THE UNIVERSITY OF BRITISH COLUMBIA



Vancouver Senate

AGENDA

THE FOURTH REGULAR MEETING OF THE VANCOUVER SENATE WEDNESDAY, DECEMBER 17, 2008 7:00 P.M.

ROOM 182, IRVING K. BARBER LEARNING CENTRE, 1961 EAST MALL

- 1. Senate Membership -- Mr. Brian J. Silzer
 - New Member: Khatereh Aminoltejari, student representative of the College for Interdisciplinary Studies (information)
- 2. Minutes of the Meeting of November 12, 2008 -- Prof. Stephen J. Toope (approval) (circulated)
- **3.** Business Arising from the Minutes Enrolment Report Q&A (information) (circulated)
- 4. Remarks from the Chair and Related Questions -- Prof. Stephen J. Toope
- 5. From the Board of Governors -- Prof. Stephen J. Toope
 Confirmation that the following items approved by the Vancouver Senate were subsequently approved by the Board of Governors as required under the *University Act* (information)

Senate Meeting of November 12, 2008

Curriculum Proposals from the Faculties of Commerce & Business Administration and Graduate Studies (Applied Science, Arts, Education, College for Interdisciplinary Studies).

The establishment of the BC Leadership Chair in Functional Cancer Imaging in the Faculty of Medicine.

New awards.

- 6. Financial Statements 2007/2008 (circulated) and Budget Outlook -- Provost David Farrar with Guest Presenter Mr. Ian Burgess, Associate Vice-President, Finance (Financial Statements circulated)
- 7. Academic Policy Committee -- Dr. Paul G. Harrison Student Development - Orientation and Transition Activities (approval) (circulated)
- 8. Admissions Committee -- Dr. David W. Fielding (approval) (circulated)
 - a. Calendar Changes on Admission Items
 - b. Motion to Extend Reporting Deadline Review of Admissions Policies

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9. Curriculum Committee -- Dr. Peter Marshall

Curriculum Proposals from the Faculties of Applied Science, Commerce & Business Administration, Graduate Studies (College of Health Disciplines, College for Interdisciplinary Studies, and Education), and Science (approval) (circulated)

- 10. Joint Report from Curriculum and Admissions Committees -- Dr. Peter Marshall (approval) (circulated)
 - a. Bachelor of Science in Applied Biology
 - b. Master of Food and Resource Economics
- 11. Nominating Committee -- Dr. Rhodri Windsor-Liscombe (approval) (circulated)
 - a. Adjustments to Committee Membership and Quorum
 - b. Membership of the Council of Senates
- 12. Tributes Committee

Candidates for Emerita/Emeritus Status (approval) (circulated)

- 13. Report from the Provost & Vice-President, Academic -- Dr. David Farrar Name Change: Centre for Hip Health and Mobility (approval) (circulated)
- 14. Proposed Agenda Items
- 15. Other Business

Notice of Motion: Status of the UBC Farm -- Mr. Blake Frederick

Section 16 (b) of the *Rules and Procedures of Senate* states that meetings will adjourn no later than 9:30 p.m.

Regrets: Lauren Hume, telephone 604.822.5239 or e-mail: lauren.hume@ubc.ca

UBC Senates and Council of Senates website: http://www.senate.ubc.ca

THE UNIVERSITY OF BRITISH COLUMBIA



Vancouver Senate

MINUTES OF NOVEMBER 12, 2008

Attendance

Present: President S. J. Toope (Chair), Ms. L. M. Collins (Acting Secretary), Dean T. Aboulnasr, Dr. Y. Altintas, Ms. K. Aminoltejari, Dr. R. Anstee, Dr. K. Baimbridge, Dean M. A. Bobinski, Ms. H. Boyd, Dr. J. Brander, Dr. B. Cairns, Mr. G. Costeloe, Ms. B. Craig, Mr. D. Dance, Dr. J. Dennison, Mr. G. Dew, Ms. A. Dulay, Dr. W. Dunford, Mr. P. Edgcumbe, Vice-President D. Farrar, Dr. D. Fielding, Mr. B. Frederick, Ms. M. Friesen, Mr. R. Gardiner, Mr. C. L. Gorman, Dr. W. Hall, Dr. P. G. Harrison, Dr. A. Ivanov, Dr. B. S. Lalli, Ms. H. Lam, Dr. D. Lehman, Dr. P. Loewen, Mr. A. Lougheed, Mr. B. MacDougall, Dr. P. L. Marshall, Dr. W. McKee, Mr. R. McLean, Mr. W. McNulty, Ms. S. Morgan-Silvester (Chancellor), Dr. G. Öberg, Dr. C. Orvig, Dr. B. Osmond, Dr. K. Patterson, Dean S. Peacock, Ms. A. Peterson, Mr. G. Podersky-Cannon, Dr. T. Ross, Dean J. Saddler, Ms. A. Shaikh, Dr. S. Singh, Dr. R. Sparks, Dr. B. Stelck, Dean R. Tierney, Dr. M. Vessey, Mr. B. W. Wang, Mr. A. Warbinek, Mr. A. Wazeer, Dr. R. Windsor-Liscombe, Dr. R. A. Yaworsky, Ms. M. Young, Dr. T. Young.

Regrets: Principal M. Burgess, Dr. W. Fletcher, Dean N. Gallini, Dr. S. Grayston, Ms. D. Herbert, Dr. R. Irwin, Dean M. Isman, Dr. S. B. Knight, Mr. A. Lee, Mr. D. Leung, Mr. C. Meyers, Mr. A. Mohan, Dean D. Muzyka, Principal L. Nasmith, Dr. J. Plessis, Dr. L. Rucker, Dean C. Shuler, Ms. L. Silvester, Mr. B. Silzer (Secretary), Dean R. Sindelar, Dean G. Stuart, Dr. S. Thorne, Mr. D. Verma, Dr. P. Ward, Dr. R. Wilson.

Recording Secretary: Associate Secretary Ms. L. M. Collins.

Call to Order

The third regular meeting of the 2008 - 2011 triennium was called to order.

Senate Membership

The President noted that Mr. Silzer had been called away due to a death in the family. Ms. Collins reported the following membership changes on his behalf.

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Senate Membership, continued

- 1. Dr. James Brander replaced Dr. Dale Griffin as representative of the Faculty of Commerce and Business Administration.
- 2. New Senators: Ms. Hedy Lam, elected student representative of the Faculty of Dentistry; Mr. Aaron Warbinek, elected student representative of the Faculty of Education.

Minutes of the Previous Meeting

ATTENDANCE

Recording Secretary Ms. Collins reported that there had been several corrections to the attendance section of the Minutes and asked that Senators be certain to sign the meeting attendance sheet.

The minutes were approved by consent.

Business Arising from the Minutes

None.

Remarks from the Chair and Related Questions

STRATEGIC PLANNING RENEWAL PROCESS

The President reported that nearly 1400 people had responded to a recent survey on the strategic planning renewal process. A series of consultations was planned to take place over the following nine months, and the senates were to be among the consultants. Focus groups and town hall meetings were also planned. Approximately 20 other working groups were underway, and there would be opportunities to integrate findings from these other processes into the strategic plan. The President reiterated the need to link the strategic plan to the University budget. He drew attention to the strategic planning website at: www.strategicplan.ubc.ca .

NCAA CONSULTATION AND CANADIAN INTERUNIVERSITY SPORT

The President gave a brief update on the consultation process regarding a potential UBC application for membership in the National Collegiate Athletic Association (NCAA). A report summarizing the consultation was due to be received by a committee co-chaired by Dean Daniel Muzyka and Associate Vice-President Marie Earl. The committee was expected to issue a report containing its recommendations in January 2009.

The President also reported that Canadian university presidents had recently been engaged in a discussion about possible changes to the existing Canadian Interuniversity Sport association.

UNIVERSITY OMBUDSPERSON

The President stated that the first University Ombudsperson had recently been appointed to begin work in January 2009. An announcement including the appointee's name was expected in the near future.

VICE-PRESIDENT, FINANCE, RESOURCES, AND OPERATIONS

The President reported that the Board of Governors had recently accepted a recommendation to appoint a candidate to the newly created role of Vice-President, Finance, Resources, and Operations. A full public announcement was expected in the near future.

SUSTAINABILITY INITIATIVES

The President reported that significant progress had been made by the academic programs working groups under the President's Advisory Council on Sustainability. The working groups were completing consultation, assessing needs, and examining potential options. More information was to be made available in the near future.

The President was pleased to report that UBC had recently placed first among Canadian post-secondary institutions and third overall in the College Sustainability Report Card, an initiative of the Sustainable Endowments Institute. Based in Cambridge, Massachusetts, the Sustainability Endowments Institute is a non-profit organization funded by the Rockefeller Philanthropy Advisors. The organization had surveyed 300 universities and colleges in the U.S. and Canada on their sustainability activities.

CHANCELLOR SARAH MORGAN-SILVESTER

The President introduced Chancellor Sarah Morgan-Silvester, who was attending her first Senate meeting since having been elected and beginning her term. Chancellor Morgan-Silvester stated that she was delighted to take up her new role and that she eagerly anticipated her installation, which was scheduled to take place during the following week.

RELATED QUESTIONS FROM SENATORS

UBC FARM

Mr. Frederick made reference to a recent decision by the Metro Vancouver board to call upon UBC to protect the size of the UBC farm at its current size of 24 hectares. Mr. Frederick asked the President to comment on what this decision signalled about governance at UBC.

