



OKANAGAN SENATE SECRETARIAT
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OKANAGAN SENATE

AGENDA

Wednesday, March 7, 2007

4:30 P.M. – 6:30 P.M.

Room: SCI 333
UBC OKANAGAN CAMPUS

1. **Minutes of the Previous Meeting – President Stephen Toope**
(approval) (circulated – Item 1)
2. **Business Arising from the Minutes – President Stephen Toope**
3. **Chair’s Remarks and Related Questions – President Stephen Toope**
4. **Deputy Vice-Chancellor’s Remarks – Dr. Doug Owram**
 - a. 2007/2008 UBC Okanagan Budget Update (information)
5. **From the Board of Governors – Deputy Vice-Chancellor Doug Owram**
Confirmation that the Board of Governors, at its meeting held on January 25, 2007, accepted the recommendations of the Senate in approving the following items (information)

Senate Meeting of November 24, 2006

Curriculum proposals from the Faculty of Arts and Sciences and the Faculty of Creative and Critical Studies and the Faculty of Health and Social Development.

Senate Meeting of December 20, 2006

Curriculum proposals from the Faculty of Arts and Sciences and the Faculty of Creative and Critical Studies and the Faculty of Health and Social Development.

New awards.

Establishment of the Okanagan Sustainability Institute (OSI).

6. Policies & Procedures Committee – Dean Michael Isaacson

- a. Change to Course Withdrawal Regulations (approval) (circulated – Item 6a)
- b. Cancellation of Classes for Create UBC Okanagan (approval) (circulated – Item 6b)
- c. Addition of the Associate Vice-President and Chief Operating Officer, Academic & Research, UBC Okanagan to the Membership of the Senate (approval) (circulated – Item 6c)
- d. Intercampus Student Mobility Motion to Refer (approval) (circulated – Item 6d)

7. Curriculum Committee – Dr. Jennifer Gustar

Curriculum Proposals from the Faculties of Applied Science, Arts & Sciences, Creative & Critical Studies, Education, and Health & Social Development (approval) (circulated – Item 7)

8. Joint Reports of the Curriculum and Admissions & Awards Committees – Dr. Jennifer Gustar

- a. Faculty of Arts and Sciences: M.Sc. and Ph.D. programs in Mathematics and M.Sc. and Ph.D. programs in Chemistry (approval) (circulated – Item 8)
- b. Faculty of Education: Developmental Standard Teaching Certificate in Okanagan Language and Culture (approval) (circulated – Item 8)

9. Admissions & Awards Committee – Dr. Sharon McCoubrey

- a. New Awards (approval) (circulated – Item 9a)
- b. Admission Requirements for the Bachelor of Education, Middle Years Specialty (approval) (circulated – Item 9b)

10. Nominating Committee – Dr. Robert Lalonde

- a. Election of Vice-Chair of Senate (approval) (circulated – Item 10)
- b. Adjustments to Senate Committees (approval) (circulated – Item 10)

11. Other Business

12. Policies & Procedures Committee – in camera

Candidates for Honourary Degrees (approval) (to be circulated at the meeting)

Note: Candidate files will also be available for advance viewing by members of Senate at the Ceremonies Office. Senators may contact Ms. Erin Podmorow at 250 807-9258 or Ms. Alanna Vernon at 250 807-9889 to arrange a time.

Regrets: Barbra MacDonald telephone 250.807.9259 or email okanagan.senate.secretariat@ubc.ca

Okanagan Senate: <http://okanagan.students.ubc.ca/senate/>

Vancouver Senate: <http://www.students.ubc.ca/senate/>

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THE UNIVERSITY OF BRITISH COLUMBIA | OKANAGAN

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Okanagan Senate**MINUTES OF JANUARY 31, 2007****Attendance**

Present: Dr. J. Cioe (Vice-Chair), Mr. R. Adl, Mr. P. Arthur, Dr. J. Bassett-Smith, Dean B. Bauer, Dean R. Belton, Dean J. Bottorff, Dr. W. Broughton, Ms. M. Burton, Dr. J. Castricano, Dr. R. Currie, Ms. L. Driscoll, Dr. M. Duran-Cogan, Ms. K. Ficke, Ms. M. Ficke, Ms. S. Grass, Dean M. Isaacson, Ms. E. Johnston, Dr. D. Keyes, Dr. R. Klukas, Mr. M. Koovisk, Dean M. Krank, Dr. S. McCoubrey, Ms. N. Neumann, Dr. S. Reid, Dr. D. Salhani, Dr. C. Scarff, Dr. M. Ungureanu, Mr. A. Webster, Dr. M. Williams, Dr. P. Wrzesniewski, Dr. P. Wylie, Dr. G. Zilm.

By Invitation: Dr. A. Abd-El-Aziz (AVP, Academic and Research), Mr. C. Eaton (Enrolment Services), Ms. B. MacDonald (Okanagan Senate Secretariat), Mr. B. Silzer (Registrar).

Regrets: Mr. G. August, Dr. E. Butz, Dean R. Campbell, Mr. B. Ford, Mr. P. Garrick, Dr. J. Gustar, Dr. A. Labun, Dr. R. Lalonde, Chancellor Dr. A. McEachern, Acting Deputy Vice-Chancellor Dr. D. Owsram, Ms. D. Polson, Dr. D. Senese, Mr. B. Silzer (Registrar), President Stephen Toope.

Recording Secretary: Ms. L. M. Collins

Call to Order

Vice-Chair Dr. Jan Cioe called the meeting to order.

Senate Membership

On behalf of the Secretary to Senate, Ms. Collins announced the following vacancy.

Declaration of Vacancy (information)

One student representative from the Faculty of Health and Social Development to replace resigning Senator Mr. Daniel Sloan

Minutes of the Previous Meeting

Moved: *Dr. Williams*
Seconded: *Dr. Keyes*

That the minutes of the Okanagan Senate Meeting of December 20, 2006 be adopted as circulated.

CARRIED.

Business Arising from the Minutes

National Day of Action

Dr. Lalonde reminded Senate that at its December meeting, Senate had approved a proposal to recognize a student Day of Action planned for February 7, 2007. He noted that many faculty members were unaware of the Senate resolution on this matter. Ms. Collins responded that the secretariat would circulate an announcement to all faculty and staff as soon as possible, and would endeavour to keep the campus community informed generally about the activities of the Senate.

Remarks from the Deputy Vice-Chancellor

In the absence of Dr. Owram, Dr. Abd-El-Aziz offered to take questions from the floor.

2007/2008 Budget

In response to a question from Dr. Keyes about the UBC Okanagan budget for the 2007/2008 fiscal year, Dr. Abd-El-Aziz stated that the budgeting process had been completed and that the draft budget had been forwarded to the Board of Governors for approval. Dr. Abd-El-Aziz indicated that Senate would receive more information about the budget once it had been approved. Dr. Williams requested that information about the budget also be circulated to the campus community at large, in the interest of improving communication. Dr. Abd-El-Aziz agreed that a wider distribution would be appropriate.

From the Board of Governors

The Deputy Vice-Chancellor reported for information that that the Board of Governors had accepted the recommendations of the Senate in approving the following items

Meeting of September 27, 2006

- a) New Awards;
- b) Curriculum proposals from the Faculty of Arts & Sciences and the Faculty of Creative & Critical Studies.

From the Board of Governors, continued

Meeting of October 31, 2006

- c) New Award;
- d) Curriculum proposals from the Faculty of Arts & Sciences and the Faculty of Health and Social Development.

Policies & Procedures Committee

Changes to Course Withdrawal Regulations

Committee Chair Dean Isaacson presented the following report.

Change to Course Withdrawal Regulations

It is proposed that the current regulations, initially developed through the Vancouver Senate, be modified for UBC Okanagan by the inclusion of the underlined sentence:

Change of Registration: Introduction

Except in special circumstances, a one-term course may be added to a student's program only within the first two weeks of the course, and a two-term course within the first three weeks. If a course is dropped during these periods, no record of the registration in the course will appear on the student's academic record.

Students may withdraw from courses in which they are registered at any time up to the end of the sixth weeks of class for courses that are offered in a single term, and of the twelfth week for courses that span two terms. Withdrawals will be noted on the academic record by a standing of 'W'. Such standings will not be included in computing averages. The withdrawal deadline dates for the current academic year are indicated in the accompanying tables in this section.

Students may also withdraw from courses up to the eighth week for courses that are offered in a single term and the sixteenth week for courses that span two terms, by obtaining the written approval of the instructor and the dean of the faculty in which they are registered. Beyond these dates, students may withdraw from courses outside the limits described above only with the permission of the dean of the faculty in which they are registered. In such cases, the instructor should be informed. Such withdrawals will be recorded as 'W' on the student's academic record.

Fee refunds for withdrawals will be calculated on a pro rata basis. (For more information, see Item 1.6, Refund of Fees.)

Moved: *Dr. Isaacson*
Seconded: *Mr. Koovisk*

That the Senate approve the change to the Calendar statement on Change of Registration.

Discussion

Dr. Broughton noted that under the proposed regulations, two approvals would be required for an earlier withdrawal, while only one approval would be necessary for a later withdrawal. Dr. Cioe stated that in the case of a request for a withdrawal up to the eighth week (for a one-term course, for example), the instructor would know whether sufficient evaluation of the student's progress in the course had been completed. He noted that the Dean could authorize a withdrawal at any point in time.

Amendment by Consent

In response to comments from Dr. Reid the meeting agreed to amend the following sentence as follows (addition in bold):

“In such cases, the instructor ~~should~~ **must** be informed.”

Dean Bauer spoke against the motion for approval, stating that the proposed policy seemed complex and noting that the rationale cited by Dr. Cioe would not be published in the Calendar.

Referral by Consent

After further discussion, the proposal was referred by consent to the Policies and Procedures Committee for further clarification and/or revision.

Curriculum Committee

In the absence of the Committee Chair, Dean Krank presented curriculum proposals from the Faculty of Arts & Sciences

Moved: *Dean Krank*

That the Senate approve the new and changed undergraduate courses and programs brought forward by the Faculty of Arts & Sciences.

Discussion

Dr. Reid noted that the Calendar was confusing with respect to Bachelor of Arts program that involved both the Faculty of Arts and Sciences and the Faculty of Creative and Critical Studies. Speaking to the proposals for a double major in arts and a double major in sciences, he asked whether definitions for and “arts courses” or “science courses” had been articulated.

There was discussion about a general desire to ensure that each major in a double major program was drawn from a separate discipline. Mr. Eaton stated that, although a “discipline” was often delineated by a subject code, some judgment was required on the part of advisors. Senators expressed a general desire for clarification for students about which combinations of majors would be permissible and which would not.

There was discussion about how best to distinguish between a “discipline” and a “program.” Dr. Salhani noted that some disciplines spanned both Arts and Sciences. Dean Bauer agreed that a conversation about these issues should take place within the Faculty of Arts and Sciences.

CARRIED, FOUR OPPOSED.

Admissions and Awards Committee

Awards Policies and Definitions

Committee Chair Dr. McCoubrey circulated for information the following report, with the request that the full text be included in the Senate record for future reference.

POLICY STATEMENT FOR AWARDS

"It is the policy of The University of British Columbia to attract, at both the graduate and undergraduate levels, the best academically qualified students, whatever their origin. With that objective in mind, it is the primary policy of the university to encourage donations, whether to individual faculties or to the university's general scholarship and bursary funds, that can be used to reward excellence or to support needy students without restrictions based on non-academic considerations."

CATEGORIES OF AWARDS

UBCO awards are classified under one of the following categories:

Fellowships are prestigious awards, which enable students to concentrate full-time on their studies and research. These awards are usually given to students enrolled in programs at the Master's or Doctoral level, and are granted on the basis of academic excellence and/ or research productivity. It is suggested that a minimum of \$16,000 be made available for annual distribution, although some fellowships are established initially at the \$10,000 level.

Scholarships are monetary awards which recognize academic achievement and assist recipients with the cost of continuing their education. These merit-based awards are granted to students in programs at both the undergraduate and graduate levels. By Senate regulation, scholarship recipients must be in the top 10% of

their class or have obtained an average of 75% or higher. In order for a scholarship to be most meaningful, we suggest that it provide for a significant portion of tuition, student fees and textbook costs, which range from \$5,600 to \$9,000 a year for undergraduate programs and research-based graduate programs. Tuition for post-baccalaureate professional programs such as Education, Law, Medicine, Dentistry and Business Administration ranges from \$10,000 to \$36,000 per year.

Bursaries are monetary gifts provided to students to assist them with expenses incurred while pursuing an academic program. Financial need is the primary consideration in the selection for bursary recipients. UBC suggests that a minimum of \$1,000 a year be available for distribution.

Prizes are awarded for academic excellence or achievement in a particular subject area. Prizes usually take the form of a monetary award valued at \$2,000 or less, sometimes accompanied by a medal, plaque or certificate. Some prizes are granted to students only upon graduation.

Service Awards are monetary awards provided to both graduate and undergraduate students in good academic standing who have demonstrated excellence in a range of non-academic fields, such as community service, student leadership, volunteerism, and athletic or artistic performance. These awards are valued at \$1,000 or greater.

AWARD FUNDING

ALL AWARDS ARE EITHER ANNUALLY FUNDED AWARDS OR ENDOWED AWARDS.
MINIMUM GUIDELINES ARE LISTED BELOW:

Annually Funded:

- Prizes and Service Awards: minimum of \$500 per year (with a minimum initial 3 year commitment)
- Scholarships and Bursaries: minimum of \$1,000 per year (with a minimum initial 3 year commitment)
- Fellowships: minimum of \$10,000 per year (with a minimum initial 3 year commitment).

Endowed*:

- Prizes and Service Awards: minimum \$6,000 endowment
- Scholarships and Bursaries: minimum \$20,000 endowment
- Fellowships: minimum \$200,000 endowment

- Endowed awards are based on an endowment expenditure rate of 5% per annum.

Since the early 1990s, the information as to whether an award is funded annually or is endowed is encoded within the description of the award. An annual award is usually identified by the phrase "*is offered by*" (the exceptions are awards funded by general purpose operating funds or fee for service funds operated directly by the University). An endowed award description will contain the phrase "*has been endowed by*".

Nominating Committee

Election of Vice-Chair of Senate

Committee Chair Dr. Lalonde circulated for information the following call for nominations.

Call for Nominations

Under Section 37(1) (a) of the University Act, Senate must elect a Vice-Chair at least annually. Senators will recall electing Dr. Jan Cioe to this position for a term of one year at the February 2006 Senate meeting.

This is a call for nominations for one Senator to serve as Vice-Chair of Senate for the term from March 7, 2007 to March 6, 2008 and thereafter until a successor is elected.

An election will be held as the next meeting of the Senate which is scheduled for March 7, 2007.

Report from the Associate Vice-President, Enrolment Services & Registrar

Academic Year 2007/2008

In the absence of the Registrar, Ms. Collins presented for information the 2007/2008 Academic Year for UBC Okanagan. She noted that the Policies & Procedures Committee had decided to undertake a review of current policy and practice about the academic year and that the Committee might in future propose some changes to the Senate.

