with an advisor, a program suited to his needs. A typical program would consist of (a) Ed. 480 (to include remediation in grammar, usage and composition); (b) 6 units chosen from Education 340, 341, 389, 414, 416, 449, 476, 478, 486, 487, 489; (c) 6 units of professional or academic electives including courses in Creative Writing, English, Linguistics and Theatre.

Where a student has obtained credit for required courses before entering the diploma program, additional courses must be substituted to complete the minimum requirements.

All or part of the diploma program may be acceptable toward the qualifying year required of B.Ed. (Elementary) graduates who wish to enter a Master's program in English Education.

A New courses

EDUC 406 (1½) Educational Intervention for Atypical Infants and Children

EDUC 448 (1½) The Education of Children with Multiple Handicaps

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF EDUCATION

Elementary Division

A New courses (continued)

EDUC 473 (1½) Materials of Reading Instruction
EDUC 490 (1½-3) Special Studies in Elementary Education

A Changes

EDUC 403 - addition of prerequisite
EDUC 408 - split into two courses; now reads:
EDUC 313 (1½) Introduction to Teaching the Gifted and Creative
EDUC 408 (1½) Programming for the Gifted and Creative
EDUC 417 - change in units and prerequisite; now reads:
EDUC 417 (1½) Educating the Slow Learner
EDUC 421 - split into two courses; now reads:
EDUC 314 (1½) Introduction to the Education of the Visually Impaired
EDUC 421 (1½) Provisions in the Education of the Visually Handicapped
EDUC 424 - split into two courses; now reads:
EDUC 315 (1½) Introduction to the Acquisition of Language in Exceptional Children
EDUC 424 (1½) The Stimulation of Language Development in Exceptional Children
EDUC 437 - change in units and addition of prerequisite; now reads:
EDUC 437 (1½) Teaching Maladjusted Children

Diploma in Education of Young Children - units increased to 15

B Changes

EDUC 331 - change in description
EDUC 336 - change in title; now reads:
EDUC 336 (3) Modern Theories of Early Childhood Education

Science Education - Major
First and Second Year more clearly defined

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF EDUCATION

Elementary Division

B Changes (continued)

ENGL 311 - course transferred from English Department; now reads:
EDUC 341 (3) The Teaching of Children's Literature

EDUC 419 - change in title and description; now reads:
EDUC 419 (1½) Introduction to Speech and Communication Disorders in Children

EDUC 471 - change in prerequisite; now reads:
EDUC 471 (3) Diagnosis and Remediation in Elementary School Mathematics
Prerequisite: At least one year of full-time teaching experience in elementary school. Students with other relevant teaching experience may be admitted by permission of instructor.

EDUC 478 - change in title and prerequisites; now reads:
EDUC 478 (3) Introduction to Teaching English as a Second Language

A Change

Diploma in Counselling - change in units from 24 to 18.

Secondary Division

A Changes

EDUC 472 - change in title and description; now reads:
EDUC 472 (1½) Reading in the Secondary School Classroom: Practical Implications

EDUC 474 - change in title and description; now reads:
EDUC 474 (1½) Reading in the Secondary School Classroom: Theoretical Principles

EDUC 377 - to be expanded into 376 and 377; now reads:
EDUC 376 (1½) Systems - Data Processing I
EDUC 377 (1½) Systems - Data Processing II

EDUC 418 - split into two courses; now reads:
EDUC 318 (1½) Education of the Handicapped Adolescent
EDUC 418 (1½) Career and Alternative Educational Programs for the Handicapped

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF EDUCATION

Secondary Division (continued)

B Changes

EDUC 426 - change in units; now reads:
EDUC 426 (3) The Role of the Teacher in Guidance

EDUC 433 - change in units; now reads:
EDUC 433 (1½-3) The Personal and Social Development of the Adult

EDUC 485 - added to list of Mathematics Education electives

Elementary and Secondary Divisions

A New courses

ARTE 441 (3) Art Education Theory and Research
ARTE 442 (3) Teaching Sculpture in the Public Schools
MUED 405 (3) Electronic Music in the Classroom
EDUC 340 (1½) Using Canadian Literature in the Classroom