The President responded that he saw no connection between the Metro Vancouver decision and UBC governance because no one at UBC had proposed an imminent change to the size or purpose of the farm. He stated that early discussions about the farm had originated with the former Greater Vancouver Regional District process to establish an Official Community Plan (OCP) for UBC. The OCP designated the land occupied by the UBC Farm as one of three Future Housing Reserves on the Point Grey campus. Before constructing housing on a Future Housing Reserve, the University would need to verify that

the land was not required for academic use. The UBC Farm had been included in the OCP process to ensure that its needs were firmly considered in land use planning decisions. The President stated that it was clear that the farm remained important to the University community and beyond. He had received a petition from Friends of the UBC Farm containing approximately 15 000 signatures.

The President emphasized that the UBC Board of Governors had not yet considered any options in relation to the UBC Farm. No decision had been taken that would indicate that the farm was under threat. Although there had been some discussion about the current scale of the farm, not a single person had argued against the continued existence of a farm. There had been suggestions that the land represented an opportunity to construct a new kind of sustainable housing development, perhaps focusing on rental student housing. Others had expressed the view that the farm should be protected in its current exact state. While many different viewpoints had been expressed, there was no decision pending.

Because of the continued interest in the topic, the President planned to recommend that the Board of Governors expedite its consideration of the status of the farm. If the Board were to accept this recommendation, preliminary discussions would take place at the November 2008 Board meeting. The January 2009 Board meeting would be the earliest possible opportunity to reach a decision. In the interim period, active discussion with all stakeholders would continue.

Dr. Windsor-Liscombe thanked the President for his clarification of the matter. He recalled that all three options included in Phase 4 of the recent UBC Vancouver Campus Plan process had included the farm in our thinking about futures for the Point Grey campus. Urban agriculture and community garden allotments were two themes that had been

proposed, and Dr. Windsor-Liscombe agreed that they were worthy of exploration. The President stated that Campus and Community Planning had issued the three options based on the ideas generated during a consultation process. He noted, however, that these would not necessarily be the options ultimately recommended to the Board of Governors for approval.

The President expressed disappointment that the Metro Vancouver board had reached its decision about the UBC Farm in the absence of discussion with the University.

Candidates for Degrees and Diplomas

The Secretary had prepared a list of 2821 candidates for degrees and diplomas. Of the graduating class, 62 percent were female and 38 percent were male.

Dr. P. G. Harrison Mr. Dew That the candidates for degrees and diplomas, as recommended by the Faculties and Schools, be granted the degree or diploma for which they were recommended, effective November 2008, and that a committee comprised of the Registrar; the appropriate dean and the Chair of the Vancouver Senate be empowered to make any necessary adjustments.

Carried by the required 2/3 majority.

The President remarked with sadness that the list included two candidates whose degrees would be conferred posthumously.

From the Board of Governors

The Senate received for information confirmation that the following items approved by the Vancouver Senate had been subsequently approved by the Board of Governors as required under the *University Act*.

From the Board of Governors, continued

Senate Meeting of September 17, 2008

- 1. Curriculum Proposals from the Faculties of Education and Commerce & Business Administration
- 2. The establishment of the Charles A. Laszlo Chair in Biomedical Engineering in the Faculty of Applied Science

BOARD/SENATE COMMUNICATIONS

The President confirmed that the Board and Senate secretariats were in regular communication with one another and that items were promptly transmitted between the two governing bodies as necessary.

Curriculum Committee

Committee Chair Dr. Marshall presented the report.

FACULTY OF COMMERCE & BUSINESS ADMINISTRATION AND FACULTY OF GRADUATE STUDIES

See also 'Appendix A: Curriculum Summary.'

Dr. Marshall Dr. McKee That the new and changed courses and programs brought forward by the Faculties of Commerce & Business Administration and Graduate Studies (Applied Science, Arts, Education, College for Interdisciplinary Studies) be approved.

Carried.

CERTIFICATE IN FRENCH REGIONAL CUISINE

In accordance with the normal procedure for the approval of certificate programs, the Committee reported having approved a new Certificate in French Regional Cuisine as submitted by Continuing Studies in conjunction with the Faculty of Land and Food Systems. The details of the approved Certificate had been circulated for information.

Nominating Committee

Committee Chair Dr. Windsor-Liscombe presented the report.

COMMITTEE MEMBERSHIP

The Committee proposed the following Committee membership adjustments.

- 1. Admissions Committee Add Dr. James Brander to replace Dr. Darrin Lehman
- 2. Student Awards Add Dr. Darrin Lehman to replace Dr. Gunilla Öberg
- 3. Library Committee
 Add Mr. Aaron Warbinek to fill vacancy

ADDITION TO CIRCULATED MATERIAL

With the permission of the assembly, Dr. Windsor-Liscombe proposed the following additional adjustment.

4. Teaching and Learning Committee
Add Mr. Aaron Warbinek to replace Mr. Robert Taddei

Dr. Windsor-Liscombe Mr. McNulty That Senate approve the revisions to the membership of Committees of Senate as recommended by the Nominating Committee.

Carried.

Student Awards Committee

Committee Chair Dr. Stelck presented the report.

Student Awards Committee, continued

NEW AWARDS

See also 'Appendix B: New Awards.'

Dr. Stelck Ms. Boyd That Senate accept the awards as listed and forward them to the Board of Governors for approval, and that letters of thanks be sent to the donors.

DISCUSSION

In response to a question from Dr. Dunford, Dr. Stelck stated that the Committee was reviewing the minimum amount of funding for a named award. He anticipated that the Committee would be ready to report to Senate in January 2009.

The motion was put and carried.

Ad Hoc Committee on Academic Advising Issues Relating to a Culturally Diverse Student Body

Committee member Dr. Yaworsky presented the report.

REPORTING DEADLINE

Although the Committee had been working diligently to finalize its report to Senate on this expansive issue, it had been unable to meet its specified deadline.

Dr. Yaworsky Mr. McNulty That the Senate Ad Hoc Committee on Academic Advising Issues Relating to a Culturally-Diverse Student Body be permitted to report back at the January 2009 meeting of Senate in lieu of the October 2008 meeting specified by Senate.

Carried.

Report from the Provost & Vice-President, Academic

BC LEADERSHIP CHAIR IN FUNCTIONAL CANCER IMAGING

Vice-President Farrar Mr. Warbinek That Senate approve the establishment of the BC Leadership Chair in Functional Cancer Imaging, made possible by endowment funding from the Province of British Columbia's Leading Edge Endowment Fund and the BC Cancer Foundation.

DISCUSSION

Dr. Hall recalled some discussion at a recent meeting of the Graduate Council about the University's ability to sustain the funding of chairs. Vice-President Farrar recalled making comments at Graduate Council about the relatively high spend rate on the University's endowment. He had been surprised to learn that the rate had been set at five percent, and felt it would be necessary to decrease it by at least one percentage point over the long term to ensure protection of principal funds. The Vice-President stated that he would encourage awareness within the University community of the current state of the endowment and the extent of activities that were endowment-supported. He added that the particular chair under consideration was well funded.

Dr. Young indicated that a candidate for the new chair had been identified and would transition from an appointment as a clinical professor. President Toope pointed out that new chairs must not be considered "faits accomplis" until after approval by both the Senate and the Board.

The motion was put and carried.

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

In the absence of the Associate Vice-President, Enrolment Services & Registrar, Ms. Collins delivered the report.

2008 REPORT ON ENROLMENT

Ms. Collins indicated that the Registrar would welcome questions on any of the reports included in the package. If those questions could not be answered at the meeting, she offered to bring responses to the December 2008 meeting of the Senate.

DISCUSSION

Questions posed by Senators included the following:

1. **Question:** Admission averages are quite high overall. How does the University feel about that?

Response: President Toope stated that UBC ranked roughly fifth among Canadian universities with respect to admission competitiveness. Faculties such as Medicine and Commerce & Business Administration had undertaken broader based admission practices in order to consider criteria other than grades. Vice-President Farrar noted the recent establishment of a Strategic Enrolment Management Committee to consider issues related to building the best possible class. He noted that the cut-off for admission to the Bachelor of Commerce program was at 84 percent after evaluation of supplementary applications. In the absence of the supplementary application, the cut-off would have been approximately 93 percent. In this example, the application of broader based admission had had a positive effect for hundreds of students. He added that it would be important to ensure that broader based admission principles were consistently applied across programs.

Vice-President Farrar noted that the Vancouver campus was at its enrolment capacity, and that the University admitted as many top students as it could each year without over-enrolling. This resulted in relatively high admission cut-offs. He noted that other institutions in the province admitted at lower averages, providing important access

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

opportunities for BC students.

2. Question: UBC has a long record of admitting college transfer students. Will this change with the establishment of five new special purpose teaching universities in the province?

Response: Dr. Farrar stated that the University could expect to continue to receive significant numbers of transfer students from Langara College and Douglas College. The number of transfer students from the new universities (formerly colleges) was expected to decline as these institutions focused on retaining more students to degree completion.

3. Question: What enrolment changes might the University expect over the next decade?

Response: Dr. Farrar stated that the number of eligible students was expected to shrink substantially across the country. While UBC remained fortunate to have a very strong applicant pool, other BC institutions were already experiencing difficulty in meeting enrolment targets. In Ontario, the Greater Toronto Area appeared to be holding steady while the applicant pool from rural areas had declined. UBC had worked to increase enrolment from outside BC, which was currently at approximately 14 percent.