Key dates for 2007/2008 Winter Session were:

Term 1

Tuesday, September 4, 2007	Classes begin for most Faculties
Friday, November 30, 2007	Last day of Term 1 classes for most Faculties
Wednesday, December 5, 2007	First day of exams Term 1
Wednesday, December 19, 2007	Last day of exams Term 1

Term 2

Monday, January 7, 2008	Classes begin for most Faculties
Friday, April 11, 2008	Last day of Term2 classes for most Faculties
Tuesday, April 15, 2008	First day of exams Term 2
Tuesday, April 29, 2008	Last day of exams Term 2

Other Business

With the consent of the meeting, the Chair added the following item to the meeting agenda.

Guidelines for Corporate Relations and Strategic Partnerships

Dean Isaacson presented for Senate information and discussion a request from the Board of Governors for consultation on strategic alliances between the University and the private sector. The administration of the University had been directed to submit to the Board of Governors by March 2007:

[G]uidelines that will enable the University to proactively seek out, create, and sustain mutually beneficial strategic alliances in a manner competitive with other top universities worldwide.

The guidelines should reflect that the University's participation in these alliances shall be carefully considered in all respects, and should, in particular:

- 1) Ensure alignment of potential partners with University values and the Trek 2010 goals and mission;
- 2) Continue to protect the University's reputation;
- 3) Create a public statement of the University's interest and ability to seek out and enter into mutually beneficial alliances, thereby attracting potential partners into discussion;
- 4) Take into account input from consultation with constituencies within the University;
- 5) Take into account input obtained from members of the private sector; and
- 6) Provide clear guidance for interested parties, including the Board of Governors, Administration and potential partners to evaluate strategic alliance opportunities.

Senate Discussion

Dr. Isaacson provided a brief overview of the request for consultation. He gave as an example an arrangement where a company might provide computers or equipment to the University in exchange for the naming in honour of the company of a building, endowment, or scholarship. He recalled a past arrangement with the former Canadian Airlines, where benefits to the University had included discount airline tickets and scholarships for students. Some faculty members, however, had expressed concern at the time about the restriction of choice to a single airline. Dean Isaacson encouraged Senators to consider issues around these kinds of alliances and to provide comments to the Board so as to have input into the policy development process.

Dr. Lalonde urged caution with respect to contracts so as to avoid situations where faculty members might be penalized for refusing to work with a selected corporate partner. He noted that this could create hostility between colleagues.

Dean Bottorff stated that her main concern would be the kinds of companies with which the University might choose to align itself, citing the example of tobacco companies as undesirable partners. She suggested that, in the interest of transparency, the University should avoid entering into contracts that require that aspects of the alliance remain confidential.

Dean Isaacson suggested that the University carefully consider the duration of contracts, noting that the reputation of companies and their relative market positions normally fluctuated over time. Dean Bottorff noted that mergers and acquisitions might affect UBC's willingness to remain aligned with companies that have significantly changed.

Ms. Grass spoke in favour of transparency regarding strategic alliances and noted that it would be important to protect members of the University community from being penalized for whistle-blowing activity.

Dr. Currie suggested a transparent social corporate audit of a company as one of the first steps toward working with a corporate sponsor. He noted that companies such as Walmart were highly controversial.

Dean Bauer stated that, with these kinds of agreements in place, faculty members might feel “locked into” using a corporate sponsor and that the process for approving exceptions could be convoluted and time-consuming.

Dean Bauer urged the University to adhere to the principles of *Trek 2010* when considering strategic alliances, noting that financial factors should not be of primary importance.

With the consent of the meeting, Dean Isaacson summarized the themes of the preceding discussion as:

- Transparency;
- Social responsibility;
- Consultation; and
- Freedom of choice.

Dr. Paul Davies

Dean Bauer was pleased to announce that the research of UBC Okanagan faculty member Paul G. Davies on race and criminal sentencing had been named as the 33rd most important science story of 2006 by *Discover Magazine*.

Adjournment

There being no further business, the meeting was adjourned at 5:35pm. The following regular meeting was scheduled for March 7, 2007.

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To: Senate
From: Policies and Procedures Committee
Re: **Change to Course Withdrawal Regulations (approval)**
Date: March 1, 2007

The Committee proposes a change to the academic regulations regarding withdrawal from courses. It is proposed that the current regulations be modified as follows (new text underlined):

Change of Registration

Except in special circumstances, a one-term course may be added to a student's program only within the first two weeks of the course, and a two-term course within the first three weeks. If a course is dropped during these periods, no record of the registration in the course will appear on the student's academic record.

Students may withdraw from courses in which they are registered at any time up to the end of the sixth week of class for courses that are offered in a single term, and of the twelfth week for courses that span two terms. Withdrawals will be noted on the academic record by a standing of 'W'. Such standings will not be included in computing averages. The withdrawal deadline dates for the current academic year are indicated in the accompanying tables in this section.

If it becomes clear before the end of the sixth (twelfth) week that there will not be sufficient evaluation of the student's performance to assess the likelihood of success in the course, then by mutual agreement between the student and instructor (in the form of written approval sent to the Registrar), the student may withdraw from the course up to the eighth week for courses that are offered in a single term and the sixteenth week for courses that span two terms. Beyond these dates, students may withdraw from courses only with the permission of the dean of the faculty in which they are registered. In such cases, the instructor shall be informed. Such withdrawals will be recorded as 'W' on the student's academic record.

Fee refunds for withdrawals will be calculated on a pro rata basis. (For more information, see [Item 1.6. Refund of Fees.](#))

The dates for withdrawal given above also apply to students auditing courses....

Rationale

The change is intended to enable a faculty member, upon request from a student, to assign a standing of W beyond the dates that students may elect to withdraw from courses. Such circumstances may arise if there has been insufficient time to adequately evaluate a student's performance prior to the earlier withdrawal dates.

Respectfully submitted,
Dean Michael Isaacson
Chair, Policies & Procedures Committee

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To: Okanagan Senate
From: Policies & Procedures Committee
Re: Cancellation of Classes for Create UBC Okanagan (approval)
Date: March 1, 2007

The Policies & Procedures Committee recently considered a request from Associate Vice-President, Students Ian Cull to cancel classes for all students on the day of the Create UBC Okanagan event. Create UBC Okanagan is the orientation day for new students. The new-student cohort includes new first year students and new transfer students, as well as new mature students. Under the current Academic Year, only 100-level classes are cancelled.

The Committee concurs with Mr. Cull's submission that cancelling all classes would reduce confusion for all students concerning their class schedule and facilitate faculty and senior student participation in the Create program. The proposal to cancel classes was well received at a recent meeting of the Deputy Vice-Chancellor's Executive Council (DVC-EC).

The Committee recommends as follows:

That the 2007/2008 Academic Year be modified to cancel classes for all students on Tuesday, September 4, 2007 in order to facilitate participation in Create UBC Okanagan.

For future years, the Committee has suggested that Term 1 classes be scheduled to start on the day following Create UBC Okanagan, thereby accomplishing the same end but avoiding cancellations. The Committee is currently considering a number of factors regarding the preparation of the Academic Year and plans to bring forward recommendations on this matter at a future meeting.

Respectfully submitted,
Dean Michael Isaacson
Chair, Policies & Procedures Committee

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To: Okanagan Senate

From: Policies & Procedures Committee

Re: Addition of the Associate Vice-President and Chief Operating Officer, Academic & Research, UBC Okanagan to the Membership of the Senate (approval)

Date: February 21, 2007

To acknowledge the critical role of the Associate Vice-President and Chief Operating Officer, Academic & Research in the academic governance of UBC Okanagan and to ensure the incumbent's full participation in the activities of the Okanagan Senate, the Policies & Procedures Committee is pleased to make the following recommendation:

That the position of Associate Vice-President and Chief Operating Officer, Academic & Research be added ex officio to the permanent membership of the Senate, as allowed under Section 35.1 (3) (j) of the University Act.

In keeping with the spirit of the *University Act*, which requires the maintenance of a balance between administrators and elected faculty and student members of the Senate, and also in keeping with the precedent set by the Okanagan Senate in March 2006 when it added to the Senate additional faculty and student representatives following the addition of the Dean of Graduate Studies, the Committee further recommends:

That the Membership of Senate be amended as allowed by Section 35.1 (3) (j) of the University Act to add two faculty members under Section 35.1 (3) (g) to be elected from the Joint Faculties, and one student under Section 35.1 (3) (h) to be elected by the student body at-large.

If the recommendations above are accepted, the Secretary of Senate will proceed to fill the newly created faculty and student vacancies under the elections regulations established by the Council of Senates and in compliance with the *University Act*.

Respectfully submitted,
Dean Michael Isaacson
Chair, Policies & Procedures Committee

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To: Senate
From: Policies and Procedures Committee
Re: **Intercampus Student Mobility (approval)**
Date: March 1, 2007

The Policies and Procedures Committee has had some discussion over the past several months regarding the mobility of students between UBC campuses and possible confusion among students with respect to the portability of their coursework within the UBC system. In order to clarify the position of UBC Okanagan, a member of the Committee has drafted the following statement for possible publication in the UBC Okanagan Calendar:

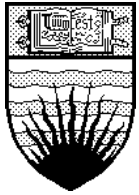
In the spirit of the principle, “One great university, two great campuses,” UBC Okanagan will accept all of the university credits earned by students transferring from the UBC Vancouver campus toward a degree conferred at UBC Okanagan. Students must, however, meet UBC Okanagan program requirements, as approved by the Okanagan Senate, to be eligible for conferral of a degree at UBC Okanagan. Course equivalencies are established by the relevant Faculties under the authority of the Senate.

Because the Admissions & Awards Committee has among its terms of reference responsibility for transfer and transfer credit, this Committee is best placed to consider the statement above and to make any recommendations thereon to the Senate.

Motion: *That the Senate refer the draft statement on intercampus student mobility to the Admissions & Awards Committee for consideration; and that the Admissions & Awards Committee be directed to report to the Senate on this matter no later than the April 25, 2007 meeting of the Senate.*

Respectfully submitted,
Dean Michael Isaacson
Chair, Policies & Procedures Committee

THE UNIVERSITY OF BRITISH COLUMBIA



March 2, 2007

ENROLMENT SERVICES

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To: Okanagan Senate
From: Senate Curriculum Committee

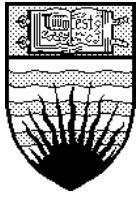
Re: **February Curriculum Proposals**

The Senate Curriculum Committee has reviewed the material forwarded to it by the faculties, and encloses those proposals it deems as ready for approval.

As such, the following is recommended to Senate:

“That Senate approves the new and changed courses and programs brought forward by the Faculties of Applied Science, Arts & Sciences, Creative & Critical Studies, Education, and Health & Social Development”

THE UNIVERSITY OF BRITISH COLUMBIA



March 2, 2007

ENROLMENT SERVICES

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To: Okanagan Senate
From: Senate Curriculum Committee

Re: **February Curriculum Proposals**

Attached please find the following for your consideration:

Faculty of Applied Science

- 1) The following program changes:
 - a. **Third Year Engineering – Civil, Electrical, and Mechanical Engineering Programs**

- 2) The following new courses:
 - a. ENGR 305 (3) Engineering Economic Analysis
 - b. ENGR 310 (3) Fluid Mechanics 2
 - c. ENGR 313 (3) Engineering Project Management
 - d. ENGR 315 (3) Systems Control
 - e. ENGR 320 (3) Electromechanical aDevices & Power Systems

 - f. ENGR 325 (3) Civil Engineering Materials
 - g. ENGR 326 (3) Structural Engineering 1
 - h. ENGR 330 (3) Optimization, Desicison Analysis and Simulation

 - i. ENGR 331 (3) Civil Engineering Laboratory
 - j. ENGR 332 (3) Surveying and GIS Analysis
 - k. ENGR 335 (3) Transporation Engineering 1
 - l. ENGR 340 (3) Geotechnical Engineering 1
 - m. ENGR 347 (3) Environmental Engineering
 - n. ENGR 350 (3) Linear Circuit Theory
 - o. ENGR 351 (3) Microelectronics 1
 - p. ENGR 352 (3) Microelectronics 2
 - q. ENGR 353 (3) Semi-Conductor Devices
 - r. ENGR 355 (3) Digital Systems Design
 - s. ENGR 359 (3) Microcomputer Engineering
 - t. ENGR 361 (3) Signals and Communcation Systems
 - u. ENGR 362 (3) Introduction to Digital Signal Processing
 - v. ENGR 365 (3) Engineering Electromagnetics
 - w. ENGR 375 (3) Energy Ssystem Design
 - x. ENGR 376 (3) Materials Science and Engienering
 - y. ENGR 377 (3) Manufacturing Processes
 - z. ENGR 380 (3) Mechanical Engineering Design 1
 - aa. ENGR 381 (3) Mechanical Engineering Design 2
 - bb. ENGR 385 (3) Heat Transfer Applications
 - cc. ENGR 387 (3) Vibration of Mechanical Systems

Faculty of Arts and Sciences

- 3) The following new specializations in the Bachelor of science program and associated new and changed courses:
- a. **Major in Ecology and Evolutionary Biology**
 - b. **Honours in Ecology and Evolutionary Biology**
- NB: By approving these specializations, the Ecology concentration in the Biology specialization will be discontinued.*
- c. BIOL 460 (3) Population Genetics
 - d. BIOL 560 (3) Population Genetics
 - e. BIOL 468 (3) Molecular Approaches in Ecology and Evolution
 - f. BIOL 568 (3) Molecular Approaches in Ecology and Evolution
 - g. BIOL 250 (3) Evolutionary Biology
 - h. BIOL 422 (3) Conversation Biology
 - i. BIOL 401 (3) Spatial Ecology
 - j. BIOL 313 (3) Science Writing
 - k. BIOL 459 (3) Behavioral Ecology
 - l. **Major in Molecular, Cell, and Developmental Biology**
 - m. **Honours in Molecular, Cell, and Developmental Biology**
 - n. **Major in Microbiology**
 - o. **Honours in Microbiology**
 - p. BIOL 480 (3) Mycology
 - q. BIOL 380 (3) Food and Industrial Microbiology
 - r. BIOL 381 (3) Environmental Microbiology
 - s. BIOL 330 (3) Freshwater Microbiology
- NB: By approving this course, BIOL 333 will be discontinued*
- 4) The following new courses:
- a. BIOL 552 (3/6) d Directed Studies in Biology
 - b. GEOG 207 (3) Introduction to Biogeography
 - c. GEOG 307 (3) Advanced Biogeography

Faculty of Creative and Critical Studies

- 5) The following new courses:
- a. ENGL 389 (3) Postcolonial Literary and Cultural Studies
 - b. ENGL 453 (3/9) d African Studies
 - c. ENGL 436 (3) Narrative and Conflict in Global Context
 - d. SPAN 470 (3) Spanish Phonetics and Phonology
 - e. SPAN 471 (3) Spanish Lexicology and Semantics