A Changes

EDUC 431 - split into two courses; now reads:
EDUC 316 (1½) Specific Learning Disabilities
EDUC 431 (1½) Programming for Children with Specific Learning Disabilities

EDUC 434 - change in title and units; now reads:
EDUC 434 (1½-3) Precision Teaching and Behaviour Management

B Change

EDUC 407 - change in number and units; now reads:
EDUC 312 (1½) Introduction to the Study of Exceptional Children

FACULTY OF FORESTRY

B Changes

FRST 463 (3) Forest Transportation Systems
- add FRST 363 as prerequisite

FRST 431 (1½) Sampling Methods
- delete FRST 430 as prerequisite

FACULTY OF GRADUATE STUDIES

Animal Science

B Change

ANSC 513 - change in title and description; now reads:
ANSC 513 (3) Applications of Quantitative Genetics

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF GRADUATE STUDIES

Animal Science (continued)

A	New course	ANSC 533 (1½) Wildlife Behaviour and Evolution

Asian Studies

A	New course	ASIA 570 (1½-3) Approaches to Asian Literature

Biochemistry

B	Change	BIOC 500 - change in number to 404

Civil Engineering

B	Changes	CIVL 515 - change in number to 492 CIVL 558 - change in title; now reads: CIVL 558 (1) Water Resources Seminar CIVL 585 - change in title and description; now reads: CIVL 585 (1) Traffic Engineering II CIVL 587 - prerequisite deleted

Classics

B	Changes	GREK 521, 525, 530, 535, 540, 545 - change in unit value from (3) to (1½-3) LATN 521, 525, 530, 535, 540, 545 - change in unit value from (3) to (1½-3)

Commerce & Business Administration

B	Changes	COMM 513 - change in description only COMM 571 - change in description only COMM 572 - change in title and description to read: COMM 572 (1½) Advanced Theory and Quantitative Techniques in Corporate Finance COMM 580 - change in number to 510

Community & Regional Planning

A	New courses	PLAN 509 (1½) Planning Theory PLAN 515 (1½) History of Urban Planning PLAN 548 (1½) Current Issues in Planning

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF GRADUATE STUDIES

Community & Regional Planning (continued)

A Change

* PLAN 425 - change in title and description; now reads:
PLAN 425 (1½) Urban Planning
* Approval of PLAN 425 withheld

Creative Writing

A New courses

CRWR 504 (3) Advanced Writing of Drama for Radio
CRWR 505 (3) Advanced Writing of Non-fiction Prose
CRWR 508 (3) Advanced Writing of the Novella or Novel

B Changes

CRWR 506 - change in title; now reads:
CRWR 506 (3) Advanced Writing of Drama for Screen and Television
CRWR 509 - change in title; now reads:
CRWR 509 (3) Advanced Writing of Short Fiction
CRWR 547 - change in description and unit value from (1-4) to (3)

Economics

A Change

ECON 615 - change in number and unit value to:
ECON 515 (1½-3) Special Topics in Economics Theory

B Changes

ECON 629 - change in number to 529
ECON 653 - change in number to 553

A New course

ECON 690 (1-3) Workshops in Economics

A Deletions

Deletions: 641, 642, 645, 652, 654, 655, 660, 661, 670

Education

A New courses

EDUC 505 (1½-3) Special Topics in Human Development and Instruction
EDUC 515 (1½) Seminar on the Education of Children with Behaviour Disorders

B Changes

EDUC 508 - change in unit value, title and description to read:
EDUC 508 (1½-6) Review of Research in Educational Methods

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF GRADUATE STUDIES

Education

B Changes (continued)

EDUC 585 - change in title to read:
EDUC 585 (3) Advanced Seminar on Research in Early Childhood Education

Education 559 (1½) Administration of Post-Secondary Institutions - to be given on an overload basis by the Centre for Continuing Education

Fine Arts

A New courses

FINA 531 (3) Studies in Early Medieval Art
FINA 561 (3) Studies in the Indigenous Arts of the Americas