President Toope added that two groups in particular were known to statistically under-enroll in post-secondary education: children of parents without post-secondary education and aboriginal students. It was important to consider changes to the K-12 system to better position these groups for successful admission to UBC.

4. **Question:** Page 21 of the Report indicates that admission averages would be recalibrated in light of the policy change to no longer require BC provincial examinations as admission requirements. What does this mean?

Response: Ms. Collins indicated that while she did not know the answer to the question, the Admissions Committee had been charged with ongoing monitoring of the new policy and would be able to address this question and others as part of a future report to Senate.

5. Question: How successful is UBC with respect to attracting international students?

Response: President Toope stated that UBC and other Canadian universities did not traditionally fare as well as other countries that had invested more heavily in student recruitment. UBC's International Student Initiative was regarded internationally, however, as very successful. UBC had had relatively low success rates in attracting non-BC Canadian students, which led to the creation of a National Enrolment Strategy.

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

6. **Question:** Are UBC Okanagan admission requirements comparable to those at UBC Vancouver?

Response: President Toope stated that the Okanagan requirements were comparable to those in Vancouver but not identical.

Proposed Agenda Items

MOTION FOR CONSIDERATION IN JANUARY 2009

Mr. Frederick indicated that he planned to give notice of motion at the December 2008 meeting relating to an item for inclusion on the January 2009 Senate meeting agenda.

Tributes Committee - in camera

Committee member Dr. Dennison presented the report.

CANDIDATES FOR HONORARY DEGREES

In closed session, the Senate considered and approved a list of candidates for honorary degrees to be conferred during graduation ceremonies in 2009. Dr. Dennison emphasized the importance of confidentiality until such time as the candidates had accepted the University's invitation and a public announcement was made. Each candidate was exceptionally distinguished in at least one of the following four categories: business/industry, academia, fine and performing arts, and public service.

Adjournment

There being no further business, the meeting was adjourned. The following regular meeting was scheduled to take place on Wednesday, December 17 at 7:00 p.m.

APPENDIX A: CURRICULUM SUMMARY

FACULTY OF APPLIED SCIENCE

New Course: LARC 543 (3) Environment and Urban Form

FACULTY OF ARTS

New Course: POLI 573 (3/6) D Formal Models in Political Science

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION

New Courses:

BAHC 500 (1.5) Introduction to Health Care Management

BAHC 580 (1.5) Topics in Health Care Management

BAHC 590 (1.5/3) C Directed Studies in Health Care Management

FACULTY OF EDUCATION

New courses:

EPSE 586 (3) Analyzing Discourse and Talk: An Overview of Methods

LLED 575 (3) Analyzing Discourse and Talk: An Overview of Methods

EPSE 587 (3) Analyzing Discourse in Education: Descriptive and Critical Approaches

LLED 576 (3) Analyzing Discourse in Education: Descriptive and Critical Approaches

COLLEGE FOR INTERDISCIPLINARY STUDIES

New Course: OCCH 513 (3) Concepts of Exposure Controls

APPENDIX B: NEW AWARDS

- B.C. ASSOCIATION of Speech/Language Pathologists and Audiologists Travel Award in Audiology: A \$1,000 award is offered by the B.C. Association of Speech/Language Pathologists and Audiologists to a student conducting their externship in audiology outside of the Lower Mainland and the Fraser Valley but within British Columbia. The award is made on the recommendation of the School of Audiology and Speech Sciences. (First award available for the 2008/09 Winter Session)
- B.C. ASSOCIATION of Speech/Language Pathologists and Audiologists Travel Award in Speech Pathology: A \$1,000 award is offered by the B.C. Association of Speech/Language Pathologists and Audiologists to a student conducting their externship in speech pathology outside of the Lower Mainland and the Fraser Valley but within British Columbia. The award is made on the recommendation of the School of Audiology and Speech Sciences. (First award available for the 2008/09 Winter Session)
- B.C. MEDTECH Graduate Award in Biomedical Engineering: A \$1,400 award has been endowed by B.C. Medical Devices Association for a graduate student entering the Biomedical Engineering Program in the Faculty of Applied Science. Preference is given to a student with an entrepreneurial spirit, an interest in the local biomedical engineering industry and demonstrated leadership and communication skills. Recipients must be Canadian citizens or Permanent Residents. The award is made on the recommendation of the Faculty in consultation with the Faculty of Graduate Studies. (First award available for the 2008/09 Winter Session)

BDO DUNWOODY LLP Service Award: A service award of \$2,000 has been endowed by BDO Dunwoody LLP to recognize a student in the Diploma in Accounting Program (DAP). The award is made on the recommendation of the Sauder School of Business to a part-time or full-time student who is enrolled in the DAP Program and demonstrates high levels of community service and volunteerism within the university or community. Award candidates must also demonstrate high academic standing in the DAP Program. (First awards available for the 2009/10 Winter Session)

Grace Lap-Yu CHAN Bursary: A \$1,000 bursary has been endowed by friends and colleagues in loving memory of Grace Chan, who died tragically too early in life when she was hit by a car. Grace enthusiastically approached new challenges, learning everything she could about her subject until she mastered it. Grace loved her years as a UBC student and spent her entire working career with the University. This bursary honours Grace's passion towards education and her kind spirit on campus. It is awarded to an undergraduate student in the Sauder School of Business who is pursuing the Accounting Option and is in need of financial assistance. (First awards available for the 2009/10 Winter Session)

Robert Mills CLARK Memorial Scholarship: A \$1,000 scholarship has been endowed through a bequest by Robert Mills Clark for an undergraduate student entering the fourth year of a major or honours program in Economics. The award is made on the rec-

ommendation of the Department of Economics. (First award available for the 2008/09 Winter Session)

Sue DEMAINE Recreation Award: Awards, which may range from a minimum value of \$1,000 to the maximum allowable under athletic association regulations, are offered to outstanding members of the REC (Recreation) student staff team registered in any year of study. Awards are made on the recommendation of the REC Awards Committee to outstanding students who have made a lasting contribution to the marketing and services sector of REC operations through demonstrated creativity, energy and leadership. (First awards available for the 2009/10 Winter Session)

FAIRCHILD Group Scholarship: A \$1,000 scholarship has been endowed by the Fairchild Group to alternate annually between the Film Program and the School of Journalism. Preference is given to Canadian and international students with good academic standing, who are focusing on cultural diversity and entrepreneurial leadership. The award is made on the recommendation of the Department of Theatre and Film in even-numbered years and on the recommendation of the School of Journalism in odd-numbered ears. In the case of graduate students, the award is made in consultation with the Faculty of Graduate Studies. (First award available for the 2009/10 Winter Session)

FENYO Prize in Music: A \$500 prize is offered by Dr. and Mrs. Victor Fenyo to an undergraduate student who has completed at least one year of study in the School of Music and demonstrates excellence in some field of music study. The award is made on the recommendation of the School. (First award available for the 2008/09 Winter Session)

Alishia Nora HARRIS Memorial Practicum Award: A \$1,000 award has been endowed by family and friends in memory of Alishia Nora Harris (B.F.A.'03, B.Ed.'07), who loved teaching children through arts and was always thrilled to share everything she had learned from her studies at UBC. The award is made on the recommendation of the Faculty of Education to a teacher candidate in the Bachelor of Education (Elementary) Program, with preference given to a teacher candidate who uses creative arts in his/her teaching practicum or whose concentration is expressive arts. (First award available for the 2009/10 Winter Session)

Sheridan Amanda HEPNER Memorial Bursary: Bursaries totalling \$35,000 have been endowed through a bequest by Margaret Tennyson Wing Hepner in memory of her daughter, Amanda Hepner (B.Sc. 1966), who died suddenly shortly after completing her studies at UBC. The bursaries are awarded to undergraduate students in the Faculty of Science who have achieved good academic standing and are in need of financial assistance to commence or continue their degree program. (First award available for the 2008/09 Winter Session)

School of HUMAN KINETICS Physical Education Bursary: Bursaries totalling \$1,000 have been endowed by friends and alumni for students in the Physical and Health Education stream of the School of Human Kinetics who are in need of financial assistance to continue their post-secondary studies. (First awards available for the 2008/09 Winter

Session)

Rita L. IRWIN Graduate Scholarship in Visual Arts Education: Scholarships totalling \$1,000 have been endowed by Dr. Rita Irwin, a dedicated educator and visual artist. The scholarships are awarded to Education graduate students whose studies integrate the visual arts in their research and practice. The awards are made on the recommendation of the Faculty of Education in consultation with the Faculty of Graduate Studies. (First awards available for the 2009/10 Winter Session)

JR REHABILITATION Services Graduate Award in Occupational Therapy: Awards totalling \$2,500 are offered by JR Rehabilitation Services to students in the Master of Occupational Therapy Program who demonstrate leadership and make a contribution to the Occupational Therapy field of practice through employment, volunteer work, and/or research. The awards are made on the recommendation of the Department of Occupational Therapy. (First awards available for the 2008/09 Winter Session)

Nestor KORCHINSKY Recreation Award: Awards, which may range from a minimum value of \$1,500 to the maximum allowable under athletic association regulations, are offered to outstanding members of the REC (Recreation) student staff team registered in any year of study. Awards are made on the recommendation of the REC Awards Committee to outstanding students who have demonstrated commitment to excellence within the entire REC Program through exceptional leadership skills and ability to inspire others. (First awards available for the 2009/10 Winter Session)