Faculty of Education

- 6) The following new courses:
- a. EDST 597 (1/15) d Contemporary Educational Issues
 - b. EDST 598 (1/15) d Contemporary Educational Practice
 - c. EDST 599 (1/15) d Studies in Educational Leadership

Faculty of Health and Social Development

- 7) The following new courses in the **Bachelor of Human Kinetics** program:
- a. HMKN 101 (3) Biomechanics
 - b. HMKN 102 (3) Physical Activity in Canadian Society

Department: School of Engineering	Contact Person: Spiro Yannacopoulos Phone: 7-8722 Email: spiro.yannacopoulos@ubc.ca
Faculty Approval Date: <i>January 5, 2007</i>	
APSC Undergraduate New Program (s)	
Effective Date: September 2007	URL: http://okanagan.students.ubc.ca/calendar/index.cfm?tree=18,317,989,1184
Proposed Calendar Entry:	Present Calendar Entry: n/a
Third Year	School of Engineering ... Third and Fourth Years Currently, the School plans to establish full programs at UBC Okanagan in Civil Engineering, Electrical Engineering, and Mechanical Engineering. Specific information on these programs, including their academic requirements, will be published over the next few years in future editions of the UBC Okanagan Calendar.
In third year, students will follow a program in: Civil, Electrical, or Mechanical engineering.	Type of Action: Revise calendar statement to introduce Third Year of the Engineering Program in Civil Engineering, Electrical Engineering, and Mechanical Engineering.
Third Year – Civil Engineering	Rationale: To phase in the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering, Electrical Engineering, and Mechanical Engineering specializations.
<i>ENGR 305 Engineering Economic Analysis</i> 3	Category 1 Document ID#: APSC UG001
<i>ENGR 310 Fluid Mechanics 2</i> 3	
<i>ENGR 313 Engineering Project Management</i> 3	
<i>ENGR 325 Civil Engineering Materials</i> 3	
<i>ENGR 326 Structural Engineering 1</i> 3	
<i>ENGR 330 Optimization, Decision Analysis & Simulation</i> 3	
<i>ENGR 331 Civil Engineering Laboratory</i> 3	
<i>ENGR 332 Surveying & GIS Analysis</i> 3	
<i>ENGR 335 Civil Engineering Materials</i> 3	
<i>ENGR 340 Geotechnical Engineering 1</i> 3	
<i>ENGR 347 Environmental Engineering</i> 3	
<i>Earth Science Technical Elective</i> 3	
Total Credits 36	
Third Year – Electrical Engineering	
<i>ENGR 305 Engineering Economic Analysis</i> 3	
<i>ENGR 315 Systems & Control</i> 3	
<i>ENGR 320 Electromechanical Devices & Power Systems</i> 3	
<i>ENGR 350 Linear Circuit Theory</i> 3	
<i>ENGR 351 Microelectronics 1</i> 3	
<i>ENGR 352 Microelectronics 2</i> 3	
<i>ENGR 353 Semiconductor Devices</i> 3	
<i>ENGR 355 Digital Systems Design</i> 3	
<i>ENGR 359 Microcomputer</i> 3	

<p>Engineering</p> <p>ENGR 361 Signals & Communication Systems 3</p> <p>ENGR 362 Introduction to Digital Signal Processing 3</p> <p>ENGR 365 Engineering Electromagnetics 3</p> <p>Total Credits 36</p> <p>Third Year – Mechanical Engineering</p> <p>Engineering Two Curriculum</p> <p>ENGR 305 Engineering Economic Analysis 3</p> <p>ENGR 310 Fluid Mechanics 2 3</p> <p>ENGR 315 Systems & Control 3</p> <p>ENGR 320 Electromechanical Devices & Power 3</p> <p>ENGR 375 Energy System Design 3</p> <p>ENGR 376 Materials Science & Engineering 3</p> <p>ENGR 377 Manufacturing Processes 3</p> <p>ENGR 380 Mechanical Engineering Design 1 3</p> <p>ENGR 381 Mechanical Engineering Design 2 3</p> <p>ENGR 385 Heat Transfer Applications 3</p> <p>ENGR 387 Vibration of Mechanical Systems 3</p> <p>Humanities Elective¹ 3</p> <p>Total Credits 36</p> <p><small>1 In general, scientific geography courses, statistical courses, studio/performance courses in fine arts, music, and theatre, will not satisfy this requirement. Courses that teach language skills are also not acceptable.</small></p> <p>Fourth Year Specific information on these programs, including their academic requirements, will be published over the next few years in future editions of the UBC Okanagan Calendar.</p>	
APSC Undergraduate New Course(s)	
Effective Date: September 2007	URL: n/a
Proposed Calendar Entry:	Present Calendar Entry: n/a
ENGR 305 (3) Engineering Economic Analysis	Type of Action: New course

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<p>Cost concepts, accounting, time value of money; depreciation and taxes; public sector projects; economic evaluation techniques; handling uncertainty; sustainability in economic evaluation; societal context; needs infrastructure; project impacts, mitigating risk. Case studies. Prerequisite: APSC 257 [3-0-0]</p>	<p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for Mechanical and Civil Engineering specializations.</p> <p>Category 1 Document ID#: APSC UG001</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 310 (3) Fluid Mechanics 2. Review of principles, Navier Stokes equations and its solutions, Boundary layers, Open Channel flow, Compressible flows. Turbo Machinery. Prerequisite: APSC 253. Corequisite: ENGR 331. [3-0-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for Mechanical and Civil Engineering specializations.</p> <p>Category 1 Document ID#: APSC UG002</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 313 (3) Engineering Project Management Project management including: initiating, planning, executing, controlling and closing engineering projects. Management of construction and implementation of tools and techniques for resource allocation and construction control. Prerequisite(s): APSC 201, APSC 257, ENGR 305. [3-0-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil, Electrical, and Mechanical Engineering specializations.</p> <p>Category 1 Document ID#: APSC UG003</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 315 (3) Systems Control Control concepts, linear systems, transfer functions, block diagram reduction, root locus, Bode and Nyquist plots, transient response, frequency response, controller design, state space concepts, controllability and observability, introduction to discrete-time control systems. Prerequisite: APSC 250. [3-0-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical and Mechanical Engineering specializations.</p> <p>Category 1 Document ID#: APSC UG004</p>
<p>Effective Date: September 2007</p>	<p>URL: n/a</p>

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<p>Proposed Calendar Entry:</p> <p>ENGR 320 (3) Electromechanical Devices & Power Systems DC & AC magnetic circuits, transformers, DC machines, principles of electromagnetic devices, synchronous machines, induction motors, power systems, power generation, distribution, and delivery. Prerequisite: APSC 255 [3-2*-0]</p>	<p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical and Mechanical Engineering specializations.</p> <p>Category 1 Document ID#: APSC UG005</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 325 (3) Civil Engineering Materials Structures and properties of common materials: aggregates, Portland cement, concrete, asphalt, timber and metals. Relationships between materials structures and mechanical properties. Prerequisite: APSC 251. Co-requisite(s): ENGR 331, Civil Lab [3-0-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG006</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 326 (3) Structural Engineering 1 Analysis and design of structures; indeterminate and approximate analysis of structures; calculation of displacements using virtual work; flexibility (force) method; stiffness method for frames; moment distribution method. Design of static structures. Prerequisite (s): APSC 251, APSC 250. Co-requisite: ENGR 325 [3-0-2]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG007</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 330 (3) Optimization, Decision Analysis and Simulation Systems engineering, optimization, applied probability and simulation for civil engineering infrastructure and the environment, life cycle perspective; cost functions, capacity issues; and optimization, alternative goals, constraints, resource allocation and multi-objective design. Prerequisite(s): APSC 254, APSC 256, APSC 257</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1</p>

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<p>[3-0-0]</p>	<p>Document ID#: APSC UG008</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 331 (3) Civil Engineering Laboratory Applications of fluid mechanics, civil engineering materials, surveying and GIS and transportation engineering. Corequisites ENGR 310, ENGR 325, ENGR 332, ENGR 335 [0-6-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG009</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 332 (3) Surveying and GIS Analysis Theory and application methods for measuring and representing objects of interest on, below and over the earth's surface and for analyzing data to meet engineering design and operational objectives driven by socio-economic or environmental concerns of natural and engineered systems. Prerequisite(s): APSC 170, APSC 254 [3-0-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG010</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 335 (3) Transportation Engineering 1 Analysis, planning, design and operation of transportation systems, including: governance; economics; land use; transport modes; users; roads; freeways; end-of-trip facilities; public transit; and intersection controls. Prerequisite: APSC 254. [3-0-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG011</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 340 (3) Geotechnical Engineering 1 Geological processes, soil classification, principle of effective stress, seepage analysis, shear strength and consolidation, and slope stability analysis. Prerequisite: APSC 251, APSC 253. [2-2-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering</p>

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	<p>specialization.</p> <p>Category 1 Document ID#: APSC UG012</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 347 (3) Environmental Engineering Air, water, environmental pollutants, and treatment design concepts. Prerequisite(s): APSC 172, APSC 173, APSC 175. [3-0-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Civil Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG013</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 350 (3) Linear Circuit Theory Sinusoidal steady-state analysis for AC circuits, AC power analysis, three-phase circuits, frequency response, Laplace transform analysis, synthesis of passive networks using zero-pole placements, second-order systems and sensitivity functions, operational amplifiers, two-port networks. Prerequisite: APSC 250 and APSC 255 [3-0-1]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG014</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 351 (3) Microelectronics 1 Diodes, bipolar junction transistor (BJT), MOSFET, single-stage and multi-stage amplifiers, differential amplifiers, MOS digital circuits. Prerequisite: APSC 255 [3-2*-0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG015</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 352 (3) Microelectronics 2 Frequency-response of amplifier, feedback, analog integrated circuits, introduction to analog filter design (Butterworth, Chebyshev), D/A, A/D converting circuits. Prerequisite: ENGR 351 [3-2*- 0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p>

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	<p>Category 1 Document ID#: APSC UG016</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 353 (3) Semi-Conductor Devices Semiconductor materials, carrier transport phenomena, P-N diode, metal-semiconductor junction, light-emitting diode (LED), semiconductor lasers and photodiodes, bipolar junction transistors, MOSFET, and other semiconductor devices. [3-0-0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG017</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 355 (3) Digital Systems Design Logic design methods, hardware description language (HDL), number representation and arithmetic circuits, combinational circuits, flip-flops, registers, counters, synchronous and asynchronous sequential circuits, digital system designs. Prerequisite: APSC 255 [3-2*-0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG018</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 359 (3) Microcomputer Engineering Microcomputer architecture, number representation, assembly language, parallel and serial input/output, interrupts, memory, peripherals. Prerequisite: APSC 255 [2-2-0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG019</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 361 (3) Signals and Communication Systems Continuous-time signals, signal classifications, linear time-invariant systems, Fourier series and transform, sampling theorem, amplitude(AM), phase(PM), and frequency(FM) modulation, baseband digital transmission, pulse code modulation (PCM) and quantization, Nyquist pulses, Inter-symbol interference (ISI). Prerequisite: APSC 250 [3-2*-0]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG020</p>

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<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 362 (3) Introduction to Digital Signal Processing Discrete-time signals and systems, difference equations, sampling and aliasing, decimation and interpolation, quantization errors, z-transform, discrete Fourier transform (DFT), fast Fourier transform (FFT), implementation of discrete-time systems, finite and infinite impulse response filter design. Prerequisite: APSC 250 [3-0-1]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG021</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 365 (3) Engineering Electromagnetics Review of vector calculus, electrostatic and magnetostatic fields, boundary conditions, Faraday's Law and induction, Maxwell's equations, electromagnetic waves and propagation, reflection of plane waves, introduction to antennas and electromagnetic radiation. [3-0-1]</p>	<p>URL: n/a</p> <p>Type of Action: New Course.</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Electrical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG022</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 375 (3) Energy System Design Primary energy sources and carriers. Energy conversion. Analysis of thermal systems. Reacting systems and combustion. Thermal systems design including steam power plants, gas turbines, internal combustion engines, and refrigeration systems. Prerequisites(s): APSC 175, APSC 253. [3-0-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG023</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 376 (3) Materials Science and Engineering Review, comprehensive study of phase diagrams, phase transformations, TTT diagrams, heat treatment, ferrous and nonferrous alloys, composite and concrete materials, and materials selection. [3-0-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG024</p>

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<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 377 (3) Manufacturing Processes Metal forming processes, plastic deformation, rolling, forging, drawing, extrusion, sheet metal forming. Machining processes and machine tools, turning, milling, drilling, grinding. Metal fabrication, welding, casting. Introduction of process planning, measurement, quality control. [2-2-0]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG025</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 380 (3) Mechanical Engineering Design I Product design methodology; fatigue; design/selection of components including springs, bearings, gears, brakes, clutches. Design evaluation and optimization; interaction of materials, processing and design; motion generated by cams and four-bar linkages; design for system dynamics. Major design project. [2-0-3]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG026</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 381 (3) Mechanical Engineering Design 2 The design, analysis of mechanisms, linkages, cams. Design and selection of gears, gear trains, belt drives, brakes clutches. Instrumentation and computer control of selected systems. Prerequisite: ENGR 380 [2-0-3]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG027</p>