French

A New course

FREN 521 (1½-3) Studies in Literatures of the French-speaking World

Geological Sciences

A New course

GEOL 516 (1½) Problems in Carbonate Geology

B Changes

GEOL 536 - change in unit value from (3) to (1½)
GEOL 552 (1½) and 562 (1½) - hours per week deleted from calendar entry to allow greater flexibility

Geophysics & Astronomy

A New course

GEOP 516 (1-2) Theoretical Glaciology

Health Care & Epidemiology

A New course

HCEP 512 (3) Health Services Clerkship

B Change

HCEP 505 - change in title to read:
HCEP 505 (1½) Hospital Project

Mechanical Engineering

A New courses

MECH 501 (1½) Thermodynamics and Heat Transfer
MECH 502 (1½) Fluid Mechanics (Graduate Core Course)
MECH 503 (1½) Solid Mechanics (Graduate Core Course)

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF GRADUATE STUDIES

Mechanical Engineering

A New courses (continued)

MECH 504 (1½) Design, Industrial Engineering (Graduate Core Course)
MECH 578 (1) Thermal and Hydraulic Design of Reactor Cores

A Deletions — MECH 553 and 554

B Change — MECH 569 - change in units from (2) to (1 or 2)

Pharmaceutical Sciences

B Changes — PHAR 510 - change in unit value from (1) to (1-3)
PHAR 511 - change in unit value from (1) to (1-2)

Plant Science

A New course — PLNT 532 (1½) Advanced Insect Physiology

B Change — PLNT 532 (old) - number changed to 534

Slavonic Studies

A New course — RUSS 501 (1½-3) Seminar in Criticism

B Change — RUSS 501 - change in units and title; now to read:
RUSS 500 (1½-3) Studies in Bibliography

A New course — SLAV 545 (1½-3) Directed Studies

FACULTY OF MEDICINE

A New course — * INDE 402 (1½) Behavioural Sciences in Medical Practice
* Approval of this course withheld

B Changes — HC/E 475 - change in number and description, now:
HC/E 452 Health Care
HC/E 475 (new) to read:
HC/E 457 (1½-3) Health Care

APPENDIX 'B'

Course and Curriculum Proposals (continued)

FACULTY OF PHARMACEUTICAL SCIENCES

A New course — PHAR 417 (2) Clinical Pharmaceutics of Dermatologic and Ophthalmic Products

FACULTY OF SCIENCE

Biochemistry

A New courses — BIOC 403 (1½) Enzymology
BIOC 448 (1½) Directed Studies in Biochemistry

B Changes — BIOC 500 - change in number and description; now reads:
BIOC 404 (1) Biochemical Methods

A Program changes

Majors

First Year: Changes resulting from changes in Mathematics courses.

Second Year: A more rigorous course in Organic Chemistry will be required (Chemistry 203 instead of Chemistry 230). Microbiology 200 will be required instead of recommended.

Third Year: No changes.

Fourth Year: Physiology 301 will be required in place of Zoology 307 (1½ units) since we think a 3 unit lecture course will be of greatest benefit to the student. Zoology 308 will remain as an elective. Biochemistry 402 and 403 will be required.

Honours

First Year: Changes resulting from changes in Mathematics courses.

Second Year: Microbiology 200 will now be required.

Third Year: Chemistry 313 will be required in the third year. Chemistry 303 will be taken in the Fourth Year instead of Third Year. Biology 334 will be required.

Fourth Year: Chemistry 303 will be taken in the Fourth Year and Chemistry 403 and 422 deleted since similar material will have been taken in Chemistry 313. Physiology 301 will be required as will Biochemistry 403. Biochemistry 500 has been renumbered to Biochemistry 404. The requirement of Biochemistry 430 will be deleted.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE (continued)

Biology

B Major and Honours Programs

Changes resulting from changes in Computer Science and Mathematics course offerings.

Botany

A New BOTA 312 (3) Plants of British Columbia and their Environment

B Changes BOTA 410 - change in description only

Major and Honours Programs

First Year Mathematics requirements are changed from MATH 100 and 121 to MATH 100 and 101, because of change in Mathematics offerings.