Arnold and Orma KYLE Memorial Bursary in Religious Studies: Bursaries totalling \$1,000 have been endowed by Lynne Muir-Smith (B.A.'56, B.S.W.'57) and Douglas Kyle (B.A.Sc.'54) in memory of their parents Arnold and Orma Kyle. The bursaries are awarded to students in good academic standing who are majoring in Religious Studies. (First awards available for the 2009/10 Winter Session)

LAMBDA Alpha International Vancouver Prize in Real Estate: A \$500 prize is offered by the Vancouver Chapter of Lambda Alpha International to a student in the Real Estate Option in the Sauder School of Business. The award is made on the recommendation of the School. (First award available for the 2008/09 Winter Session)

Edward and Aldine MADSEN Scholarship: Scholarships totalling \$3,700 have been endowed through a bequest by Aldine Florence Madsen and her husband, Edward Madsen (B.Sc. 1949, University of Alberta), for students in Electrical Engineering who have demonstrated an interest in applying their technical knowledge to improving the quality of life of Canadians. The awards are made on the recommendation of the Department of Electrical and Computer Engineering and, in the case of a graduate student, in consultation with the Faculty of Graduate Studies. (First awards available for the 2009/10 Winter Session)

Yvonne M. MARR Bursary in Education: Bursaries totalling \$1,000 have been endowed by Yvonne M. Marr for students in the West Kootenay Teacher Education Program of the Faculty of Education. (First awards available for the 2008/09 Winter Session)

Allan McEACHERN Memorial Scholarship in Law: Scholarships totalling \$1,250 have been endowed by family, friends and colleagues in memory of Allan McEachern (1926-2008) for one or more students who have graduated from a secondary school in the Province of British Columbia and are entering the Faculty of Law. Allan McEachern will be remembered for his outstanding contributions to the legal profession and his long-standing service to The University of British Columbia. He graduated with a Bachelor of Arts in 1949, an LL.B. in 1950 and was given an Honorary LL.D. degree in 1990. He became Chief Justice of the Supreme Court of British Columbia in 1979 and in 1988 was appointed Chief Justice of British Columbia. He retired from that position in May 2001. He was elected UBC's 16th Chancellor in 2002 and re-elected in 2005. This scholarship recognizes a deserving student (or students) who shows leadership in connection with team sports or athletic endeavours, genuine commitment to community service, and promise of an exceptional career in the practice of law. The award is made on the recommendation of the Faculty of Law. Financial circumstances of candidates may be taken into consideration. (First award available for the 2009/10 Winter Session)

MEC Graduate Research Fellowship in Sustainability: Fellowships totalling \$25,000 are offered by Mountain Equipment Co-op to support graduate students in the Ph.D. Program in the Department of Chemistry. Candidates must have excellent academic records and be engaged in research in an area that advances the cause of sustainability. The fellowships are made on the recommendation of the Department of Chemistry in consultation with the Faculty of Graduate Studies. (First awards available for the 2008/09 Winter Session)

MEDICAL Staff Association for the South Island Bursary: Two bursaries of \$2,500 each, administered through the University of Victoria Foundation, are offered to first year M.D. students in the Island Medical Program. The awards are made on the recommendation of the Office of Student Financial Assistance and Awards in consultation with the Faculty of Medicine. (First awards available for the 2008/09 Winter Session)

MONARCH Pediatric Dental and Orthodontic Centre Entrance Bursary in Dentistry: Bursaries totalling \$1,500 are offered by the partners of Monarch Pediatric Dental Centre to students entering the first year of the D.M.D. Program. Candidates are selected on the basis of financial need as determined by the Office of Student Financial Assistance and Awards.

(First awards available for the 2009/10 Winter Session)

MONARCH Pediatric Dental and Orthodontic Centre Bursary in Dentistry: Bursaries totalling \$1,500 are offered by the partners of Monarch Pediatric Dental Centre to students entering the third year of the D.M.D. Program. Candidates are selected on the basis of financial need as determined by the Office of Student Financial Assistance and Awards.

(First awards available for the 2009/10 Winter Session)

Finlay Angus MORRISON and Dorothy Ellen Morrison Scholarship: Two scholarships of \$1,250 each have been endowed by Dr. Finlay Angus Morrison and Mrs. Dorothy Ellen Morrison for undergraduate students in the Faculty of Pharmaceutical Sciences who display exceptional professionalism and have high academic standing. The awards are made on the recommendation of the Faculty. (First awards available for the 2009/10 Winter Session)

Stafford D. PLANT Scholarship in Fine Arts: A \$2,000 scholarship is offered by Thelma and Stafford Plant to an undergraduate student entering the second year of study in the Department of Art History, Visual Art and Theory. The award is made on the recommendation of the Department. (First awards available for the 2008/09 Winter Session)

PROSECUTION Services of British Columbia Bursary in Criminal Law: Bursaries totalling \$2,500 are offered by the Prosecution Service of British Columbia to students, entering their third year of study in Law, who demonstrate financial need and have an interest in criminal law. (First awards available for the 2008/09 Winter Session)

REAL Estate Council of British Columbia Scholarship: A \$7,500 scholarship has been endowed for an undergraduate student entering the Bachelor of Commerce Program at the Sauder School of Business. The award honours the Real Estate Council of B.C.'s 50th Anniversary and recognizes the long-standing partnership in education between the Council and the Sauder School. Candidates must be able to demonstrate an interest in or connection to the real estate industry. The award is made on the recommendation of the School. (First award available for the 2009/10 Winter Session)

J. Lewis ROBINSON Memorial Scholarship: Scholarships totalling \$1,100 have been endowed by the family of J. Lewis Robinson and by his friends and former students to honour his life and achievement at UBC, which included the establishment of the Department of Geography. Scholarships are open to graduate students with high academic standing studying Human Geography with a Canadian focus. The awards are made on the recommendation of the Department of Geography in consultation with the Faculty of Graduate Studies. (First awards available for the 2009/10 Winter Session)

TANABE Thorne Scholarship in Opera: A \$2,000 scholarship is offered by Mr. Takeo Tanabe to a graduate or undergraduate student in the Voice and Opera Division at the School of Music, with preference for a singer in the UBC Opera Ensemble. Established by Takao Tanabe, one of Canada's most influential painters, and Anona Thorne, the scholarship honours the couple's love of opera and their commitment to fostering the next generation of artistic talent. The award is made on the recommendation of the School. (First award available for the 2008/09 Winter Session)

THUNDERBIRD Women's Softball Award: One or more awards, which may range from a minimum value of \$500 each to the maximum allowable under athletic association regulations, are offered to outstanding members of the Thunderbirds Women's Varsity Softball Team in any year of study. Awards are made on the recommendation of the President's Athletic Awards Committee to outstanding students who have demonstrated excellent leadership skills and maintained good academic standing. (First awards avail-

able for the 2009/10 Winter Session)

Michael TOPOLEWSKI Memorial Bursary: A \$1,000 bursary is offered by Mark Topolewski in memory of his brother, Michael John Topolewski, for students with dependent children who are registered in any year or faculty and are in need of financial assistance. (First award available for the 2008/09 Winter Session)

Alban and Audrey TUFTS Memorial Scholarship in Music: A \$1,000 scholarship has been endowed for a student studying piano or a band instrument at the School of Music. The Tufts loved music. Alban studied orchestration and played euphonium, trombone, trumpet and the organ. Audrey taught piano for over sixty years and had a special gift: she made music fund and, as a result, her students' devotion to music was steadfast. Whether it was through impromptu arrangements with friends or more formalized venues, Alban and Audrey always shared their gifts with others. The award is made on the recommendation of the School of Music, taking financial need into account, and alternates between piano in odd-numbered Winter Sessions and a band instrument in evennumbered Winter Sessions. (First award available for the 2008/09 Winter Session)

Pei-Huang TUNG and Tan-Wen Tung Graduate Fellowship: Fellowships totalling \$10,000 have been endowed by Mr. Pei-Huang Tung for international graduate students who are citizens of the People's Republic of China or Taiwan. Fellowships may be renewed for a second year of study at UBC subject to recipients maintaining good academic standing. In adjudicating eligibility, the financial circumstances of eligible candidates may be taken into account. The awards are made on the recommendation of the Faculty of Graduate Studies. (First awards available for the 2009/10 Winter Session)

VANCOUVER Iranian Dental Association Award in Dentistry: A \$1,000 award is offered by the Vancouver Iranian Dental Association (VIDA) to a student entering their second year of the D.M.D. Program in the Faculty of Dentistry who has an outstanding GPA and has demonstrated leadership in the community. The award is made on the recommendation of the Faculty. (First award available for the 2008/09 Winter Session)

WATERS Limited Graduate Student Travel Award: Travel awards totalling \$1,500 are offered by Waters Limited to enable graduate students of the Faculty of Pharmaceutical Sciences to attend conferences and symposia. The recipients must also have a keen interest in liquid chromatography and mass spectrometry. The awards are made on the recommendation of the Faculty of Pharmaceutical Sciences. (First award available for the 2008/09 Winter Session)

Ernest WILLIAMS Bursary in Cardiology: A \$5,000 bursary is offered by Herb and Joan Brubaker to an undergraduate medical student who has shown interest and proficiency in the field of Cardiology. The award is made on the recommendation of the Office of Student Financial Assistance and Awards in consultation with the Faculty of Medicine. (First award available for the 2008/09 Winter Session)

Anna P. WINKLER Memorial Bursary in Medicine: A \$1,000 bursary has been endowed in memory of Anna P. Winkler by her husband, Siegfried Winkler, to aid students in the

M.D. Program who are in need of financial assistance to complete their education. (First award available for the 2009/10 Winter Session)

Shirley M. WONG Award in Education: A \$1,000 award has been endowed by the Canadian Chapter of the International Society for Business Education for an outstanding student in the Bachelor of Education (Secondary) Program with preference for a student whose major or concentration is Business Education. The award is made on the recommendation of the Faculty of Education. (First awards available for the 2009/10 Winter Session)

Shirley M. WONG Bursary in Education: Bursaries totalling \$1,000 have been endowed by Dr. Shirley M. Wong, Associate Professor Emerita of Curriculum Studies, whose lifelong and tireless commitment to education, particularly of the underprivileged, is inspiring. The bursaries are awarded to Aboriginal students in the Faculty of Education who have achieved good academic standing and are in financial need. (First awards available for the 2009/10 Winter Session)

PREVIOUSLY-APPROVED AWARDS WITH CHANGES IN TERMS OR FUNDING SOURCE:

Award 03963 – Mary Campbell Women's Athletic Award (revised description): One or more awards, which may range from a minimum value of \$500 each to the maximum allowable under athletic association regulations, are offered to outstanding members of the Thunderbird Women's Basketball Team in any year of study. Awards are made on the recommendation of the President's Athletic Awards Committee to outstanding students who have demonstrated excellent leadership skills and maintained good academic standing.