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<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 385 (3) Heat Transfer Applications Steady and transient conduction heat transfer. Internal and external forced convection. Introduction to free convection. Radiation heat transfer. Design of heat exchangers, boilers, condensers. Prerequisite(s): APSC 175, APSC 250 [2-0-2]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG028</p>
<p>Effective Date: September 2007</p> <p>Proposed Calendar Entry:</p> <p>ENGR 387 (3) Vibration of Mechanical Systems Vibration of mechanical systems. Single and multiple degree of freedom systems. Undamped, damped vibrations. Forced vibrations and resonance. Modal analysis, modelling vibrating systems. Spectral analysis. Measurement and control of vibrating mechanical systems. Prerequisite: APSC 250 [3-0-1]</p>	<p>URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Course</p> <p>Rationale: New course in support of the third year curriculum for the Bachelor of Applied Science program and to provide the prerequisite body of knowledge required for the Mechanical Engineering specialization.</p> <p>Category 1 Document ID#: APSC UG029</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School of Arts and Sciences Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session W Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>																																										
<p>Proposed Calendar Entry:</p> <p>Major in Ecology and Evolutionary Biology</p> <p>Graduates will obtain a grounding in theory, practical experience, and skills in laboratory and field work, computers and communications (both verbal and written). This program prepares students for graduate school and professional programs.</p> <p style="text-align: center;">Requirements for the B.Sc. in Ecology and Evolution</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">First Year and Second Years</th> <th style="text-align: left;">Credits</th> </tr> </thead> <tbody> <tr><td>BIOL 116 and 125</td><td>6</td></tr> <tr><td>MATH 100 and 101</td><td>6</td></tr> <tr><td>CHEM 111 & 113 <u>or</u> 121 & 123</td><td>6</td></tr> <tr><td>PHYS 112 & 122 <u>or</u> 102 & 111</td><td>6</td></tr> <tr><td>Two of ENGL 112,113, 150, 151, 152, 153</td><td>6</td></tr> <tr><td>BIOL 200</td><td>3</td></tr> <tr><td>BIOL 203</td><td>3</td></tr> <tr><td>BIOL 209 <u>or</u> 210</td><td>3</td></tr> <tr><td>BIOL 204 <u>or</u> 205</td><td>3</td></tr> <tr><td>BIOL 228</td><td>3</td></tr> <tr><td>BIOL 2XX</td><td>3</td></tr> <tr><td>CHEM 203 & 204</td><td>6</td></tr> <tr><td>Arts Electives</td><td>6</td></tr> <tr><td colspan="2">Third and Fourth Years*</td></tr> <tr><td>BIOL 304</td><td>3</td></tr> <tr><td>BIOL 308</td><td>3</td></tr> <tr><td>BIOL 365</td><td>3</td></tr> <tr><td>One of BIOL 306, 307 <u>or</u> 309</td><td>3</td></tr> <tr><td>One of BIOL 4XA <u>or</u> 4XB</td><td>3</td></tr> <tr><td>BIOL 364 <u>or</u> 417</td><td>3</td></tr> </tbody> </table>	First Year and Second Years	Credits	BIOL 116 and 125	6	MATH 100 and 101	6	CHEM 111 & 113 <u>or</u> 121 & 123	6	PHYS 112 & 122 <u>or</u> 102 & 111	6	Two of ENGL 112,113, 150, 151, 152, 153	6	BIOL 200	3	BIOL 203	3	BIOL 209 <u>or</u> 210	3	BIOL 204 <u>or</u> 205	3	BIOL 228	3	BIOL 2XX	3	CHEM 203 & 204	6	Arts Electives	6	Third and Fourth Years*		BIOL 304	3	BIOL 308	3	BIOL 365	3	One of BIOL 306, 307 <u>or</u> 309	3	One of BIOL 4XA <u>or</u> 4XB	3	BIOL 364 <u>or</u> 417	3	<p>URL: n/a Present Calendar Entry: n/a</p> <p>Type of Action: new program</p> <p>Rationale: Currently, the Biology faculty at UBC Okanagan offers a B.Sc Major in Biology as well as a B.Sc. Honours in Biology. There are three existing concentrations within the Biology major, including Ecology. With the rapid growth in undergraduate enrollment at UBC Okanagan, and the opening of the new interdisciplinary centre for Species at Risk and Habitat Studies, a new B.Sc. Major in Ecology and Evolutionary Biology will offer our students greatly increased opportunities to take advantage of the research and expertise of faculty with interests in these areas.</p> <p>Nationally and internationally, there are rapidly increasing job opportunities for graduates in the fields of Ecology and Evolutionary Biology, and programs in these areas typically attract many students. As brief examples of this trend, the Canadian Society for Ecology and Evolution was formed in 2005 with NSERC's encouragement, since these disciplines have for many years had the largest Grant Selection Committee of any NSERC panel. The number of ecological and environmental science undergraduate programs in North America has more than tripled in the last three decades. The Canadian Council on Human Resources in the Environment Industry indicates that jobs in environmental fields are increasing at a rate 60% higher than growth of the economy in general. We are therefore confident that creation of this B.Sc. degree will attract students.</p>
First Year and Second Years	Credits																																										
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BIOL 364 <u>or</u> 417	3																																										



Additional courses to fulfill requirements for an Ecology and Evolution major; 12 credits required. Courses used to fulfill requirements listed above cannot be re-used here: 12

- BIOL 306
- BIOL 307
- BIOL 309
- BIOL 330
- BIOL 357
- BIOL 364
- BIOL 417
- BIOL 420
- BIOL 459
- BIOL 440
- BIOL 4XA
- BIOL 4XB
- BIOL 4XC
- BIOL 4XD
- BIOL 452

Additional Arts electives 6
Additional Credits 24
Total Credits **120**

Total of 120 credits is required for graduation, including a minimum of 42 upper-level credits with at least 36 Science credits.

Students are encouraged to take courses offered in other disciplines that are relevant to the B.Sc. in Ecology and Evolutionary Biology. Such courses often have prerequisites, so students should start planning their electives early in their degree program.

Please note that courses with an X in the title are proposed in the following section of this proposal.



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School of Arts and Sciences Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session W Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>Honours in Ecology and Evolutionary Biology</p> <p>Graduates will obtain a grounding in theory, practical experience, and skills in laboratory and field work, computers and communications (both verbal and written). With the inclusion of a required research component to their curriculum, the students who complete this program will have demonstrated their ability for competent independent work. This experience is designed to prepare students for graduate school.</p> <p>The course requirements are the same as in the Major in Ecology and Evolutionary Biology, except that students must complete 6 credits of BIOL 440 in the elective component of the program.</p> <p>ADMISSION REQUIREMENTS</p> <ul style="list-style-type: none"> • Fourth-year standing • A minimum grade average of 75% over all courses completed • Enrolment in BIOL 440 with a research project and research supervisor approved by the Unit Head <p>GRADUATION REQUIREMENTS</p> <ul style="list-style-type: none"> • Completion of the course requirements for the Major in Ecology and Evolutionary Biology • A 75% overall grade average • BIOL 440 (6 credits), with a minimum grade of 75%. A written thesis is required, with a public presentation in the form of a poster session or a seminar. 	<p>URL: n/a Present Calendar Entry: n/a</p> <p>Type of Action: new program</p> <p>Rationale: Currently, the Biology faculty at UBC Okanagan offers a B.Sc Major in Biology as well as a B.Sc. Honours in Biology. There are three existing concentrations within the Biology major, including ecology. The Biology faculty are proposing a new Honours program in Ecology and Evolutionary Biology to complement their proposal for a new B.Sc. program in Ecology and Evolutionary Biology.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>Ecology Concentration</p> <p>42 upper-level credits (of which 30 must be BIOL credits) are needed to satisfy the requirements for the B.Sc. Biology Major. First and Second Years As listed under Major in Biology— Students should complete all four survey courses: BIOL 204, 205, 209, 210— Total Credits——60 Third and Fourth Years BIOL 3042——3 BIOL 308 and 311——6 BIOL 354 and 365——6 Two of BIOL 306, 307, 3095——6 Four of BIOL 306, 307, 309, 330, 357, 359, 417, 467; and 420, 440, 452, if in appropriate area; EESC 311, 313, 341, 418, 435, 456; GEOG 3704——12 Non-Biology Science electives numbered 300 or higher——6 Arts electives1——6 Satisfy prerequisite and UBC O requirements3——15 Total Credits——60 Minimum credits for degree——120</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: Ecology Concentration</p> <p>42 upper-level credits (of which 30 must be BIOL credits) are needed to satisfy the requirements for the B.Sc. Biology Major. First and Second Years As listed under Major in Biology Students should complete all four survey courses: BIOL 204, 205, 209, 210 Total Credits 60 Third and Fourth Years BIOL 3042 3 BIOL 308 and 311 6 BIOL 354 and 365 6 Two of BIOL 306, 307, 3095 6 Four of BIOL 306, 307, 309, 330, 357, 359, 417, 467; and 420, 440, 452, if in appropriate area; EESC 311, 313, 341, 418, 435, 456; GEOG 3704 12 Non-Biology Science electives numbered 300 or higher 6 Arts electives1 6 Satisfy prerequisite and UBC O requirements3 15 Total Credits 60 Minimum credits for degree 120</p> <p>Type of Action: Dissolution of the Ecology concentration for Biology Majors.</p> <p>Rationale: Development of a new B.Sc. Degree program in Ecology and Evolutionary Biology (EEB) will render the Ecology concentration redundant, as EEB will provide more thorough coverage of the disciplines and enhanced flexibility to pursue sub-disciplinary tracks within EEB.</p>



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<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: W Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 460 (3) Population Genetics Concepts in empirical and theoretical population genetics. Primary processes shaping genetic variation within and among populations. Methodologies for measuring genetic variation in nature, and practical applications of population genetic principles to genomics, molecular evolution, human evolution and conservation biology. Credit will not be granted for both BIOL460 and 560. Prerequisite: Biol 365. [3,0,0]</p> <p>BIOL 560 (3) Population Genetics Concepts in empirical and theoretical population genetics. Primary processes shaping genetic variation within and among populations. Methodologies for measuring genetic variation in nature, and practical applications of population genetic principles to genomics, molecular evolution, human evolution and conservation biology. Credit will not be granted for both BIOL460 and 560. Prerequisite: Graduate standing. [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: 460 is a new course, that will contribute to the Biology B.Sc. and to the proposed Ecology and Evolutionary Biology Undergraduate program. Will also contribute to the Biology Graduate Program through cross-listing as 560.</p> <p>Rationale: See attached documentation for the Ecology and Evolutionary Biology Undergraduate Program. This course also fits the specialty of a new faculty member (Russello) in Biology & Physical Geography.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 468 (3) Molecular Approaches in Ecology and Evolution</p> <p>Techniques for collecting molecular and population genetic data. Applications in ecology, evolution and conservation. Characteristics of molecular markers, associated analytical approaches, emerging genomic technologies, and case studies. Credit will not be granted for both 468 and 568. Prerequisites: Biol 365. [3,0,0]</p> <p>BIOL 568 (3) Molecular Approaches in Ecology and Evolution</p> <p>Techniques for collecting molecular and population genetic data. Applications in ecology, evolution and conservation. Characteristics of molecular markers, associated analytical approaches, emerging genomic technologies, and case studies. Credit will not be granted for both 468 and 568. Prerequisites: graduate standing. [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: 468 is a new course, that will contribute to the Biology B.Sc. and to the proposed Ecology and Evolutionary Biology Undergraduate program. Will also contribute to the Biology Graduate Program through cross-listing as 568.</p> <p>Rationale: See attached documentation for the Ecology and Evolutionary Biology Undergraduate Program. This course also fits the specialty of a new faculty member (Russello) in Biology & Physical Geography.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

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<p>Proposed Calendar Entries:</p> <p>BIOL 250 (3) Evolutionary Biology</p> <p>Natural selection, neutral evolution, the evolutionary perspective on life history variation, speciation and macroevolution. Prerequisites: 116, 125. [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New required course, as part of proposed Ecology and Evolutionary Biology Undergraduate program.</p> <p>Rationale: See attached documentation for the Ecology and Evolutionary Biology Undergraduate Program.</p>



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<p>Proposed Calendar Entries:</p> <p>BIOL 422 (3) CONSERVATION BIOLOGY</p> <p>Scientific basis of conservation biology. Analysis of demographic data, population models, and extinction risks. Examine complex habitat, landscape, genetic and trophic interactions that affect populations. Conservation approaches including habitat planning, reserve design, surrogacy, and policy. Credit will not be granted for both 422 and 513. Prerequisite: 308. [3,0,0]</p> <p>BIOL 513 (3) CONSERVATION BIOLOGY</p> <p>Scientific basis of conservation biology. Analysis of demographic data, population models, and extinction risks. Examine complex habitat, landscape, genetic and trophic interactions that affect populations. Conservation approaches including habitat planning, reserve design, surrogacy, and policy. Credit will not be granted for both 422 and 513. Prerequisite: Graduate Standing [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Approve course as 422.</p> <p>Rationale: Course was approved as 513 as part of the Biology Graduate Program. This request is for listing it as a 4th year course so that students in the Biology major or in the proposed Ecology and Evolutionary Biology major can use it for their programs.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: not applicable Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 401 (3) SPATIAL ECOLOGY Spatial patterns in ecology, exploring ways to describe variation and mechanisms that give rise to patterns. Dispersal, metapopulation and source-sink dynamics, connectivity and fragmentation, heterogeneity, disturbance, edges, and dynamics of geographical ranges. Credit will not be granted for both 401 and 512. Prerequisite: 304. [3,0,0]</p> <p>BIOL 512 (3) SPATIAL ECOLOGY Spatial patterns in ecology, exploring ways to describe variation and mechanisms that give rise to patterns. Dispersal, metapopulation and source-sink dynamics, connectivity and fragmentation, heterogeneity, disturbance, edges, and dynamics of geographical ranges. Credit will not be granted for both 401 and 512. Prerequisite: Graduate Standing [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Approve course as 401.</p> <p>Rationale: Course was approved as 512 as part of the Biology Graduate Program. This request is for listing it as a 4th year course so that students in the Biology major or in the proposed Ecology and Evolutionary Biology major can use it for their programs.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 313 (3) SCIENCE WRITING</p> <p>Develop strong and efficient writing skills in the biological sciences. Improve quality of written work; develop techniques for writing, editing, evaluating, and critiquing writing; and learn attributes unique to science writing and methods for writing fluent scientific prose. [3,0,0]</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: new course</p> <p>Rationale: This course could be used by students in the Biology B.Sc. program as an elective or students in the proposed Ecology and Evolutionary Biology B.Sc. program to fulfill program requirements.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

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<p>Biol 459 (3) Behavioural Ecology Ecological and evolutionary basis for behaviour, role of behaviour in enabling an organism to adapt to its environment. Topics include optimization and game theoretic approaches, foraging, sociality, mating and parental care. Laboratory provides opportunities to explore concepts covered in lecture. Prerequisite: BIOL 203. (3,3,0)</p>	<p>URL: n/a Present Calendar Entry: Biol 359 (3) Introduction to Animal Behaviour Introduction to the ethological approach to the study of animal behaviour. Emphasis placed on social behaviour. Physiological mechanism underlying behaviour briefly considered. Laboratory provides opportunities to work with a variety of animals, experimenting with the principles established in the lecture. OUC equivalent: BIOL 355. Prerequisite: All of BIOL 203, BIOL 204, [3-3-0] Type of Action: Change of title, number, content and prerequisite to existing course, as part of proposed Ecology and Evolutionary Biology Undergraduate program. Rationale: See attached documentation for the Ecology and Evolutionary Biology Undergraduate Program. Course is renamed because of change in content that reflects how the present course has evolved and to allow coverage of non-animal behaviour. Prerequisite is changed because vertebrate biology is no longer needed because of repositioning of the course. Course is renumbered to 4th year level because of specialized subject matter and to allow future cross-listing as a graduate course.</p>