Chemistry

A Changes

Honours Chemistry:

Change first year mathematics requirement from Mathematics 100 and 121 (3) to Mathematics 100 and 101 (3). Change second year mathematics requirement from Mathematics 200 and 221 (4) to Mathematics 200 and 221 (3) and change "Optional additional elective" from (2) to (3) units.

Major Chemistry:

Change first year mathematics requirement from Mathematics 100 and 121 (3) to Mathematics 100 and 101 (3). Change second year mathematics requirement from Mathematics 200 and 221 (4) to Mathematics 200 and 221 (3) and change "Additional units" from (2) to (3).

Changes were made necessary by changes in Mathematics course offerings.
- Combined Biology and Chemistry Honours

Changes made necessary by changes in Mathematics and Biochemistry courses.
- Combined Chemistry and Mathematics Honours

Changes made necessary by changes in Mathematics course offerings.
- Combined Chemistry and Physics Honours

Changes made necessary by changes in Mathematics and Physics course offerings.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE (continued)

Computer Science

A Change — CPSC 201 - change in number, title and description; now reads:
CPSC 101 ($1\frac{1}{2}$) Introduction to FORTRAN Programming

A New

CPSC 115	(3)	Principles of Computer Programming
CPSC 118	($1\frac{1}{2}$)	Principles of Computer Programming
CPSC 215	(3)	Computer Program Design I
CPSC 315	(3)	Computer Program Design II

A Deletions — CPSC 210, 213 and 310

B Changes — Changes in prerequisites for the following courses were made necessary because of the changes in Mathematics and/or Computer Science courses 302, 311, 312, 313, 320, 321, 404, 405, 406, 410, 411, 420, 422.

A Changes — Major

First Year		Second Year	
Computer Science 115+	(3)	Computer Science 215	(3)
Mathematics 100, 101	(3)	Mathematics 205, 221	(3)
Physics 110, 115 or 120	(3)	Other Mathematics	($1\frac{1}{2}$)
Chemistry 110 or 120	(3)	Electives	($7\frac{1}{2}$)
English 100	(3)		
	(15)		(15)

\+ Computer Science 118 ($1\frac{1}{2}$) and a $1\frac{1}{2}$ unit elective can be substituted by those eligible for Computer Science 118.

Special arrangements may be made for students who did not take Computer Science 115 or 118 in first year. Such arrangements may limit choice of 400-level courses.

Third and Fourth Years

Computer Science 315	(3)
* Other Computer Science courses numbered 300 or higher	(6)
* Further Computer Science courses numbered 400 or higher	(6)
+ Mathematics courses numbered 300 or higher	(6)
** Electives	(9)
	(30)

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Computer Science

A Changes

Major (continued)

\+ Mathematics courses in linear algebra, probability, differential equations, and statistics are recommended.

* For Major students, it is recommended that at least two of the optional Computer Science courses be chosen from application areas (e.g. Computer Science 302, 402, 404, 405, 406).

** One or two appropriate courses from other fields of possible computer applications are suggested, as is E.E. 256.

Honours

First Year	Second Year	
Same as Majors program	Computer Science 215	(3)
	Mathematics 200, 205, 220, 221	(6)
	Electives	(6)
		(15)

Third and Fourth Years

Computer Science 302, 315, 320, 321	(9)
Computer Science 420, 421	(3)
Other Computer Science courses numbered 300 or higher	(9)
\+ Mathematics courses numbered 300 or higher	(9)
* Electives	(6)
	(36)

\+ Mathematics courses in linear algebra, probability, differential equations, and statistics are recommended.

* Among them, courses in logic, foundations of Mathematics, and E.E. 256 are strongly recommended.