How amended: The previous description included the following additional restriction, which proved to be so narrow that it prevented the award from being given out in most years: "Half of each year's awards are granted to outstanding student athletes on the Thunderbird Women's Basketball Team who are majoring in Physical Education and half are granted to female student athletes who are majoring in English." The quoted restriction has now been deleted with the donor's permission.

Award 04425 – Simba Technologies Award in Computer Science (revised description): Awards totalling \$500 have been endowed by the Shiraz Rajan Family, who came to Canada in 1973 from East Africa. Three of the Rajan children, Tazim, Amynmohamed and Salima, attended university in British Columbia in the 1980's and 1990's. In the family tradition, the Rajan Family wished to give back to The University of British Columbia in particular and the Canadian community in general. The awards are made on the recommendation of the Department of Computer Science to outstanding full-time undergraduate students in the Computer Science Program who have demonstrated outstanding community service, with preference to female candidates.

How amended: This is a change to the award title only (the former title was Orbital Technologies Award in Computer Science). The terms of the award remain unchanged.

The endowment which supports this award is called the "Shiraz Rajan Family Endowment Fund" and so there is no legal impediment to amending the award title as requested by the donors.

Award 04632 - Don Wehrung International Student Humanitarian Award (revised description): Awards totalling \$45,000 have been endowed in honour of Dr. Donald A. Wehrung on the occasion of his stepping down as the founding Executive Director of UBC's International Student Initiative, in which capacity he served from 1996 to 2008. The awards recognize outstanding international students from developing countries who have achieved academic excellence under exigent circumstances and would be unable to pursue post-secondary education without assistance. Candidates for the award are nominated by secondary schools, as well as by international, community-based and non-governmental organizations. The value of each award depends on the candidate's financial circumstances and the costs of their program. The awards are made to students entering the University directly from secondary school and may be renewed for up to three additional years of undergraduate study or to degree completion, whichever is less, provided the recipient achieves satisfactory academic standing as determined by his or her Faculty, holds a valid Canadian Study Permit (student visa), and continues to demonstrate financial need. The awards are made on the recommendation of a selection committee comprised of faculty and staff from across the University, with input from members of the community.

How amended: This is a variation in the name of the award from "International Student Humanitarian Award Endowment Fund" to the "Donald Wehrung International Student Humanitarian Award Endowment Fund" to honour Mr. Wehrung on the occasion of his stepping down as the founding Executive Director of UBC's International Student Initiative. The terms of the award itself remain unchanged.

THE UNIVERSITY OF BRITISH COLUMBIA



Vancouver Senate Secretariat Senate and Curriculum Services Enrolment Services 2016-1874 East Mall Vancouver, BC V6T 1Z1

November 21, 2008

To: Vancouver Senate

From: Brian Silzer

Associate Vice-President, Enrolment Services & Registrar

Subject: Business Arising: 2008 Enrolment Report (information)

Please accept my apologies for my inability to attend the November 12 Senate meeting. Following the meeting, several Senators sent us their questions about the 2008 Enrolment Services Annual Report on Enrolment. I thought it would be helpful to provide a list of all of the questions we have received to date, along with their answers.

1. **Question:** UBC's entrance averages seem very high. How does the University feel about that?

Answer: Dr. Farrar noted at the meeting that admission to UBC is competitive. Our capacity to admit new students is limited, and we admit as many top students as we can. Certain programs, e.g., the Bachelor of Commerce, employ broader based admission strategies to look at criteria other than grades in order to build the best possible classes in those disciplines. While UBC entrance averages are undoubtedly the highest in the province, students with lower averages have many other post-secondary options within BC.

2. Question: Page 21 of the Report indicates that admission GPAs will be recalibrated to anticipate changes in grades presented by BC applicants now that provincial examinations are no longer required for admission. What does this mean?

Answer: Every year, undergraduate admission GPAs are determined by analyzing the size and composition of the applicant pool. Because BC secondary school students represent the largest proportion of our applicant pool, any changes in the grades presented by this group has an impact on admission GPAs. We know that historically, BC provincial examinations tend to lower students' grades. As a result, now that UBC no longer requires provincial examination results, we can expect to see BC secondary students presenting higher admission averages than in previous years. Therefore, in order to prevent over-enrolment,

UBC's admission GPAs must be adjusted accordingly.

3. **Question:** Are competitive entrance averages comparable for the Vancouver and Okanagan campuses?

Answer: Entrance averages are not identical. Admission averages are a function of "supply and demand". Demand, as measured by volume of applications, has remained strong on both campuses. But at UBC Vancouver, the supply of undergraduate seats has stayed the same, resulting in higher admission GPAs. At UBC Okanagan, the year-over-year increase in seats has increased capacity and put downward pressure on GPAs.

4. **Question:** How might the recent establishment of five special purpose teaching universities in British Columbia affect UBC's enrolment of college transfer students?

Answer: As Dr. Farrar noted at the meeting, these five new universities definitely changes the post-secondary environment in the province and increases choices for students. While these institutions formerly focused on supporting university transfer, we expect that they will promote student retention in various degrees. The Strategic Enrolment Management Committee is well aware of this issue and will continue to monitor.

5. **Question:** How many first year students entered the Faculty of Science for the 2008/2009 Winter Session?

Answer: 1,329 domestic and 98 ISI students entered into the first year of the BSc program in 2008.

6. **Question:** Could you explain what appears to be a discrepancy between Figure 4 (approximately 28,000 applicants and 14,000 admitted) and the statement on page 7 that "70% of all applicants who complete their admission file were made an offer of admission to their first or second choice of program"?

Answer: In 2008, approximately 70% of all applicants who completed their admission file (i.e. provided all the information requested by UBC) were made an offer of admission to their first or second choice of program.

While it is true that 28,000 applied, not all completed their file. Some students never submitted the documents requested by UBC to render an admission decision. In some cases, students submitted the wrong documents, and when they found out what was actually required, they abandoned their application. Technically, we cannot say that these students were denied admission; these students never received an admission decision because they could not be

evaluated. Therefore, once you subtract the number of incomplete applications, the total application volume drops. Once we only look at the applicants who actually completed their file and received a decision, approximately 70% were made an offer of admission to their first or second choice of program.

Also skewing the numbers is the choice of campus. In the graph on page 6 of the Annual report, we see that 28,000 students applied to (1st choice) UBC Vancouver and 14,000 students got in. However, some students had a first choice of UBC Vancouver and a second choice of UBC Okanagan. If the students were admitted to a second choice at UBC O, they would not be included in the 14,000 who were admitted to UBC Vancouver. They would, however, be included in the "70% of all applicants who … were made an offer of admission to their first or second choice of program."

THE UNIVERSITY OF BRITISH COLUMBIA



3 December 2008

ACADEMIC POLICY COMMITTEE Vancouver Senate c/o Enrolment Services 2016 - 1874 East Mall Vancouver, B.C. Canada V6T 1Z1

Tel: (604) 822-9952 Fax: (604) 822-5945

christopher.eaton@ubc.ca

To: Senate

From: Academic Policy Committee

RE: Student Development - Orientation and Transition Activities (approval)

The Committee has considered a request from the Student Development unit of the Vice-President, Students office for a modification to the academic year so as to allow a coordination of orientation and transition programs for many students on the first day of classes of the Winter session each year. The Committee agrees with the proposal (set out in the attached memorandum) and as such recommends the following to Senate:

"That on the Tuesday following Labour day of each Winter Session starting with 2009 Winter, all classes for students in – or offered by - the following programs be replaced by Imagine UBC, with the exception of those classes that start at or after 5:00 pm and meet only once per week:

Faculty of Arts - All undergraduate programs except the Bachelor of Social Work Faculty of Commerce & Business Administration – Bachelor of Commerce Faculty of Dentistry – Bachelor of Dental Science in Dental Hygiene Faculty of Applied Science – Bachelor of Applied Science Faculty of Forestry – All undergraduate programs Faculty of Education – Bachelor of Human Kinetics Faculty of Land & Food Systems – All undergraduate programs Faculty of Science – All undergraduate programs"

This change would have the effect of causing undergraduate service courses used by programs not listed above – but offered by the faculties of Arts and Science– to not occur on the first day of class. For example, CHEM233/235 and STAT203 used by the Bachelor of Science in Pharmacy, or GEOG102/103, ENGL110/112 and PHYS100 used by the Bachelor of Environmental Design program.