**Curriculum Proposal Form
UBC OKANAGAN
New or Change to Course or Program**

Category: 1

<p>Faculty: Barber School of Arts & Sciences Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007</p> <p>Effective Session Winter Term 1 2007</p>	<p>Date: 16 January 2007 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>																																														
<p>Proposed Calendar Entry:</p> <p>Major in Molecular, Cell and Developmental Biology</p> <p>Provides students with comprehensive training in molecular, cell and developmental biology. Core courses ensure that students will obtain the most current information pertaining to the fundamental nature of cells as well as their molecular and developmental mechanisms.</p> <p>Requirements for the B.Sc. in Molecular, Cell and Developmental Biology</p> <table border="0"> <thead> <tr> <th></th> <th align="right">Credits</th> </tr> </thead> <tbody> <tr> <td colspan="2">First Year</td> </tr> <tr> <td>BIOL 116 and 125</td> <td align="right">6</td> </tr> <tr> <td>MATH 100 and 101</td> <td align="right">6</td> </tr> <tr> <td>CHEM 111 and 113 or 121 and 123</td> <td align="right">6</td> </tr> <tr> <td>PHYS 112 and 122 or 102 and 111</td> <td align="right">6</td> </tr> <tr> <td>Two of ENGL 112, 113, 150, 151, 152, 153</td> <td align="right">6</td> </tr> <tr> <td colspan="2">Second Year</td> </tr> <tr> <td>BIOL 200 and 263</td> <td align="right">6</td> </tr> <tr> <td>BIOL 203 and 228</td> <td align="right">6</td> </tr> <tr> <td>BIOL 204 or 205</td> <td align="right">3</td> </tr> <tr> <td>CHEM 203 and 204</td> <td align="right">6</td> </tr> <tr> <td>BIOL 209 or 210</td> <td align="right">3</td> </tr> <tr> <td>Arts electives</td> <td align="right">6</td> </tr> <tr> <td>Total Credits</td> <td align="right">60</td> </tr> <tr> <td colspan="2">Third and Fourth Year</td> </tr> <tr> <td>BIOL 304</td> <td align="right">3</td> </tr> <tr> <td>BIOL 311</td> <td align="right">3</td> </tr> <tr> <td>BIOL 319</td> <td align="right">3</td> </tr> <tr> <td>BIOL 354</td> <td align="right">3</td> </tr> <tr> <td>BIOL 365</td> <td align="right">3</td> </tr> <tr> <td>BIOL 366</td> <td align="right">3</td> </tr> <tr> <td>one of BIOL 363 or 364</td> <td align="right">3</td> </tr> </tbody> </table>		Credits	First Year		BIOL 116 and 125	6	MATH 100 and 101	6	CHEM 111 and 113 or 121 and 123	6	PHYS 112 and 122 or 102 and 111	6	Two of ENGL 112, 113, 150, 151, 152, 153	6	Second Year		BIOL 200 and 263	6	BIOL 203 and 228	6	BIOL 204 or 205	3	CHEM 203 and 204	6	BIOL 209 or 210	3	Arts electives	6	Total Credits	60	Third and Fourth Year		BIOL 304	3	BIOL 311	3	BIOL 319	3	BIOL 354	3	BIOL 365	3	BIOL 366	3	one of BIOL 363 or 364	3	<p>URL: http://okanagan.students.ubc.ca/calendar/index.cfm?tree=18,282,858,991</p> <p>Present Calendar Entry: Cell and Development Concentration</p> <p>Forty-two upper-level credits (of which 30 must be BIOL credits) are needed to satisfy the requirements for the B.Sc. Biology major.</p> <p>First and Second Years As listed under Major in Biology — Total Credits — 60 Third and Fourth Years BIOL 3042 — 3 BIOL 308 and 311 — 6 BIOL 354 and 365 — 6 BIOL 319 and 366 — 6 BIOL 363 or 3644 — 3 Four of BIOL 318, 333, 363, 364, 461, and 420, 440, 452 if in the appropriate area. — 12 Non-Biology science electives numbered 300 or higher — 6 Arts electives¹ — 6 Satisfy prerequisites and UBC O requirements³ — 12 Total Credits — 60 Minimum credits for degree — 120</p> <p>¹ A minimum of 18 credits of Arts electives is required (including 6 credits in first-year English) for the degree. ² Must be taken in third year. ³ Total of 120 credits is required for graduation including a minimum of 42 upper-level credits which include at least 36 credits of science courses. ⁴ Each course can only be used once to fulfill the requirements for this concentration.</p> <p>Type of Action: New Program</p>
	Credits																																														
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one of BIOL 363 or 364	3																																														



<p>12 credits from the following electives:</p> <table border="0"> <tr><td>BIOL 312</td><td>3</td></tr> <tr><td>BIOL 341</td><td>3</td></tr> <tr><td>BIOL 318</td><td>3</td></tr> <tr><td>BIOL 363</td><td>3</td></tr> <tr><td>BIOL 364</td><td>3</td></tr> <tr><td>BIOL 461</td><td>3</td></tr> <tr><td>BIOL 420 (if appropriate)*</td><td>3</td></tr> <tr><td>BIOL 452 (if appropriate)*</td><td>3 or 6</td></tr> </table> <p>Upper level non-Biology science electives 6</p> <p>Upper level Arts or Science electives 3</p> <p>Courses to satisfy degree requirements 12</p> <p>Arts electives 6</p> <p>Minimum credits for degree 120 *Course must be approved as appropriate by the Unit Head or the Biology Program Advisor</p>	BIOL 312	3	BIOL 341	3	BIOL 318	3	BIOL 363	3	BIOL 364	3	BIOL 461	3	BIOL 420 (if appropriate)*	3	BIOL 452 (if appropriate)*	3 or 6	<p>Rationale:</p> <p>Student interest in molecular, cell and developmental biology is very high and enrolment in these courses has increased dramatically in the last few years. In the past three years 45% of graduating biology students chose the existing Cell and Development Concentration. In addition, there has been an increase in the number of courses that are suitable for this major such as Biology 341 (Neurobiology), Biology 363 and 364 (Developmental Biology II and Evolutionary Development), and Biology 461 (Cell Signaling) The proposed new major would better prepare students for advanced graduate-level training in molecular, cell and developmental biology, as well prepare students for careers in the health sciences. This new major can be offered now without the need to hire new faculty or establish new courses. This is essentially a conversion of the existing cell and development concentration to a major but with recognition of the emphasis on molecular biology.</p>
BIOL 312	3																
BIOL 341	3																
BIOL 318	3																
BIOL 363	3																
BIOL 364	3																
BIOL 461	3																
BIOL 420 (if appropriate)*	3																
BIOL 452 (if appropriate)*	3 or 6																
<p>Proposed Calendar Entry:</p> <p>Molecular, Cell and Developmental Biology Honours Program</p> <p>Through course work and research experience, the Honours program is an intensive program of study. Students trained in this program will have the ability to work independently with a high degree of competency in molecular cellular biology and developmental biology.</p> <p>The course requirements are the same as the Major in Molecular, Cell and Developmental Biology, except that students must complete 6 credits of BIOL 440. Students may replace 6 credits of Biology electives with BIOL 440.</p> <p>ADMISSION REQUIREMENTS Fourth-year standing A minimum grade average of 75% over all courses completed.</p> <p>Enrolment in BIOL 440 with a research project and research supervisor approved by the Unit head.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: New Program, in addition to the proposed major in molecular, cell and developmental Biology.</p> <p>Rationale:</p> <p>This program is part of the proposal for a new major in molecular, cell and developmental Biology.</p>																



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School of Arts and Sciences Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session Winter Term 1 2007</p>	<p>Date: 2 October 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>																																												
<p>Proposed Calendar Entry:</p> <p>Major in Microbiology</p> <p>Designed to provide graduates with a breadth of knowledge in microbiology as it applies to the environment, health and industry. Students graduating from UBC Okanagan with a B.Sc. in Microbiology will have developed a wide-range of lab, communication, and critical thinking skills. Prepares students for careers in microbiology (e.g. food and beverage industries, health sciences and environmental sciences), graduate school, and professional programs.</p> <p style="text-align: center;">Requirements for the B.Sc. in Microbiology</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">First Year</th> <th style="text-align: right;">Credits</th> </tr> </thead> <tbody> <tr> <td>BIOL 116, 125</td> <td style="text-align: right;">6</td> </tr> <tr> <td>MATH 100 and 101</td> <td style="text-align: right;">6</td> </tr> <tr> <td>CHEM 111 & 113 or 121 & 123</td> <td style="text-align: right;">6</td> </tr> <tr> <td>PHYS 112 & 122 or 102 & 111</td> <td style="text-align: right;">6</td> </tr> <tr> <td>Two of ENGL 112, 113, 150, 151, 152, 153</td> <td style="text-align: right;">6</td> </tr> <tr> <td colspan="2">Second year</td> </tr> <tr> <td>Biology 200</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 228</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Chemistry 203/204</td> <td style="text-align: right;">6</td> </tr> <tr> <td>Biology 203</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 209</td> <td style="text-align: right;">3</td> </tr> <tr> <td>One of Biology 204, 210, 205</td> <td style="text-align: right;">3</td> </tr> <tr> <td>2 Arts electives</td> <td style="text-align: right;">6</td> </tr> <tr> <td>1 Science elective</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Total Credits</td> <td style="text-align: right;">60</td> </tr> <tr> <td colspan="2">Third and Fourth Year:</td> </tr> <tr> <td>Biology 311/319</td> <td style="text-align: right;">6</td> </tr> <tr> <td>Biology 365/366</td> <td style="text-align: right;">6</td> </tr> <tr> <td>Biology 304</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 354</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 393/395</td> <td style="text-align: right;">6</td> </tr> </tbody> </table>	First Year	Credits	BIOL 116, 125	6	MATH 100 and 101	6	CHEM 111 & 113 or 121 & 123	6	PHYS 112 & 122 or 102 & 111	6	Two of ENGL 112, 113, 150, 151, 152, 153	6	Second year		Biology 200	3	Biology 228	3	Chemistry 203/204	6	Biology 203	3	Biology 209	3	One of Biology 204, 210, 205	3	2 Arts electives	6	1 Science elective	3	Total Credits	60	Third and Fourth Year:		Biology 311/319	6	Biology 365/366	6	Biology 304	3	Biology 354	3	Biology 393/395	6	<p>URL: N/A Present Calendar Entry: n/a</p> <p>Type of Action: new program</p> <p>Rationale: Currently, UBC Okanagan offers a B.Sc. Major in Biology as well as a B.Sc. Honours in Biology. Demand by students for microbiology programs is very high as evidenced by the waiting list of 100+ students for the Microbiology Major at UBCV. Typically, between second and third year at UBCO, we lose 5-10 students to the microbiology program at UBCV. We anticipate that our new Microbiology program will help to retain these students in the Okanagan and we anticipate some of the students on the waiting list at Vancouver will transfer to our new microbiology program, particularly those students with a medical interest. The majority of students in our Introductory Microbiology course are interested in a career related to medicine. We anticipate many of these students will enroll into our new Microbiology Major. Although our proposed Major is not the same as that offered at UBCV, it complements it and offers students a number of options for pursuing careers in industrial, medical or environmental microbiology.</p> <p>A new hire with expertise in medical microbiology and virology is top on the hiring list of the Biology and Physical Geography unit (Unit 2). With the addition of this position, there will be the breadth and expertise to offer a well-balanced Microbiology Major.</p> <p>Please note that courses with an X, Y or Z in the course number are proposed below in the next section of this proposal. Only one of these courses is completely new, whereas the others are redesigned from existing courses.</p>
First Year	Credits																																												
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Four of the following seven courses:

Biology 318	3
Biology 310	3
Biology 312	3
Biology 4XX (Mycology)	3
¹ Biology 3XY (Food and Industrial Microbiology)	3
Biology 3XZ (Environmental Microbiology)	3
² Biology 420 (special topics)	3
Arts electives	6
Non-Biology Science electives numbered 300 or higher	6
³ electives	12

Total Credits: 120

¹ This course will replace Biology 333: Applied microbiology

² If related to microbiology

³ Total of 120 credits is required for graduation including a minimum of 42 upper-level credits, which include at least 36 credits of Science courses.



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 2 October 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>																																
<p>Proposed Calendar Entries:</p> <p>Microbiology Honours Program</p> <p>Through course work and research experience, the Honours in Microbiology is an intensive program of study. Students who complete this program will have the ability to work independently with a high level of competency in the field of microbiology.</p> <p>The course requirements are the same as in the Major in Microbiology, except that students must complete 6 credits of BIOL 440. Students may replace 6 credits of electives with BIOL 440.</p> <p>Third and Fourth Year:</p> <table style="width: 100%; border: none;"> <tr><td>Biology 311/319</td><td style="text-align: right;">6</td></tr> <tr><td>Biology 365/366</td><td style="text-align: right;">6</td></tr> <tr><td>Biology 304</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 354</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 393/395</td><td style="text-align: right;">6</td></tr> <tr><td>Biology 440</td><td style="text-align: right;">6</td></tr> </table> <p>Four of the following seven courses:</p> <table style="width: 100%; border: none;"> <tr><td>Biology 318</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 310</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 312</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 480 (Mycology)</td><td style="text-align: right;">3</td></tr> <tr><td>¹Biology 380 (Food and Industrial Microbiology)</td><td style="text-align: right;">3</td></tr> <tr><td>Biology 381 (Environmental Microbiology)</td><td style="text-align: right;">3</td></tr> <tr><td>²Biology 420 (special topics)</td><td style="text-align: right;">3</td></tr> <tr><td>Arts electives</td><td style="text-align: right;">6</td></tr> <tr><td>Non-Biology Science electives numbered 300 or higher</td><td style="text-align: right;">6</td></tr> <tr><td>³electives</td><td style="text-align: right;">6</td></tr> </table> <p>Total Credits: 120</p>	Biology 311/319	6	Biology 365/366	6	Biology 304	3	Biology 354	3	Biology 393/395	6	Biology 440	6	Biology 318	3	Biology 310	3	Biology 312	3	Biology 480 (Mycology)	3	¹ Biology 380 (Food and Industrial Microbiology)	3	Biology 381 (Environmental Microbiology)	3	² Biology 420 (special topics)	3	Arts electives	6	Non-Biology Science electives numbered 300 or higher	6	³ electives	6	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: New Program, in addition to the proposed Microbiology Major.</p> <p>Rationale: This program is part of the proposal for a new Microbiology Major.</p>
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³ Total of 120 credits is required for graduation including a minimum of 42 upper-level credits, which include at least 36 credits of Science courses.

ADMISSION REQUIREMENTS

Fourth-year standing

A minimum grade average of 75% from all courses completed.

Enrolment in BIOL 440 with a research project and research supervisor approved by the Academic Unit.



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 480 (3) Mycology</p> <p>A detailed examination of the fungi. Emphasis is on taxonomy, evolution, genetics, ecology and physiology of the Zygomycota, Ascomycota and Basidiomycota. The laboratory emphasizes morphological and molecular taxonomy of mushrooms. Prerequisites: Biol 311. [3-3-0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: Add new course, as part of the proposed Microbiology Major.</p> <p>Rationale: This course is part of the proposed Microbiology Major.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007	Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca
Proposed Calendar Entries: BIOL 380 (3) Food and Industrial Microbiology A detailed examination of the microbes that play a role in the manufacturing of beverages (e.g. beer and wine), solid foods (e.g. cheese), and industrial processes (e.g. waste water treatment). Prerequisites: Biol 228. [3-0-0]	URL: N/A Present Calendar Entry: n/a Type of Action: Add new course, as part of the proposed Microbiology Major. Rationale: This course is part of the proposed Microbiology Major.