A Changes

Combined Honours Computer Science and Mathematics

First Year		Second Year	
English 100	(3)	Computer Science 215	(3)
Mathematics 100, 101	(3)	Mathematics 200, 220, 221, 315	(6)
Chemistry 110 or 120	(3)	*Electives	(6)
Physics 110, 115 or 120	(3)		
Computer Science 115**	(3)		
	(15)		(15)

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Computer Science

A Changes — Combined Honours Computer Science and Mathematics (continued)

Third Year		Fourth Year	
Computer Science 302+ 315, 320, 321	(9)	Computer Science 420, 421	(3)
Mathematics 320	(3)	Other Computer Science courses numbered 300 and above	(3)
Courses from Mathematics 300, 316, 321, 322, 345	(6)	Two courses from Mathematics 400, 406, 418, 420, 421, 422, 423, 424, 425, 426	(6)
		*Electives	(6)
	(18)		(18)

\+ May be deferred to the following year.

* At least 6 of these 12 elective units must be in the Faculty of Arts.

** Computer Science 118 and a 1½ unit elective may be substituted by those eligible for Computer Science 118.

Special arrangements may be made for students who did not take Computer Science 115 or 118 in first year. Such arrangements may limit choice of 400-level courses.

Geography

A Changes
- Major Program
- Honours - Focus Climatology
- Combined Honours Geography and Geology - Focus Geomorphology

Changes made necessary by changes in Mathematics course offerings.

Geological Sciences

A New — GEOL 516 (1½) Problems in Carbonate Geology

A Changes — GEOL 536 - change in unit value from (3) to (1½)
- Honours Geology
- Major Geology
- Combined Honours, Geology and Geophysics

Changes made necessary by changes in Mathematics and Computer Science offerings.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Geological Sciences (continued)

B Changes — GEOL 552 - change in description only
GEOL 562 - change in description only

Geophysics and Astronomy

A New — ASTR 301 (1½) Celestial Mechanics
ASTR 302 (1½) The Structure of our Galaxy
ASTR 303 (1½) Galactic Dynamics
GEOP 516 (1-2) Theoretical Glaciology

A Deletion — ASTR 320

B Change — GEOP 320 - change in prerequisites only

A Changes
- Astronomy Major
- Honours Astronomy and Geophysics
- Combined Honours Astronomy and Physics
- Major Geophysics
- Honours Geophysics
- Combined Honours Geophysics and Physics

Changes made necessary by changes in Mathematics, Physics and Astronomy course offerings.

Mathematics

A Changes
MATH 100 - change in unit value and description; now reads:
MATH 100 (1½) Calculus I
MATH 200 - change in unit value, title and description; now reads:
MATH 200 (1½) Calculus III
MATH 205 - change in unit value, title and description; now reads:
MATH 205 (1½) Probability and Statistics I
MATH 220 - change in unit value, title and description; now reads:
MATH 220 (1½) Analysis I
MATH 221 - change in unit value, title and description; now reads:
MATH 221 (1½) Matrix Algebra
MATH 140 - change in number, unit value and description; now reads:
MATH 340 (1½) Introduction to Linear Programming

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Mathematics (continued)

A	Deletions	MATH 120 and 121	
A	New	MATH 101 (1½)	Calculus II
		MATH 105 (1½)	Descriptive and Elementary Inferential Statistics
		MATH 201 (1½)	Calculus IVa
		MATH 202 (1½)	Calculus IVb
		MATH 307 (1½)	Linear Algebra
		MATH 344 (1½)	Applied Mathematics for Discrete Systems
		MATH 345 (1½)	Applied Mathematics for Continuous Systems
		MATH 426 (3)	Calculus of Variations and Optimal Control
		MATH 480 (1½)	Optimization in Graphs and Networks

A Changes in programs

The changes incorporate changes in Mathematics course offerings. All mathematics students are now expected to take Mathematics 315 ordinarily in Second Year. This will introduce them to an important subject which in the past they did not always study and will serve as an introduction to applied mathematics. For Honours students, 316 and 345 will be allowed as Third Year Honours courses. This will make it more likely that a student will choose to do applied mathematics. Most of the remaining changes have been made in an attempt to eliminate one and two unit courses in favour of the 1½ and 3 unit courses.