Some classes offered by the programs above are cross-listed or offered concurrently with classes for programs not listed; in these cases, the cross-listed version of the course would still be held, but students enrolled via an above-listed program may not be academically penalized for participating in Imagine UBC in lieu of attending class. For example, LAW316 would still be held, but students enrolled in that course under its POLI376 title would be excused. The same would be true for MECH489 and 582. Most of these cases are 400-level undergraduate classes that are offered concurrently with 500-level graduate classes.

MEMORANDUM

To: Senate Academic Policy Committee

From: Student Development

Re: Request for the replacement of the first day of Term 1 undergraduate classes with orientation and transition programming

Request

Orientation and transition programming and support are a foundational aspect of Strategic Enrolment Management. At UBC Vancouver we do not have an institutional commitment to orientation and transition and we have gone about as far as we can with the current programming. Replacing the first day of Term 1 undergraduate classes with orientation and transition programming would help to build on the current programming to offer specific transition and academic services that are important for our new to UBC students as well as addressing the needs of continuing UBC undergraduate students. As such, the Associate Deans, Students and Student Development recommend to Senate that on the Tuesday after Labour Day, undergraduate classes in specified programs in Arts, Commerce & Business Administration, Dental Hygiene, Engineering, Forestry, Human Kinetics, Land and Food Systems, and Science are replaced with Imagine UBC, with the single exception of those classes that start at or after 5:00 pm and meet only once per week.

Background

Since 1997, the Imagine UBC Orientation program has replaced all 100-level classes until 5:00 pm on the first day of Term 1, typically the Tuesday following Labour Day. Through small faculty-based groups (MUG – My Undergraduate Group), students who share a common class are led by a senior student (MUG Leader) through a program that addresses many of their pressing transition questions and facilitates connections with peers, faculty, and staff. Through these connections new first-year students learn about the resources and services available to support a successful academic and social transition to university life (see <u>Appendix 1</u>). The hope is that at the end of their first day at UBC, each student leaves knowing that our community wants them to be successful and believing that they have made the right institutional choice. They begin to belong to their faculty and have a set of peer introductions that will serve them over the next transitional weeks.

The success of Imagine UBC demonstrates what is possible when a campus community works together and serves as an example of the importance of making time for all students during regular class time in Term 1 to deliver effective orientation and transition events. The current parameters placed on Imagine UBC create constraints by dividing the commitments of over 750 volunteers who are both participating in Imagine UBC and required to be in class on that day. Imagine UBC does not have access to the classroom space it requires to facilitate thoughtful and engaging interactions between students, faculty and staff and this significantly constrains the impact of the orientation program. Additionally, students have the experience of being led from one end of campus to the other to utilize whatever space is available. With so little available classroom space there is no rain plan; leaving MUG Leaders little choice but to meet in hallways and open space that they may or may not need to vacate if a class is scheduled to begin. Despite all the work that has been done, it quickly becomes apparent to new students that faculty, staff and the campus community are focused not on orientation and welcoming new students to the UBC community but on the priorities of their first day of classes. One of the most important changes as a result of starting classes one day later would be to enable more faculty members to become involved with orientation and for the many faculty members currently engaged in Imagine UBC, to deepen their role and engagement with students that day.

Planning and Institutional Research (PAIR) analyzed the data collected from the 2004 Student Voice Orientation Benchmarking Survey to assess the degree to which orientation and transition programming at UBC is effective. Their analysis found that it contributes positively to all students' academic transition and commuter student's social transition to university. If we stopped doing Imagine UBC this would negatively impact our student's experience

Beyond the First Year Experience

Many transitions occur throughout a student's university experience, such as choosing a major and becoming part of one or more academic departments or preparing for graduation. Freeing up the first day of term would allow academic departments to deliver specific programming to welcome new students to their academic community and provide them a

scholarly orientation to the academic department. In doing so, undergraduate students would continue to build connections with faculty members and peers, and learn about the educational opportunities, resources, and services that are available to support them. UBC has a large commuter population and it is important to facilitate the process for students to find their place in a smaller community, academic departments being the most critical. Beyond building smaller communities, this model would allow programming to be directed toward specific student populations. For example, students preparing for their graduating year may benefit from transition topics such as applying to graduate school, preparing for the career search, and accessing volunteer and internship opportunities.

A significant number of transfer students make the choice to attend UBC each year and are another student population that would benefit greatly from specific orientation and transition programming on the first day of Term 1. Though they have experience in post secondary institutions, they are new to the UBC campus and express similar concerns to first-year students entering from high school, including finding their way around campus, making connections with peers and faculty, and succeeding academically.

Traditionally, the types of programs that have been outlined above have been taking place to varying degrees in the evenings and on weekends but there is much more that could be accomplished. Offering programming at these times limits access to many groups who need it most. Furthermore, students are already experiencing a high level of stress given multiple and competing priorities. UBC has one of the longest average commutes by students of any university in North America. Survey data show that those who commute to campus are more likely than students who live in residence to be the first generation in their family to attend university and they are more likely to have work and family responsibilities that compete for their time. Building orientation and transition programming into the regular term schedule would remove some of the barriers that currently exist for commuter students. The aforementioned examples clearly demonstrate the possibilities for improving the student experience. It is incumbent upon us to provide time and the institutional commitment to these kinds of academic transitions in order to enhance a student's experience.

Plan for Implementation

An Orientation Committee will be created with representation from Student Development, Faculties, Undergraduate Societies, and the AMS. In the first year, the committee will be charged with two priorities. First they will review current first-year orientation programming and recommend changes to content and structure. Second, they will work with the campus community on the design, coordination, and implementation of programs and services that will provide an orientation experience for transfer students and for students entering an academic department or program. As part of this process the committee will look at building a program around existing elements of the Imagine UBC day, like the Main Event Carnival that is open to the entire campus community. Not all academic programs will be able to take advantage of the new opportunity to the same extent in the first year but pilot programs of varying design will help us all learn how to make positive changes.

To successfully implement changes of this magnitude requires time and institutional support. Even though it may take a number of years to fully implement a comprehensive program, there is no question that it is not just first-year students who will benefit from replacing the first day of classes with orientation and transition programming. This kind of change will focus our priority on transition and academic services in order to help create a supportive campus environment and a truly great university experience for both new and returning students.

Consultation Process

Over the years the Alma Mater Society has brought the idea embodied in this proposal forward to Student Development on many occasions and continues to advocate for a more comprehensive orientation and transition program. The idea was raised for discussion at the Committee of Associate Deans, Students and received full support. The Associate Deans support the delay of the first day of classes for undergraduates in Arts, Commerce & Business Administration, Dental Hygiene, Engineering, Forestry, Human Kinetics, Land and Food Systems, and Science to allow Faculties and the Vice President, Students portfolio to develop a comprehensive orientation and transition program for undergraduates in these Faculties. Subsequently, a discussion paper was created and brought to the Senate Academic Policy Committee for consideration and they recommended that it be considered by all undergraduate and professional programs with the exception of those programs that already have orientation and transition programs built into the curriculum. On advice received from the Senate Academic Policy Committee the discussion paper was presented to the Committee of Deans and received strong support. The Deans recommended working with the Associate Deans, Students on consultation in each of the faculties. In addition it was recommended that AMS and the Undergraduate Societies be consulted on the process. A summary of the consultation process can be found at the end of the proposal (see Appendix 2).

Throughout the consultation process the response has been very positive with an overwhelming majority of respondents supporting the proposed change. AMS Council passed a motion, with 23 out of 30 votes in support the proposed change. The questions and concerns raised during the consultations are consistent across faculty, staff, and students and centre around the logistics of the implementation, student attendance on the day, and the impact of losing an instruction day for upper-year courses particularly those that meet only once per week on Tuesday. Alternatives have been recommended, such as starting the semester before the Labour Day weekend to accommodate orientation or compressing the December exam schedule to make up for the loss of an instructional day.

Addressing Concerns and Alternatives Raised During Consultation Process

We will need to address in a systematic and coordinated the manner the logistics of implementing campus-wide programming so that we limit the competing priorities for students on the first day of term. The current Imagine Day serves as an example of what is possible when the entire campus community works together and this approach is essential in the creation of a coherent and varied program that appeals to students. Experience shows that students will attend if they see value in programs and services and they must be involved in providing feedback on program design.

Replacing classes for undergraduate students on the traditional first day of classes would still allow for sixty-one instructional days through 2016 and would not affect Monday, Wednesday, Friday classes that are normally impacted by statutory holidays. In addition, the Academic Course Scheduling Guidelines restrict the scheduling of classes that meet once a week for three hours to outside peak class scheduling times. This results in the majority of these classes being scheduled in the evening when they will not be impacted by the proposed change.

Traditionally Labour Day weekend marks the end of the summer work period and the beginning of University for students. Starting the semester before the Labour Day weekend to accommodate orientation would create a ripple effect felt across the campus and beyond.

Our Canadian peer institutions, the University of Toronto and Queen's University, both make orientation and transition programming a priority over the entire first week of September and begin classes the following week. The University of Toronto has a semester of the same length as UBC and makes up the difference by having an exam period that is a week shorter than UBC's. Queen's semester has a week less of instructional days and a shorter exam period.

UBC Okanagan currently replaces the first day of classes for all students. The first instructional day has been moved to day 2 of the term to facilitate orientation and transition programming. The programs run on the first day have been well attended and received by students.