UBC Curriculum Proposal Form Change to Course or Program

Category: (1)

<p>Faculty: I. Barber School of Arts and Sciences Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: October 2, 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>BIOL 381 Environmental Microbiology</p> <p>Introduction to the diverse roles of microbes in natural and artificial environments. Topics range from community interactions to biogeochemical cycles to biodegradation. Lectures introduce principles, practical applications and implications of environmental microbiology. Laboratories explore classic and molecular research methodologies. Prerequisites: BIOL 228 or BIOL 330. [3-3-0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course, as part of the proposed Microbiology Major.</p> <p>Rationale: This course is part of the proposed program for a new Microbiology Major.</p>



UBC Curriculum Proposal Form Change to Course or Program

<p>Category: 1 Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 330 (3) Freshwater Microbiology</p> <p>Integrates taxonomy, physiology, and ecosystem functioning of freshwater microbes. Effects of microbial activities in perturbed aquatic environments will be examined. Labs introduce basic and advanced techniques for identification, enumeration and measuring biogeochemical activity within an aquatic and experimental context. Prerequisite: either (a) one of BIOL 307, EESC 301 or (b) one of BIOL 209, BIOL 210, BIOL 275 and one of BIOL 204, BIOL 205. Note: this course will be offered on alternate years. [3-3-0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: Integrates taxonomy, physiology, and ecosystem functioning of freshwater bacteria, fungi, and protozoans. Effects of microbial activities in nature and in environments perturbed by humans. Labs include aseptic technique, isolation of bacteria, estimation of numbers and biomass, identification of fungi and protozoans. Prerequisite: either (a) one of BIOL 307, EESC 301 or (b) one of BIOL 209, BIOL 210, BIOL 275 and one of BIOL 204, BIOL 205. [3-3-0]</p> <p>Type of Action: Change course description as is stated to reflect it being offered every other year rather than every year and to reflect more closely to what is presently being taught.</p> <p>Rationale: Freshwater Microbiology (BIOL 330) is a required course in the Freshwater Science program, thus it is directed towards these students. However, only 2-3 Freshwater Science students, along with 10-15 Biology students, take it on a yearly basis. This change will accommodate Freshwater Science students, but at the same time it will allow Environmental Microbiology to alternate with it. Most Biology and Microbiology students will take Environmental Microbiology.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: February 19, 2007 Effective Session: Winter Term 1 2007</p>	<p>Date: 21 September 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Delete Biology 333 from calendar</p> <p>Biol 333 (3) APPLIED MICROBIOLOGY. Study of industrial and microbiology, Food and pharmaceutical microbiology, clinical aspects and epidemiology of disease, soil and water microorganisms, and industrial and agricultural applications. OUC equivalent: BIOL 328. Prerequisite: All of BIOL 228, CHEM 204. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: Biol 333 (3) Study of industrial and medical microbiology. Food and pharmaceutical microbiology, clinical aspects and epidemiology of disease, soil and water microorganisms, and industrial and agricultural applications. (3-0-0)</p> <p>Type of Action: Delete Biology 333. Stand alone courses in the Microbiology Major, including Medical Microbiology, Food and Industrial microbiology, and Environmental Microbiology will make Applied Microbiology redundant.</p> <p>Rationale: See attached documentation for the Microbiology Major. Applied Microbiology is not needed, because Medical Microbiology, Food and Industrial Microbiology, and Environmental Microbiology will now be taught.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: not applicable Effective Session: Winter Term 2 Year 2006-2007</p>	<p>Date: 9 January 2007 Contact Person: Louise Nelson Phone: 250-807-8152 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>BIOL 552 (3/6) D DIRECTED STUDIES IN BIOLOGY</p> <p>Allows investigation on a specific topic as agreed upon by the faculty member and the student. Prerequisite: Permission of the Graduate Program Advisor and the course instructor required</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New course, as part of Biology Graduate Program</p> <p>Rationale: Biology 552 was approved in principle as part of the Biology Graduate Program in 2006, but we had neglected to provide calendar language for this course. Please note that no course outline is attached because the readings and the marking scheme will vary each time the course is taught.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: January 9, 2007 Effective Session: Winter Term 1, 2007</p>	<p>Date: 07 November 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>GEOG 207 (3) Introduction to Biogeography</p> <p>Geographical ecology emphasizing species distributions, abiotic-biotic interactions, disturbance and vegetation response, and human impacts across spatial scales. Labs and field trips examine local sites and provide students with sampling and analysis skills. Credit will not be granted for both BIOL 203 and GEOG 207. Prerequisites: GEOG 108 and 109; or BIOL 116 and 125; or BIOL 117 and 122; or EESC 111 and 121. [3-3-0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: Add new course.</p> <p>Rationale: Biogeography is a major sub-discipline within Geography, but there are no biogeography courses offered in the Geography program. In addition, this course allows a faculty member (Kavanagh) to teach in her area of expertise.</p> <p>Please note that the course description parallels the comparable course taught at UBC-Vancouver:</p> <p>GEOG 207 (3) Introduction to Biogeography Geographical ecology emphasizing plant distributions, abiotic-biotic interactions, effects of disturbance, succession, and human impacts across scales. Labs and field trips examine a local site.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: Barber School Unit: Biology and Physical Geography Faculty Approval Date: January 9, 2007 Effective Session: Winter Term 1 2008</p>	<p>Date: 7 November 2006 Contact Person: Louise Nelson Phone: 807-8756 Email: louise.nelson@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>GEOG 307 (3) Advanced Biogeography</p> <p>Examines present distribution and diversity of plants and animals; factors underlying the development of modern biogeographic realms; dispersal, colonization and invasion; prehistoric and modern evolution and extinction; biodiversity; island biogeography; conservation biogeography. Reading and writing intensive. Prerequisite: GEOG 207 or BIOL 203 [3-0-1]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course.</p> <p>Rationale: Biogeography is a major sub-discipline in Geography, but there are no biogeography courses offered in the Geography program. In addition, this course allows a faculty member (Kavanagh) to teach in her area of expertise.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: FCCS Department: Critical Studies Faculty Approval Date: Feb. 13, 2007</p> <p>Effective Session _ Winter Term I Year 2007 for Change</p>	<p>Date: November 14, 2006 Contact Person: David Jefferess Phone: 7-9359 Email: david.jefferess@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>ENGL 379 (3) Postcolonial Literary and Cultural Studies</p> <p>Examines colonialism, representation, nationalism, decolonization, identity, globalization, and neo-imperialism, in relation to literature, film, and other forms of cultural production.</p> <p>Pre-requisite: 3 credits of 200-level English. ENGL 224 and/or ENGL 250 are recommended.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: New Course</p> <p>Rationale:</p> <p>This interdisciplinary course provides an introduction to the key theoretical concerns of postcolonial studies. It provides an important conceptual framework for studying international literatures in English and cultural production in a global framework. Hence, it provides an important addition to English's theory and international literature offerings, and provides a key course in the Global Cultural Studies stream of the Cultural Studies program.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: FCCS Department: Critical Studies Faculty Approval Date: Feb. 13, 2007</p> <p>Effective Session Winter Term I Year 2007 for Change</p>	<p>Date: November 14, 2006 Contact Person: David Jefferess Phone: 7-9359 Email: david.jefferess@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>ENGL 435 (3/9) D African Studies</p> <p>An examination of African literature and other forms of cultural production using a postcolonial approach. Topics vary from year to year.</p> <p>Pre-requisite: 3 credits of 200-level English. English 224 and/or 379 are recommended.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: New Course</p> <p>Rationale:</p> <p>The current category at the 400 level in International Literature in English, “ENGL 480 Studies in International Literature in English” has been taught from a wide variety of perspectives and, as such, is a rather broad title that does not adequately inform students of course content or focus. The introduction of a 400 level course in African studies provides a more specific title that can still allow for varying topics. This course will contribute to the development of the study of international literature in English within the English program, and allow for the development of interdisciplinary courses that fulfill the mandate of the department of Critical Studies, as well as support the Global Cultural Studies stream of the major in Cultural Studies.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: FCCS Department: Critical Studies Faculty Approval Date: Feb. 13, 2007</p> <p>Effective Session Winter Term I Year 2007 for Change</p>	<p>Date: November 14, 2006 Contact Person: David Jefferess Phone: 7-9359 Email: david.jefferess@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>ENGL 436 (3) Narrative and Conflict in Global Context</p> <p>Examines conflict, violence, and struggles for social justice in relation to narrative, discourse, and representation, as well as questions of nationalism, identity, and globalization.</p> <p>Pre-requisite: 3 credits of 200-level English. ENGL 250 and/or ENGL 379 are recommended.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: N/A</p> <p>Type of Action: New Course</p> <p>Rationale:</p> <p>This interdisciplinary course provides a cross-cultural approach to contemporary concerns of global culture, neo-imperialism, transnationalism, violence, and social justice, as they relate to forms of cultural production, including literature, film, and other forms of global popular culture. The course supports the mandate of the department of Critical Studies and the university to develop interdisciplinary programming that reflects faculty research as well as the global framework of the UBCO academic plan. The course develops the offerings of international literature in English within the English program and supports the Global Cultural Studies stream of the Cultural Studies major.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: (1)

<p>Faculty: FCCS Department: Critical Studies Faculty Approval Date:</p> <p>Effective Session ___ Winter _ Term _1_ Year _2007__ for Change</p>	<p>Date: November 8, 2006 Contact Person: Grisel Garcia Phone: 807-9310 Email: grisel.garcia-perez@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>SPAN 470 (3) Spanish phonetics and phonology <i>Prerequisite:</i> SPAN 315 <i>Corequisite:</i> SPAN 302</p>	<p>URL: N/A Present Calendar Entry: N/A Type of Action: new course Rationale: This course will expand offerings in Spanish in the field of Spanish Linguistics.</p>
<p>Proposed Calendar Entry:</p> <p>SPAN 471 (3) Spanish lexicology and semantics <i>Prerequisite:</i> SPAN 315 <i>Corequisite:</i> SPAN 302</p>	<p>URL: N/A Present Calendar Entry: N/A Type of Action: new course Rationale: This course will expand offerings in Spanish in the field of Spanish Linguistics.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

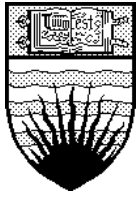
<p>Faculty: Education Unit: Faculty Approval Date: October 2006 Effective Session _Summer_ Term 2 Year 2007 for Change</p>	<p>Date: February 5, 2007 Dean: Dr. Robert Campbell Contact Person: Sharon McCoubrey Phone 807-8109 Email: Sharon.mccoubrey@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>EDST 497 Contemporary Educational Issues (1/15) D Seminar that examines special topics and current issues within Education.</p> <p>EDST 498 Contemporary Educational Practice (1/15) D Seminar that explores various approaches, projects, methodologies, and teaching applications.</p> <p>EDST 499 (1/15) D Studies in Educational Leadership Seminar that investigates effective educational programs, leadership and practice.</p>	<p>Present Calendar Entry: n/a</p> <p>Type of Action: The establishment of three new Courses.</p> <p>Rationale: These are new courses being established to allow the delivery of 1-credit seminars on a variety of topics. As indicated, these courses can be taken more than once for credit.</p>



UBC Curriculum Proposal Form Change to Course or Program

Category: (1)

<p>Faculty: Health and Social Development Department: Human Kinetics Faculty Approval Date: Effective Session Fall Term 1 Year 07 for change</p>	<p>Date: November 28, 2006 Contact Person: Dr. Joan Bottorff Phone: 7-9901 Email: joan.bottorff@ubc.ca</p>
<p>HMKN 1-- (3) Biomechanics Application of the elementary principles of physics and math to quantitative analysis of human movement. Analysis will also focus on the development of forces within muscles and their effect on initiating and controlling human movement (pertaining to exercise, physical activity and rehabilitation). [3-0]</p>	<p>Present Calendar Entry N/A</p> <p>Type of Action: The establishment of two new courses.</p> <p>Rationale: These are new courses being established for the first year of the new Bachelor of Human Kinetics Program.</p>
<p>HMKN 1-- (3) Physical Activity in Canadian Society Introduction to the role, history and social basis of physical activity in society; concepts, theories, links to health. [3-0]</p>	



March 1, 2007

ENROLMENT SERVICES

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To: Okanagan Senate

From: Senate Curriculum and Admissions & Awards Committees

Re: **February New Program Proposals**

Our committees have reviewed the material forwarded to us by the faculties, and encloses those proposals we deems as ready for approval.

As such, the following is recommended to Senate:

*“That Senate approves the **Master of Science and Doctor of Philosophy in Chemistry, the Master of Science and Doctor of Philosophy in Mathematics, and the Developmental Standard Teaching Certificate in Okanagan Language and Culture; and their associated courses.***

UBC Curriculum Proposal Form Change to Course or Program

<p>Faculty: <u>I.K Barber School</u> Department: <u>Chemistry</u> Faculty Approval Date: Effective Session <u>Winter</u> Term <u>1</u> Year 2007 for Change</p>	<p>Date: <u>February 5, 2007</u> Contact Person: <u>David Jack</u> Phone: <u>250 807-8747</u> Email: <u>david.jack@ubc.ca</u></p>
<p>Proposed Calendar Entry:</p> <p>CHEMISTRY</p> <p>Degrees Offered: Ph.D., M.Sc.</p> <p>PROFESSORS A. Abd-El-Aziz.</p> <p>ASSOCIATE PROFESSORS N. Eggers, D. Jack, E. Neeland, K. Perry, P. Phillips, K. Smith, A. Vaisius.</p> <p>ASSISTANT PROFESSORS S. Mahmoud, S. McNeil, S. Murch, R. O'Brien, P. Shipley.</p> <p>PROGRAM OVERVIEW</p> <p>The Chemistry Graduate Program offers the research-based degrees Master of Science in Chemistry and Doctor of Philosophy in Chemistry. The program offers a variety of research areas including analytical, environmental, inorganic, organic, and physical chemistry.</p> <p>DOCTOR OF PHILOSOPHY</p> <p>Admission Requirements The program is governed by the general graduate guidelines of the University of British Columbia Okanagan College of Graduate Studies' policies and procedures, including its standards for admission of</p>	<p>URL:</p> <p>Present Draft Calendar Entry:</p> <p>Type of Action: New admission guidelines required as part of proposed Chemistry Graduate Program</p> <p>Rationale: (see attached supporting documents)</p>

students. Ph.D. applicants will have either a M.Sc. in Chemistry or a related field, with a B+ (76%) average or better in their M.Sc. coursework and thesis, or a B.Sc. in Chemistry or a related field with an A- (80%) average or better in their third and fourth year classes. Their background training must be sufficient for advanced work in their chosen field.

Students registered in the M.Sc. program may transfer to the Ph.D. program within their first year of study after completing M.Sc. level courses worth 12 credits with an A- (80%) average or better and being approved by their research committee. Such transfers must comply with the regulations of the College of Graduate Studies.

In exceptional cases, applicants who do not meet the requirements stated above but who have had significant formal training and relevant professional experience to offset such deficiencies, may be granted admission on the recommendation of the Chemistry Graduate Program Committee and approval of the Dean of the College of Graduate Studies.

Program Requirements

The Ph.D. degree is based on substantial original research conducted under the supervision of a faculty member of the Chemistry Graduate Program. Ph.D. students must submit their research in the form of a thesis and are not required to complete coursework unless specified by their supervisory committee, or as a condition of admission. Within 12 months of registering in the Ph.D. program (or 24 months if entering with only a B.Sc.) students are required to present a research proposal and pass a comprehensive oral examination designed to assess the student's breadth of knowledge in the

general subject area(s) of the proposed research.