Major; now reads:

Mathematics 100, 101, 200, 220, 221, 315; an additional 16½ units of mathematics to be chosen from 201, 205, and courses numbered 300 or above. (25½ units)

Honours; now reads:

Mathematics 100, 101, 200, 220, 221, 315; 320 and 19½ additional units of mathematics of which at least 6 must be from 300, 316, 321, 322, 345 and at least 9 from 400, 406, 418, 420, 421, 422, 423, 424, 425 and 426. (31½ units)

Combined Honours in Mathematics and Another Subject; now reads:

Mathematics 100, 101, 200, 220, 221, 315; 320 and 6 units from 300, 316, 321, 322, 345 and two courses from 400, 406, 418, 420, 421, 422, 423, 424, 425, 426. (25 units)

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Mathematics (continued)

A New programs

New Major and Honours Options in Applied Mathematics

Briefly, the four principal reasons given for developing programs in Applied Mathematics at U.B.C. concern (1) the changes that have taken place recently in the field of mathematics (2) changes in the personnel of the Department of Mathematics (3) changes in student interests and (4) the need to keep students adequately informed of existing opportunities for a broader range of studies and courses within the field of mathematics.

Honours

First Year	
Mathematics 100, 101	(3)
Physics 110, 115 or 120	(3)
Chemistry 110 or 120	(3)
English 100	(3)
Approved elective*	(3)
	(15)

Second Year	
Mathematics 220, 200, 221	($4\frac{1}{2}$)
Mathematics 315	($1\frac{1}{2}$)
Computer Science 115	(3)
Electives**	(6 to 9)
	(15 to 18)

Third Year	
Mathematics 300, 320	(6)
Mathematics 307, 316	(3)
Mathematics course in area of concentration***	($1\frac{1}{2}$)
Electives or courses in areas of application****	($4\frac{1}{2}$-$7\frac{1}{2}$)
	(15 to 18)

Fourth Year	
Mathematics courses in area of concentration***	(6)
Restricted electives***	(6)
Other electives or courses in areas of application****	(6)
	(18)

* Computer Science 115 may be taken as the approved elective in first year, substituting an approved elective for Computer Science 115 in second year.

** Students in this option are strongly advised to include one of Mathematics 201, 205, 340 among their second year electives.

*** At present this program recognizes three areas of concentration: applied analysis, statistics and operations research. The appropriate concentration courses and restricted fourth year electives for these areas are as follows:

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Mathematics

A New programs

New Major and Honours Options in Applied Mathematics (continued)

	3rd Year	4th Year	Restricted Electives
App. Anal.	Math 345	Math 400, 426	3 units from Math 423, Cp. Sc. 302, 402 3 units from Math 305, 406, 318, 418
Statistics	Math 344	Math 406, 418	6 units from Math 305, 318, 400, 405, 420, 423, 426
Oper. Res.	Math 344	Math 406, 426	3 units from Math 318, 418 3 units from Math 420, Cp. Sc. 302

Special choices of concentration courses and electives may be arranged subject to the approval of the Director of the Institute for Applied Mathematics and Statistics.

**** All students in this option are required to include in their electives at least 6 units of courses numbered 300 or above in one area of application such as chemistry, biology, economics, physics, etc.

Major

First Year		Second Year	
Mathematics 100, 101	(3)	Mathematics 220, 200, 221	(4½)
Physics 110, 115, or 120	(3)	Mathematics elective**	(1½)
Chemistry 110 or 120	(3)	Computer Science 115	(3)
English 100	(3)	Other electives*	(6)
Elective*	(3)		
	(15)		(15)

Third and Fourth Years

Mathematics 315/316 or 301	(3)
Mathematics 205 or 305**	(1½ or 3)
Mathematics 344, 307	(3)
Courses in mathematical area of concentration***	(6)
Other mathematics courses numbered 300 or above	(3 or 1½)
Courses in area of application, numbered 300 or above****	(3)
Other electives*	(10½)
	(30)

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE

Mathematics

A New Major and Honours Options in Applied Mathematics

Major (continued)

* Electives must satisfy all requirements of the Faculty of Science.

** Students wishing to concentrate on statistics should take Mathematics 205 during their second year, and Mathematics 305 during third year. Students who take Mathematics 205 in second year and do not wish to take Mathematics 305 should substitute Mathematics 201 for 305.