APPENDIX 1 Imagine UBC - First Year Orientation Schedule

	Science A (SONE, CPSC, CSP)	Science B	Arts A (AONE & CAP)	Arts B	Music	Sauder	HKIN	LFS	Engineering	Forestry	
7:00 AM						SL/SM Check-in					
7:15 AM							SL/SM Check-in	SL/SM Check-in		SL/SM Check-in	
7:30 AM 7:45 AM	SL/SM Check-in	SL/SM Check-in	SL/SM Check-in	SL/SM Check-in	SL/SM Check-In	ML Check-in			SL/SM Check-in	,	
8:00 AM 8:15 AM	ML Check-in	ML Check-in	ML Check-in	ML Check-in	ML Check-In	Morning	ML Check-in	ML Check-in		ML Check-in	
8:30 AM						Meetings	Morning	Morning	ML Check-in	Morning	
8:45 AM	Morning	Morning	Morning	Morning	Morning		Meetings	Meetings		Meetings	
9:00 AM	Meetings	Meetings	Meetings	Meetings	Meetings	MTD	мто мто	[Morning		
9:15 AM		C	Load WMGM	Load WMGM	Load WMGM			Faculty Breakfast	Meetings	Faculty Breakfast	
9:30 AM 9:45 AM		Campus Tour & UBC Rec & Lahda	MTD	MTD	MTD			,	MTD		
10:00 AM 10:15 AM	Unload Chan	Centre				Campus Tour & UBC Rec	HKIN Tour	МТВ		- Campus Tour	
10:30 AM	_	Load Chan				OBO NEC	HKIN Cheer	14.1.5		campas rour	
10:45 AM			Unload WMGM		Unload WMGM						
		MTD	ssw	Campus Tour	SSW	ssw	ssw	ssw	Campus Tour & SSW		
11:15 AM 11:30 AM										MTD	
11:45 AM 12:00 PM	Lunch	Lunch		SSW		Travel Time		Lunch		Lunch	
12:15 PM			Lunch			Lunch	Lunch			Lunch	
12:30 PM											
12:45 PM	ssw	SSW Travel Time	Campus Tour		2411011	Sauder Carnival	Campus Tour	Campus Tour		ssw	
1:00 PM				Lunch	Campus Tour						
1:15 PM 1:30 PM	Travel Time			Travel Time					Lunch		
1:45 PM	maver nine	maver nime		maver nine							
2:00 PM											
2:15 PM											
2:30 PM	Pep Rally										
2:45 PM		. 									
3:00 PM											
3:15 PM											
3:30 PM		Main Event Carnival									
3:45 PM											
4:00 PM											
4:15 PM	ividili Evelit Catilival										
4:30 PM											
4:45 PM 5:00 PM											

Morning Meetings

First thing in the morning and before any activities, time is spent on introductions and questions in MUG.

Student Success Workshop (SSW)

The workshop is facilitated by a faculty member and senior students and provides strategies on how to make a successful academic transition to university.

Meet the Dean/Director (MTD)

The Meet the Dean/Director session is the chance to meet and hear from the Dean/Director, as well as the student leaders who are involved in the undergraduate society. The session provides the opportunity to learn more about the faculty or program and some of the opportunities and resources available to students.

Lunch

Lunch is provided by the faculty and provides the opportunity for MUG members to get to know each other better and to interact with faculty and staff present.

Campus Tours

MUG Leader provides a tour of the relevant buildings and services, sharing personal perspective on the student experience.

Pep Rally

The entire first-year class assembles in War Memorial Gymnasium for a high energy welcome to UBC. There is an academic procession much like the one at convocation and speeches from the UBC and AMS Presidents. This is the only time the entire class will be assembled at once.

Main Event Carnival

The purpose of the Main Event Carnival is to showcase UBC student life by presenting a wide range of services, clubs, and activities, over two hundred interactive booths. All students are invited to explore the social and academic atmosphere of the university, while enjoying entertainment.

APPENDIX 2 Consultation Process

Groups	Date	Consultation Summary
Committee of Deans	September 10, 2008	 Unanimously supported by the Deans Program needs to meet the unique needs of each faculty, cannot be standardized for the entire campus Important to be intentional in planning and not create competing priorities for students Work with the Associate Deans on consultation within each of the Faculties
Student Senate Caucus	October 15, 2008	 Unanimously supported by the Senators present at the meeting Orientation leaders are forced to choose between class and Imagine Other student leaders have responsibilities on that day and are required to make a difficult choice Transfer students need to receive the same type of welcome as first-year students so that they feel part of the campus community Concern raised about upper-year students coming on the first day if there is no class
Undergraduate Society Presidents	October 15, 2008	 Unanimously supported by the Presidents Opportunity for undergrad societies to get more involved in orientation Raised question if Term 1 could begin on the Friday before Labour Day and what do other universities do
AMS Executive	October 16, 2008	 AMS Exec split on their support for the proposal All were supportive of 1st-year and transfer students participating in orientation events on the first day Concern raised around cancelling classes for upper-year students, particularly seminar classes that meet once per week on Tuesday's Current Imagine program does not work for all students Raised question if Term 1 could begin on the Friday before Labour Day and what do other universities do Raised the issue of financial impact on TA's, Faculty Members, and cost savings to the university

AMS Council	October 22, 2008	 AMS generally supportive of the proposal Raised questions about why this hadn't been done already, have graduate students been considered, will upper-year students attend, could the term start before the Labour Day Opportunity for increased orientation for transfer students Opportunity to hold departmental events AMS Council passed a motion (23 of 30 in favour) to endorse change on November 5, 2008
Faculties	Ongoing	 Response from students and faculty members has been mostly positive with some opposition to the change Opportunity to hold departmental events Opportunity to provide a more comprehensive orientation to transfer students Concern raised about student attendance Concern raised about value of orientation Concern raised about impact on number of instructional days Alternatives – start the semester earlier or compress the exam period Feedback submitted by faculty members

THE UNIVERSITY OF BRITISH COLUMBIA



Vancouver Senate Admissions Committee c/o Enrolment Services |Senate & Curriculum Services Brock Hall 2016 – 1874 East Mall Vancouver BC V6T 1Z1 Tel: (604) 822-8141 | Fax: (604) 822-5945 amandeep.breen@ubc.ca

December 5, 2008

To: Vancouver Senate

From: Admissions Committee

Re: Calendar Changes on Admission Items (approval)

I. Changes in Admission Requirements – Bachelor Science in Nursing (approval)(circulated)

This item was reviewed and approved at the September 2008 meeting of Senate. The calendar entry approved at that meeting was incomplete; information on the selection process for and readmission to the Bachelor of Science in Nursing was inadvertently removed and is now included in the circulated document.

Motion: That Senate approve the revised calendar entry on admission to the Bachelor of Science in Nursing, effective for the 2009 admission cycle and thereafter.

II. Calendar Changes on Admission Items – Bachelor of Science (approval)(circulated)

The Admissions Committee has reviewed and recommends to Senate for approval the revised calendar entry on admission and transfer to the Bachelor of Science program.

Motion: That Senate approve the revised calendar entry on admission and transfer to the Bachelor of Science program, effective for the 2009 admission cycle and thereafter.

III. Calendar Changes on Admission Items – Bachelor of Science in Food, Nutrition & Health, Dietetics Major (approval)(circulated)

The Admissions Committee has reviewed and recommends to Senate for approval the revised calendar entry on admission to the Bachelor of Food, Nutrition and Health, Dietetics Major.

Motion: That Senate approve the revised calendar entry on admission to the Bachelor of Food, Nutrition and Health, Dietetics Major, effective for the 2009 admission cycle and thereafter.

Respectfully submitted,

Dr. David Fielding Chair, Admissions Committee



UBC Undergraduate Admissions Proposal Form Change to Admission Requirements

Department: School of Nursing

Effective Session: Winter Session 2009

Year for Change: 2008

URL:

http://www.students.ubc.ca/calendar/index.cfm?tree=12,2 11,386,379

Proposed Calendar Entry:

Admission Criteria

All inquiries relating to the Bachelor of Science in Nursing (B.S.N.) Program should be directed to the School. Students considering application should refer to the School of Nursing Website for more details.

Admission to the program requires advanced standing by either a bachelor's degree or significant progress (48 credits) toward a degree in another field of study.

All prospective students are required to demonstrate a minimum level of English language proficiency before admission: Please refer to the UBC English Language Admission Requirements.

Applicants are required to have a minimum C average, or grade point average of 2.0 (calculated on a 4-point scale) based upon the most recent 30 credits completed at the undergraduate level (<u>Please refer to the UBC requirements for more details</u>).

UBC will consider granting transfer credit for all appropriate post-secondary courses completed. The following post-secondary courses are required:

- First-year English (3 credits): English 112 is recommended or an equivalent first year higher education English composition course. Exceptionally, the English prerequisite may be waived for students who completed a bachelor's degree from an accredited University (where English was the main language of instruction during that degree).
- BIOL 153 (7 credits) or BIOL 155 (6 credits) or an equivalent human anatomy and physiology course/courses. Courses accepted as equivalent to this are listed on the School of Nursing Website. In addition, other human anatomy and physiology courses may be

Date: July 4, 2008

Contact Person: Dr. Bernie Garrett

Phone: 604 822 7443

Email: bernie.garrett@nursing.ubc.ca

URL:

http://www.students.ubc.ca/calendar/index.cfm?tree=12,21 1,386,379

Present Calendar Entry:

Admission

All inquiries relating to the Bachelor of Science in Nursing (B.S.N.) Program should be directed to the School. Students considering application should refer to the Website for more details.