MASTER OF SCIENCE

Admissions Requirements

The program is governed by the general graduate guidelines of the University of British Columbia Okanagan College of Graduate Studies' policies and procedures, including its standards for admission of students. Applicants to the M.Sc. program are expected to have a B.Sc. in Chemistry or a related field, with a B+ (76%) average or better in their third and fourth year classes or at least 12 credits in third and fourth year classes in their intended field of study with an A- (80%) or better average. Their background training must be sufficient for advanced work in their chosen field. Applicants from a university in which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer. In this regard, minimum acceptable TOEFL scores are 570 (paper), 230 (computer), and 86 (internet).

Program requirements

The M.Sc. degree requires a research based thesis (18 credits) and completion of 13 credits of coursework with a B+ (76%) average or better. The required Chemistry Seminar provides 1 credit and the remaining 12 credits may be obtained from an array of courses.

**UBC Curriculum Proposal Form
Change to Course or Program**

Faculty: I. K. Barber School Department: Chemistry/Unit 3 Faculty Approval Date: Effective Session <u>Winter</u> Term <u>2</u> Year <u>2007</u> for Change	Date: Aug. 29 2006 Contact Person: David Jack Phone: 250-807-8747 Email: david.jack@ubc.ca
Proposed Calendar Entry: CHEM 503 (3) Equilibrium Statistical Mechanics in Chemistry [3,0,0] Introductory principles of Statistical Mechanics with illustrations of chemical importance. Applications to molecular gases, liquids, solids, independent particle statistics, electric and magnetic moments, radiation, chemical equilibrium and reaction rates. Credit will not be given for CHEM 503 and CHEM 407 or CHEM 422 when on the same topic.	Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 507 (3) Topics in Physical Chemistry [3,0,0] Seminar presentation required based on current literature in the field. Credit will not be given for both CHEM 507 and CHEM 422 on the same topic.	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 521 (3) Topics in Inorganic Chemistry [3,0,0] Seminar presentation required based on current literature in the field. Credit will not be given for both CHEM 521 and CHEM 422 on the same topic.	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 524 (3) Organometallic Catalysts[3,0,0]	Present Calendar Entry: none Type of Action: create a new course



An advanced course describing selected recent developments in catalytic applications of organo-transition metal chemistry. Credit will not be given for both CHEM 524 and CHEM 422 on the same topic.	Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
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Proposed Calendar Entry: CHEM 533 (3) Bioanalytical Chemistry [3,0,0] Chemical analysis of biological samples. Metabolomics, proteomics, sample interactions and matrix effects.	Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
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Proposed Calendar Entry: CHEM 534 (3) Chromatography and Mass Spectrometry [3,0,0] Gas, liquid and supercritical fluid chromatography. Mass spectrometry: ionization processes, mass analyses, ion molecule reactions, fragmentation processes. [3-0-0]	Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
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Proposed Calendar Entry: CHEM 535 (3) Topics in Analytical Chemistry [3,0,0] Seminar presentation required based on current literature in the field. Credit will not be given for both CHEM 535 and CHEM 422 on the same topic.	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
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Proposed Calendar Entry: CHEM 540 (1) Graduate Seminar in Chemistry [2,0,0] Students present a present a one-hour lecture on a topic agreed upon jointly with the instructor, but unrelated to their	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree
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previous or current research projects. Students will be assessed on their seminar and a related written paper.	program in Chemistry
Proposed Calendar Entry: CHEM 549 (18) M.Sc. Thesis	Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 568 (3) Topics in Organic Chemistry [3,0,0] Seminar presentation required based on current literature in the field. Credit will not be given for both CHEM 568 and CHEM 422 on the same topic.	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 569 (3) Advanced Mechanistic Enzymology [3,0,0] The chemistry of enzyme active sites, cofactors and inhibitors will be discussed. Enzyme kinetics, thermodynamics, kinetic isotope effects, and other physical methods will also be covered in detail. Credit will be given for only one of CHEM 569 and CHEM 413	Present Calendar Entry: none Type of Action: create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry
Proposed Calendar Entry: CHEM 649 (0) Ph.D. Thesis	Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of the creation of a graduate degree program in Chemistry



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: IKB School of Arts & Sciences Unit: Mathematics, Statistics and Physics (Unit 5) Faculty Approval Date: February 19, 2007 Effective Session Winter Term 1 Year 2007 for Change</p>	<p>Date: 2007.02.02 Contact Person: Heinz Bauschke Phone: (250) 807-8529 Email: heinz.bauschke@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>Mathematics <i>Degrees Offered: M.Sc., Ph.D.</i></p> <p>Program Overview</p> <p>The Mathematics Graduate Program offers students the research-based degrees of Master of Science in Mathematics, and Doctor of Philosophy in Mathematics. Research interests of Mathematics faculty members include Mathematical Biology and Differential Equations, Optimization and Analysis, and Number Theory and Algebra.</p> <p>Master of Science</p> <p>Admission Requirements</p> <p>The program is governed by the regulations of the University of British Columbia Okanagan College of Graduate Studies, including its standards for admission of students.</p> <p>Students entering the M.Sc. program will normally have an honours degree or a bachelor's degree in mathematics with at least a B+ (76% or greater) average.</p> <p>Applicants from a university outside Canada in which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Students can demonstrate English language proficiency with: the TOEFL (Test of English as a Foreign Language) minimum score of 600 [paper version] or 250</p>	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to existing content - for course entries simply list the course number.)</p> <p>Present Calendar Entry: none</p> <p>Type of Action: New Programs</p> <p>Rationale: This calendar description sets out the nature of degrees available and the admission requirements. See also the attached supporting documentation.</p>



[computer version] or 100 [internet version]; the IELTS (International English Language Testing Service) minimum overall band score of 7.0 with no other component score less than 6.5); or a MELAB score of at least 84.

Students are encouraged to contact the program prior to applying to discuss their admission.

Program Requirements

In addition to the general academic regulations for graduate students set out in the College of Graduate Studies Academic Regulations Chapter VII, the minimum requirements for the M.Sc. are:

- 12 credits for a successfully defended Master’s thesis [MATH 549];
- 3 credits for seminar presentations [MATH 5xx taken thrice];
- 9 course credits selected by the student in consultation with – and approval of – the advisory committee and the program committee from a list of core courses in Mathematical Biology and Differential Equations, Optimization and Analysis, and Number Theory and Algebra;
- 6 other credits selected by the student in consultation with, and approval of, the advisory committee and the program committee none of which may be at the 100, 200 or 300 level.

Doctor of Philosophy

Admission Requirements

The program is governed by the regulations of the University of British Columbia Okanagan College of Graduate Studies, including its standards for admission of students. Students admitted to the Ph.D. degree program normally must possess a M.Sc. in Mathematics or a related area with a B+ (76%) average or better in their M.Sc. coursework and thesis, with clear evidence of research ability or potential. Exceptional students may be admitted directly to the Ph.D. program with only an Honours degree.

Transfer from the M.Sc. to the Ph.D. program is permitted at the discretion of the program under regulations set by the College of Graduate Studies after 12, but after no more than 18, months in the M.Sc. program.

Applicants from a university outside Canada in



which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Students can demonstrate English language proficiency with: the TOEFL (Test of English as a Foreign Language) minimum score of 600 [paper version] or 250 [computer version] or 100 [internet version]; the IELTS (International English Language Testing Service) minimum overall band score of 7.0 with no other component score less than 6.5); or a MELAB score of at least 84.

Students are encouraged to contact the program prior to applying to discuss their admission.

Program Requirements

In addition to the general academic regulations for graduate students set out in the College of Graduate Studies Academic Regulations Chapter VII, the minimum requirements for the Ph.D. are

- 30 credits of coursework [course credits obtained for the M.Sc. may count towards this requirement];
- a written qualifying examination during the first two years, and a subsequent oral qualifying examination;
- 6 credits of coursework per year until the oral qualifying examination is passed;
- a successfully defended doctoral thesis [MATH 649].

Additional requirements may be established by the student’s advisory committee and the program committee. For more information regarding the comprehensive examination and thesis, please refer to the College of Graduate Studies Academic Regulations in Chapter VII.

Contact Information

-Insert here



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

<p>Faculty: I.K. Barber School, UBCO Department: Mathematics (Unit 5) Faculty Approval Date: February 19, 2007 Effective Session: <u>Winter</u> Term: <u>1</u> Year <u>2007</u> for Change</p>	<p>Date: February 7, 2007 Contact Person: Heinz Bauschke Phone: 250-807-8529 Email: heinz.bauschke@ubc.ca</p>
<p>Proposed Calendar Entry: MATH 549 (12) Thesis for Master's Degree</p>	<p>URL: N/A Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of a graduate degree program in Mathematics. [This course exists at UBCV.]</p>
<p>Proposed Calendar Entry: MATH 649 (0) d Ph.D. Thesis</p>	<p>URL: N/A Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of a graduate degree program in Mathematics. [This course exists at UBCV.]</p>
<p>Proposed Calendar Entry: MATH 5gg (1-3) c Mathematics Graduate Seminar Presentation and discussion of recent results in the mathematical literature. Credit may be obtained more than once. [0,0,1]</p>	<p>URL: N/A Present Calendar Entry: None Type of Action: Create a new course Rationale: The course is proposed in support of a graduate degree program in Mathematics. [This course exists at UBCV.]</p>



<p>Proposed Calendar Entry:</p> <p>MATH 620 (2-15) c Directed Studies in Mathematics</p> <p>Advanced study under the direction of a faculty member may be arranged in special situations.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 5bb (3) Mathematical Biology</p> <p>Mathematical methods in modeling biological processes, at levels from cell biochemistry to community ecology. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course can initially be cross-taught with a new Mathematical Biology Undergrad course.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 5aa (3) Methods and Applications of Partial Differential Equations</p> <p>Theory of partial differential equations and their solutions. Classical linear equations: the Laplace equation, heat equation, and wave equation. Green's functions, conformal mapping, and traveling waves. Numerical Methods. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course can initially be cross-taught with the replacement of DE II]</p>



<p>Proposed Calendar Entry:</p> <p>MATH 605 (2-15) c Topics in Applied Mathematics</p> <p>Topics will be chosen from different areas of applied mathematics. Content will be determined so as to complement course offerings and meet the needs of the students. Credit for this course may be obtained more than once.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 612 (2-15) c Topics in Mathematical Biology</p> <p>This course will allow students to explore topics in mathematical biology outside of the core offerings. Topics will depend on student demand and instructor availability. Credit for this course may be obtained more than once.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 523 (3) Combinatorial Optimization</p> <p>Theory of the nature of problems from combinatorial optimization; solution techniques and theory; topics from integer programming, network flows, and matroids. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV]</p>



<p>Proposed Calendar Entry:</p> <p>MATH 5xx (3) Convex Optimization and Nonsmooth Analysis</p> <p>Separation and support properties of convex sets; polar, tangent, and normal cones; Fenchel conjugation; subgradient calculus for convex functions; Fenchel duality for convex optimization problems; algorithms for non-differentiable optimization; nonsmooth analysis and optimization for nonconvex objects. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course can initially be taught with MATH 461]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 5yy (1-3) c Optimization and Analysis I</p> <p>Topics from Optimization and Analysis that are particularly relevant for beginning graduate students at the Master's level. [0,0,3]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course is team-taught as a seminar course]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 6yy (1-3) c Optimization and Analysis II</p> <p>Topics from Optimization and Analysis that are particularly relevant for Master's students nearing completion of their program as well as beginning Ph.D. students. [0,0,3]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course is team-taught as a seminar course]</p>
<p>Proposed Calendar Entry:</p>	<p>URL: N/A</p>



<p>MATH 601 (2-15) c Topics in Analysis</p> <p>Topics, which depend on the students' background and requirements and on the instructor, are drawn from functional analysis, measure and integration theory, non-smooth analysis and variational analysis.</p>	<p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 604 (2-15) c Topics in Optimization</p> <p>Advanced theoretical, algorithmic, or computational topics in optimization chosen by the instructor. Topics in the theory of optimization may include: non-smooth optimization and analysis in infinite-dimensional spaces; monotone operators; subgradient calculus for non-convex functions; semidefinite programming. Algorithms considered may include: interior point methods, projection and other non-differentiable algorithms. Computational topics may include: Complexity of optimization algorithms; practical overview of optimization solvers for continuous and discrete problems; numerical and symbolic computation of Fenchel conjugates.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[This course exists at UBCV. It can initially be team taught.]</p>



<p>Proposed Calendar Entry:</p> <p>MATH 600 (2-15) c Topics in Algebra</p> <p>Topics chosen from group theory, rings and modules, Galois theory, commutative rings, categorical algebra, representations of finite groups, and other topics.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course if proposed in support of a graduate degree program in Mathematics</p> <p>[This course exists at UBCV. Can be offered jointly with MATH 432.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 538 (3) Algebraic Number Theory</p> <p>Ring localizations, integral elements, prime and maximal ideals, Dedekind domains, unique factorization of ideals, algebraic number fields, integral bases, discriminants, norms, class number. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course if proposed in support of a graduate degree program in Mathematics</p> <p>[This course exists at UBCV.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 539 (3) Analytic Number Theory</p> <p>Properties of arithmetic functions. Average values, densities, analytic properties of the zeta function, formula for the nth prime, Prime Number Theorem, Dirichlet characters, Prime Number Theorem for arithmetic progressions. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course if proposed in support of a graduate degree program in Mathematics</p> <p>[This course exists at UBCV.]</p>



<p>Proposed Calendar Entry:</p> <p>MATH 5ee (3) Theory of Error-Correcting Codes</p> <p>Fundamental concepts of communication and coding theory; major types of codes currently used in applications and the mathematical techniques needed to develop them; recent developments in coding theory and the connection between codes and other mathematical objects. [3,0,0]</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics.</p> <p>[Can be offered jointly with MATH 433.]</p>
<p>Proposed Calendar Entry:</p> <p>MATH 610 (2-15) c Topics in Pure Mathematics</p> <p>Topics chosen will depend on the instructor. These may include algebraic number theory, group representation theory, analytic number theory, category theory, combinatorics or algebraic topology.</p>	<p>URL: N/A</p> <p>Present Calendar Entry: None</p> <p>Type of Action: Create a new course</p> <p>Rationale: The course is proposed in support of a graduate degree program in Mathematics</p> <p>[This course exists at UBCV.]</p>



UBC Curriculum Proposal Form Change to Course or Program

Category:

<p>Faculty: Education Unit: Faculty Approval Date: August 2006 Effective Session __ Winter __ Term __ I __ Year 2007 __ for Change</p>	<p>Date: February 2, 2007 Dean: Robert Campbell Contact Person: Sharon McCoubrey Phone 807-8109 Email: Sharon.mccoubrey@ubc.ca</p>
<p>Proposed Calendar Entries:</p> <p>Faculty of Education Developmental Standard Teaching Certificate in Okanagan Language and Culture.</p> <p>Admissions Requirements</p> <ul style="list-style-type: none"> • A grade point average of at least 65% in the following attempted credits: • 6 credits of approved English • 6 credits of Canadian Studies • 3 credits Math¹ • 3 credits Science¹ • 54 credits of Okanagan Language and Culture courses, and Indigenous Studies courses. <p>¹The Math and Science credits may be deferred as this certificate will restrict teaching to only Okanagan Language and Culture courses. Deferred credits must be completed prior to completion of a Permanent Teaching Certificate or a B.Ed. degree.)</p> <p>Education Courses:</p> <p>EDUC 406 (6) Indigenous Language Teacher Education Module, Culture of Education</p> <p>Integrated studies module consisting of the following Seminars: The Developing Learner (2) Social and Cultural Issues in Education (2) Learning Difficulties (2)</p> <p>Introduction to education through seminars and colloquia that provide foundational knowledge in the psychological, socio-cultural, and philosophical and historical underpinnings of</p>	<p>Present Calendar Entry: n/a</p> <p>Type of Action: The establishment of a Developmental Standard Teaching Certificate Program in Okanagan Language and Culture.</p> <p>Rationale: It is essential that the Okanagan Language be taught in order to ensure that the language thrives. There are few Aboriginal teachers certified to teach the Okanagan language.</p> <p>The Developmental Standard Teacher Certificate allows teachers to obtain certification in an expedient manner. Those students obtaining the DSTC will be restricted to teaching only Okanagan language and culture courses.</p> <p>With additional coursework, the DSTC can eventually be converted to a Permanent Teaching Certificate and Bachelor of Education Degree. (This is still under development)</p>



education. Registration limited to students in the B.Ed. DSTC program.