*** Three areas of concentration in applied mathematics are considered by this program:

Applied Analysis, requiring Mathematics 300 and one of Mathematics 318, 320, 400 or Computer Science 302;

Statistics, requiring Mathematics 405 and either Mathematics 318 or Computer Science 405 and 406.

Operations Research, requiring Mathematics 318 and 3 additional units selected from Mathematics 340, 480 or Computer Science 405, 406.

**** These courses must be taken in one area of application such as biology, chemistry, economics, physics, etc.

B Changes

MATH 300 - exemption from co-requisite Math 220 to show need for student to take 301 or 316
MATH 310 - delete MATH 222 co-requisite requirement
MATH 311 - delete MATH 222 prerequisite requirement
MATH 312 - prerequisite requirement to read MATH 220
MATH 315 - change in prerequisite to read MATH 101 and 221
MATH 316 - to be offered in both terms; prerequisite requirements to read MATH 315
MATH 322 - delete MATH 222 from prerequisite requirement

Microbiology

A Changes - Major and Honours Microbiology

Changes made necessary by the changes in the Mathematics course offerings and the incorporation of the Biology 200 and 201 course into the Second Year requirements of the Microbiology programs.

B Change MICB 417 - change in description only

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE (continued)

Oceanography

A New — OCGY 406 (1½) Biological Oceanographic Systems
(this is the same course as Zoology 406)

Physics

A Change — PHYS 301 - change in number and description; now PHYS 201

A Deletion — PHYS 204

A New — PHYS 205 (1) D.C. and A.C. Electric Circuits
PHYS 303 (2) Thermal Physics

A Change - Physics Major

Changes made necessary by changes in the First and Second Year Mathematics course offerings.

A Changes
- Honours in Physics
- Combined Honours in Physics and Mathematics
- Combined Honours in Physics and Computer Science
- Combined Honours in Physics and a subject other than Mathematics, Geophysics, Astronomy, Chemistry or Computer Science

Changes made necessary by:

(i) the changes in the First and Second Year Mathematics courses;
(ii) the deletion of Physics 204 (3) from the Honours programs, the change of Physics 301 (2) to Physics 201 (2), and the addition of Physics 205 (1) and Physics 303 (2) to the programs; and
(iii) the changes in the Computer Science content of the Combined Honours in Physics and Computer Science program.

- Combined Honours in Physics and Geophysics

Changed to increase the Geophysics content by 1½ units (GEOP 220), reduce the Physics content by 3 units (delete PHYS 413) and increase the electives in the Third Year by 1½ units.

APPENDIX 'B'

Course and Curriculum Proposals

FACULTY OF SCIENCE (continued)

Physiology

A Changes - Honours Physiology

First Year — Changes made necessary by changes in Mathematics course offerings.

Third Year — Changes because of extensive overlap between BIOL 330 and PHYL 301, 401, the Department of Physiology wishes to delete BIOL 330 from the list of required courses in the Third Year. It is considered that BIOL 300, at present a very strongly recommended elective, should be a required course in the Honours program. The 1½ units freed as a result of this substitution will enable students to complete 9 units of Arts during the first 3 years of their program.

Psychology

A Changes - Major Psychology
- Honours Psychology

Changes in First Year made necessary by changes in Mathematics course offerings.

Choice of Life Science courses available to the student in the Third Year is enlarged, allowing the student more freedom in choosing Life Science courses which complement his interest in Psychology. The enumeration of suitable electives in the Fourth Year brings into a single list courses which are otherwise spread throughout the calendar.

B Change — PSYC - correction of error in calendar listing.

Zoology

A New — ZOOL 411 (1½) Biomechanics

B Changes — ZOOL 304 - change in description only
ZOOL 348 - change in description only
ZOOL 416 - change in prerequisites only

B Change - Honours Zoology

Fourth Year changed so that optional units are increased to (3) from (1½). This gives a great deal more freedom to students who wish to take an Arts course as their option, since most of the Arts courses are 3-unit ones.