EDUC 474 (3) Methods in Aboriginal Language Education

Examines theory and practice of teaching a language. Instructional strategies, evaluation requirements and processes, curriculum planning, classroom management, and other factors related to teaching a language in a classroom setting. Registration limited to students in the B.Ed. DSTC program.

EDUC 412 (4) Indigenous Language Teacher Education Module Culture of the School

Integrated studies module consisting of the following Seminars
Educational Policy and Administration (2)
Instructional Design: Planning and Evaluation (2)
School operations including the legislative and administrative aspects of the school and the overall school culture. Seminar work in instructional design is provided to prepare students for their practicum teaching experience. Registration limited to students in the B.Ed. DSTC program.

EDUC 422 Context Studies: Learning Communities Practicum (10)

Becoming a practicing professional is explored in this practice teaching experience. An eight-week practice teaching experience will take place in an aboriginal language context. The practicum follows one week of conferring and preparing with sponsor teachers and



supervisors.

Prerequisites: Registration limited to students in the B.Ed. DSTC program.

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THE UNIVERSITY OF BRITISH COLUMBIA | OKANAGAN



OKANAGAN SENATE SECRETARIAT
Senate and Curriculum Services
3333 University Way
Kelowna, B.C. Canada V1V 1V7
Tel: (250) 807-9259
Fax: (250) 807-8007
Lisa.collins@ubc.ca

March 1, 2007

Memo to: Okanagan Senate

From: Admissions and Awards Committee

Re: **New Awards (approval)**

The Committee is pleased to present the following awards.

Motion: *That the Senate accept the new awards as listed and forward them to the Board of Governors for approval, and that letters of thanks be sent to the donors.*

BRIDGES Transitions Inc. Award in Education: A \$500 award is offered by Bridges Transitions Inc. to a student in the Faculty of Education at The University of British Columbia Okanagan who has demonstrated outstanding academic achievement and leadership. The award is made on the recommendation of the Faculty. (First award available for the 2007/08 Winter Session)

CANWEST Global Centre Scholarship: Two scholarships of \$1,000 each have been endowed by the CanWest Global Foundation for students demonstrating outstanding academic and artistic achievement who are registered for full-time studies in the second or third year of the Visual Arts Program. Candidates should be participating in course work and project work in video production at the CanWest Global Centre for Artists' Video in the Faculty of Creative and Critical Studies at The University of British Columbia Okanagan. The awards are made on the recommendation of the Visual Arts Department. (First awards available for the 2007/08 Winter Session)

CANWEST Global Centre Graduating Prize: A \$1,000 prize has been endowed by the CanWest Global Foundation for a student demonstrating outstanding academic and artistic achievement graduating from the Bachelor of Fine Arts Program in the Faculty of Creative and Critical Studies. Candidates should have completed course

work and project work in video production at the CanWest Global Centre for Artists' Video at The University of British Columbia Okanagan. The award is made on the recommendation of the Visual Arts Department. (First award available for the 2007/08 Winter Session)

JACOBSEN Pontiac Buick Men's Varsity Award: One or more awards, which may range from a minimum value of \$500 each to the maximum allowable under athletic association regulations, have been endowed by Jacobsen Pontiac Buick for outstanding members of the Men's Varsity Teams at The University of British Columbia Okanagan in any year of study, with preference where possible, to members of the Men's Varsity Golf Team. Awards are made on the recommendation of the Department of Athletics and Recreation to outstanding students who have demonstrated excellent leadership skills and maintained good academic standing. (First awards available for the 2007/08 Winter Session)

JACOBSEN Pontiac Buick Women's Varsity Award: One or more awards, which may range from a minimum value of \$500 each to the maximum allowable under athletic association regulations, have been endowed by Jacobsen Pontiac Buick for outstanding members of the Women's Varsity Teams at The University of British Columbia Okanagan in any year of study, with preference where possible, to members of the Women's Varsity Golf Team. Awards are made on the recommendation of the Department of Athletics and Recreation to outstanding students who have demonstrated excellent leadership skills and maintained good academic standing. (First awards available for the 2007/08 Winter Session)

Previously-Approved Awards With Changes in Terms or Funding Source:

Award 21104 – VISUAL Arts Course Union Award: (revised description) Three awards of \$200 each are offered by the Visual Arts Course Union, one each for a first, second, and third year student in the Visual Arts Program who has demonstrated commitment to the program and the local fine arts community through volunteerism. The awards are made on the recommendation of the Visual Arts Department at The University of British Columbia Okanagan. (Available 2006/2007 Winter Session)

How amended: The \$600 in available funding was formerly split into two awards of \$300 each instead of three awards of \$200 each.

Respectfully submitted,

Dr. Sharon McCoubrey, Chair
Admissions and Awards Committee

THE UNIVERSITY OF BRITISH COLUMBIA | OKANAGAN



OKANAGAN SENATE SECRETARIAT
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March 1, 2007

Memo to: Okanagan Senate

From: Admissions and Awards Committee

Re: **Admissions Requirements for the Bachelor of
Education, Middle School Specialty (approval)**

Please find attached a proposal to modify the admissions requirements for the Bachelor of Education, Middle School Specialty.

Motion: *That the Senate approve the revisions to the admissions requirements for the Bachelor of Education, Middle School Specialty.*

**Faculty of Education – STEP Middle School
UBC Curriculum Proposal Form
Change to Course or Program**

Category: (1 or 2)

<p>FACULTY: EDUCATION Department: Faculty Approval Date: Fall 2007 Effective Session: Summer, Term 2 Year for Change: 2007</p>	<p>Date: January 2007 Contact Person: Dr. Robert Campbell Phone: 807-9170 Email: Robert.Campbell@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p>Middle School Education Specialty</p> <p>Admission Requirements</p> <p>BEGINNING WITH THE JULY 2008 INTAKE APPLICANTS TO THE STEP MIDDLE SCHOOL EDUCATION SPECIALTY WILL BE REQUIRED TO HAVE ACADEMIC PREPARATION IN TWO TEACHABLE SUBJECTS. - It is important that this text appear in the 2007/8 calendar in bold lettering and in all caps.</p> <ul style="list-style-type: none"> ▪ GPA: A grade point average of at least 65% in the last 60 credits of post-secondary course work passed, failed, and/or repeated; ▪ English Requirements: 6 credits of approved English with an average of 65% or greater. A minimum 3 credits must be English literature. The 6 credits of approved English literature 	<p>URL: (URL from the current web Calendar – not the draft calendar. This URL is not needed if you are only making changes to individual courses - for course entries simply list the course number.)</p> <p>http://okanagan.students.ubc.ca/calendar/index.cfm?tree=18,284,838,976</p> <p>Present Calendar Entry: (Cut and paste from the current web Calendar.)</p> <p>Middle School Education Specialty</p> <p>Admission Requirements</p> <ul style="list-style-type: none"> ▪ GPA: A grade point average of at least 65% in the last 60 credits of post-secondary course work attempted; ▪ English Requirements: 6 credits of approved English with an average of 65% or greater. A minimum 3 credits must be English literature. The 6 credits of approved English literature and composition may be satisfied with course work at the 100-, 200-, 300-, and/or 400-levels. Courses in creative writing, technical or business writing, or communication are not acceptable; ▪ A Bachelor of Arts, Science, or Fine

<p>and composition may be satisfied with course work at the 100-, 200-, 300-, and/or 400-levels. Courses in creative writing, technical or business writing, or communication are not acceptable;</p> <ul style="list-style-type: none"> ▪ A four-year (120 credits) Bachelor of Arts, Science, or Fine Arts degree (or equivalent), which includes academic preparation in either a teaching major and a teaching concentration, or two teaching concentrations, as follows: <p>Option 1: Teaching Major & Teaching Concentration</p> <p>The teaching major requires 30 credits of course work at the 300-level or higher. The teaching concentration requires 9 credits of course work at the 200-level and 9 credits of course work at the 300-level or higher. The 200-level course work will qualify for the concentration only if 6 credits of introductory course work in the subject (typically at the 100-level) have been completed.</p> <p>Option 2: Two Teaching Concentrations</p> <p>The two teaching concentrations require one concentration with 18 credits of course work at the 300-level or higher, and one concentration with 9 credits of course work at the 200-level and 9 credits of course work at the 300-level or higher. The 200-level course work will qualify for the concentration only if 6 credits of introductory</p>	<p>Arts degree or equivalent, with a minimum of 18 credits of coursework at the 300-level or higher in one or two teachable subjects. See 1, 2, and 3 below.</p> <ul style="list-style-type: none"> ▪ Note: it is strongly recommended that students have academic preparation in two teachable subjects; ▪ Applicants with a French Major or teaching concentration must also successfully complete the oral and written French Competency exam to the level specified for French as a Second Language. <p>Teachable Subjects include: English, French Language and Literature, Geography, History, Biology, Chemistry, Computer Studies/Computer Science, Earth/Geological Sciences, Mathematics, Physics, Music, Art/Visual Arts, Home Economics, Technology Studies, and Social Studies.</p> <p>A teaching concentration consists of 18 credits of course work at the 300-level or higher. A teaching major consists of 30 credits of course work at the 300-level or higher.</p> <p>1. A teaching concentration in Geography or History requires completion of 6 credits of approved Canadian Studies¹, in addition to a minimum 18 credits of course work at the 300-level or higher.</p> <p>A teaching major in Geography or History requires completion of 6 credits of approved Canadian Studies¹ which may be included in the minimum 30 credits of course</p>
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course work in the subject (typically at the 100-level) have been completed.

Teachable subjects acceptable for admission to the STEP Middle School Education Specialty are: Computer Studies/Computer Science, English, Art/Visual Arts, Geography, History, Social Studies, Biology, Chemistry, Earth/Geological Sciences, Mathematics, and Physics. See 1, 2, and 3 below.

It is strongly recommended that applicants completing requirements for a teaching major or concentration in English include a course in Shakespeare.

1. A teaching major in Geography or History requires completion of 6 credits of approved Canadian Studies¹ which may be included in the minimum 30 credits of course work at the 300-level or higher.

A teaching concentration in Geography or History requires completion of 6 credits of approved Canadian Studies¹ in addition to a minimum 18 credits of course work at the 300-level or higher.

Applicants may apply with either a teaching major or concentration in either Geography or History but not both. Geography and History must be paired with another teachable subject.

2. A **teaching major or concentration** in Social Studies with a Social Science focus may include course work in one or more of the following: Anthropology, Economics, Geography, History, Political Science, or Sociology.

A teaching major in Social Studies with a Social Science

work at the 300-level or higher.

2. A teaching concentration or major in Social Studies may include course work in one or a combination of the following: Anthropology, Economics, Political Science, Sociology, History, or Geography.

A teaching concentration in Social Studies requires completion of 6 credits of approved Canadian Studies¹, 3 credits of senior-level Geography², and 3 credits of senior-level History², ~~in addition to a minimum 18 credits of course work at the 300-level or higher.~~

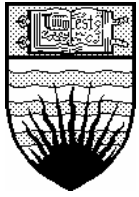
A teaching major in Social Studies requires completion of 6 credits of approved Canadian Studies, 6 credits of senior-level Geography², and 6 credits of senior-level History², in addition to a minimum 30 credits of course work at the 300-level or higher.

1. ~~Applicants with a degree in Kinesiology or Physical Education, acceptable in content to the Faculty of Education, may be considered for admission only if they have completed a minimum 18 credits of course work at the 300-level or higher in a second teachable subject from the above list.~~

¹Approved Canadian Studies course work may be completed at the 100-, 200-, 300-, and/or 400-level.

²For the teaching concentration or major in Social Studies, 200-level course work may satisfy the senior-

<p>focus requires completion of 6 credits of approved Canadian Studies¹, 6 credits of senior-level Geography², and 6 credits of senior-level History², and 30 credits of course work at the 300-level or higher. The 6 credits of approved Canadian Studies may be included in the minimum 30 credits of course work at the 300-level or higher.</p> <p>A teaching concentration in Social Studies with a Social Science focus requires completion of 6 credits of approved Canadian Studies¹, 3 credits of senior-level Geography², and 3 credits of senior-level History², in addition to the course work required for the concentration.</p> <p>¹Approved Canadian Studies course work may be completed at the 100-, 200-, 300-, and/or 400-level.</p> <p>²For the teaching concentration or major in Social Studies, 200-level course work may satisfy the senior-level Geography and History requirement, provided 6 credits of introductory course work in the subject (typically at the 100-level) have been completed.</p>	<p>level Geography and History requirement, provided 6 credits of introductory course work in the subject (typically at the 100-level) have been completed.</p> <p>Type of Action: Revise admission requirements including the list of acceptable teachable subjects.</p> <p>Rationale: Following consultation with the BC College of Teachers, and in order to ensure applicants have adequate academic preparation for teaching the Middle School curriculum, it is necessary to revise admission requirements for the STEP Middle School Education Specialty.</p>
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February 23, 2007

SENATE SECRETARIAT

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To: Senate

From: Nominating Committee

Re: Election of Vice-Chair and Committee Appointment

Vice-Chair

The Nominating Committee is pleased to recommend the following to Senate:

“That Dr Doug Owram be elected as Vice-Chair of Senate for a term of one (1) year and thereafter until a successor is elected, effective 1 March 2007.”

Committee Assignments

The Nominating Committee is please to recommend the following to Senate:

“That the following standing committee appointment be made, effective until 31 March 2007 and thereafter until a successor is appointed:

Appeals of Academic Standing and Discipline: Ms Starleigh Grass”