The last day for submission of applications for the Winter Session beginning the following September or January is February 28, with necessary documents and official transcripts to be received in Enrolment Services by May 15. For registered nurses, application and documentation submitted to the School's Undergraduate Program Records Office by June 1 will be processed for either September or January admission. Once accepted, registered nurse students should consult a faculty advisor in order to determine their course sequence.

The School has a limited enrolment. Since the number of qualified applicants usually exceeds the number of places available, fulfillment of the following requirements is not a guarantee of admission. The School reserves the right of selection of all students for admission and readmission to the School.

Applicants whose first language is not English must demonstrate competence in both oral and written English. Please refer to the English Language Admission Standard.

Admission from Secondary School

Admission directly from secondary school is suspended, effective September 2006.

Admission with Advanced Standing

Advanced standing includes a bachelor's degree or significant progress (48 credits) toward a degree in another field of study.



acceptable to the School subject to an internal review. Details of this review process and an application package can be found on the School Prior Learning Assessment & Recognition (PLAR) Website.

For students to obtain the required competencies for entry-level Registered Nursing practice certain skills and abilities are required. It is important that you are aware of these prior to applying for admission to the nursing program. These requirements (Requisite Skills and Abilities) can be viewed on the CRNBC Website.

Application and Document Submission

- 1. Initial application must be made on-line to the <u>University</u> by December 1.
- 2. The School of Nursing also requires a supplemental application. Applicants must submit the following supplemental admission documents:
 - · the Supplemental application form
 - the names and contact information of two individuals who can provide reference information. It is recommended that one referee be a teacher, instructor, employer, or supervisor.
 - a current résumé (structured form provided in the application)
 - a brief written personal statement about the applicant's reasons for requesting admission to the School and understanding of the profession of nursing. (Format provided in the application).

These forms are available and can be filled in and submitted on-line at the <u>Student Services</u> <u>Centre</u> (select Self Admission). They must be submitted by January 15.

Applications for any human anatomy/physiology course equivalence (if required) may be received at any time but must be received by January 15 for entry the following September.

3. Official transcripts and other required documents must be sent to the following address by January 30.

The University of British Columbia Enrolment Services 2016 - 1874 East Mall Vancouver, BC Canada V6T 1Z1 The School will select for admission those students who not only demonstrate academic potential, but who also most aptly display a motivation to study nursing and who demonstrate that they possess the qualities and skills most necessary to be a caring and competent professional nurse. Candidates may be invited for an interview at the discretion of the admissions committee.

Applicants from post-secondary institutions are required to have a minimum C average, or grade point average of 2.0 (calculated on a 4-point scale). Note: Due to enrolment limitations, the academic standing required for admission is higher than the above average and is subject to change each academic year. Applicants who have completed college and/or university courses should consult the third- and fourth-year advisor in the School. UBC will consider granting transfer credit for all appropriate post-secondary courses completed. The following courses are required:

- English (3-6) (ENGL 112 is recommended)
- BIOL 153 (7) or BIOL 155 (6) or equivalent (pending approval by Senate, BIOL 153 and BIOL 155 will be renumbered as BIOL 253 and BIOL 255, respectively).

The following courses are recommended: BIOL 112 and MICB 202 or 3 credits of microbiology.

Applicants for admission for advanced standing must submit the following additional supplemental admission requirements to Undergraduate Program, School of Nursing, T201-2211 Wesbrook Mall, Vancouver, BC, V6T 2B5, by February 28:

- Name and contact information of two individuals who can provide reference information. It is recommended that one referee be a teacher, instructor, employer, or supervisor.
- 2. A current resumé (structured form provided in the application package).
- A brief written personal statement about the applicant's reasons for requesting admission to the School and understanding of the profession of nursing. (Format provided in the application package.)
- 4. Supplemental application form and processing fee. A processing fee of CAD \$107.50 must accompany the supplemental application admission forms that are returned to the School. This fee is non-refundable and should be made payable to the UBC School of Nursing. No applications will be processed unless the fee is received.

Inquiries and requests for a supplemental application



Tel: 604.822.9836

Tel: 1.877.272.1422 (Toll free in the US

& Canada)

4. Additionally an unofficial transcript/copy must also be sent to the School of Nursing at:

School of Nursing Admissions Office University of British Columbia School of Nursing T201-2211 Wesbrook Mall Vancouver, B.C. V6T 2B5 Canada

Application Processing Fees

A processing fee of CAD \$107.50 plus \$50.00 for outof-province applicants must accompany the
supplemental application package. These fees are
non-refundable and are paid as part of the
supplemental on-line application. No applications will
be processed unless the fee is received. Late
applications will not be considered. There is an
additional \$50 review fee, payable to the UBC
School of Nursing, for any human
anatomy/physiology course equivalence review
(if required). These applications must be
accompanied by this fee when submitted.

Selection Process

The School of Nursing has a limited enrolment. Since the number of qualified applicants usually exceeds the number of places available, fulfillment of the minimum requirements is not a guarantee of admission (see the School of Nursing Website for a profile of accepted students). The School reserves the right of selection of all students for admission and readmission to the School. Canadian residents will be given preference in the selection process.

The School of Nursing will select for admission those applicants who not only demonstrate academic potential, but who also most aptly display a motivation to study nursing and who demonstrate that they possess the qualities and skills most necessary to be a caring and competent professional nurse. In addition, the School will select those applicants who demonstrate the best potential for academic success, leadership, and ability to advance the nursing profession.

Academic documents are assessed by Enrolment Services and the supplemental application documents are assessed by the UBC School of Nursing Admissions Team. Human anatomy/physiology course equivalency is assessed by the School of package may be addressed to the School.

Incomplete applications and late applications will not be considered.

Applicants with advanced standing who are accepted will be sent a letter of acceptance and details about the registration procedures.

Supplemental Application Form and Processing Fee

A University application and a supplemental application package must be completed and returned to the School by June 1. Along with the supplemental application form, two confidential assessment forms, a resumé, and a personal statement must be submitted. A processing fee of CAD \$107.50 plus \$50.00 for out-of-province applicants must accompany the supplemental application forms. These fees are non-refundable and should be made payable to the UBC School of Nursing. No applications will be processed unless the fee is received. Late applications will not be considered.

The School will select for admission those students who demonstrate the potential for academic success, leadership, and ability to advance the nursing profession.

Readmission

The School reserves the right to readmit students and to stipulate conditions attached to readmission. Application for readmission to the School will be reviewed on an individual basis.

Type of Action:

- Reformat of the existing information, and addition of additional information on the selection process and requirements for practice.
- Removal of information pertaining to direct admissions options
- 3) Canadian residents are to be given preference
- 4) Stipulation of earlier application deadlines
- New process for Human Anatomy and Physiology pre-requisites for entry and internal review process
- 6) Change of process of Supplemental Application Package being processed online by the Student Service Centre

Rationale:

 Reformatted for clarity, to prevent duplication of information, and to provide additional detail



Nursing PLAR Committee.

Based on academic standing and scoring on the supplemental application, a selection of applicants are offered interview. The interview is a critical component of the admission process. Applicants selected for an interview will be contacted by the School of Nursing Admissions Office. The interview dates will likely be scheduled for late March and April.

Applicants who, after interview, are accepted will be sent a letter of acceptance and details about the registration procedures.

Readmission

The School reserves the right to readmit students and to stipulate conditions attached to readmission. Application for readmission to the School will be reviewed on an individual basis.

- on selection for applicants, and information on the CRNBC Prerequisite Skills and Abilities needed for practice.
- Direct entry from High-School is no longer offered by the School (there are no longer program options as previously described) i.e. Entry with advanced standing is the only undergraduate entry now offered.
- Canadian residents are to be given preference in selection, in order to prioritize the recruitment of nurses who will continue to work in Canadian healthcare system over US and other foreign applicants.
- 4. An earlier application deadline enables the School to process applications more efficiently and offer places earlier, therefore preventing loss of applicants to other Universities.
- 5. The School wishes to change the Human Anatomy and Physiology course entry prerequisites to increase flexibility, and review equivalent courses to BIOL 153/BIOL 155 with an internal review committee. Applicants will be required to send a copy of their transcript, course syllabus and a \$30 review fee to the School. Then the School PLAR committee will review the course for equivalency to BIOL 153/BIOL 155 and make a decision on its acceptability for entry.
- The SSC is now able to process and track supplemental applications online and process supplemental application fees which provides a more efficient process and is easier for applicants to use.

UBC Undergraduate Admissions Proposal Form Change to Admission Requirements

Faculty: Science Date: December 1, 2008

Effective Session: 2009 Summer Contact Person: Dr. Paul Harrison

Year for Change: 2008 Phone: 2-3659

URL:

http://www.students.ubc.ca/calendar/index.

cfm?tree=12,215,410,406

Proposed Calendar Entry:

Admission and Transfer

General

Application for admission to the Faculty must be made through **the on-line application for undergraduate admission** (**insert URL**). Procedures, policies, and admission requirements to UBC and the Faculty are specified in Calendar Chapter II, Admissions.

Many students are admitted on the basis of interim grades to ensure that offers of admission meet the needs of both the applicant and the university for timely decision-making. Students who are admitted on interim grades must continue to meet the University's minimum admission requirements (see the Calendar Chapter II, Admissions [insert link]). Admitted students whose final grades indicate that they may face academic challenges may be contacted by the Faculty to arrange for participation in student success workshops and peer support programs offered during the teaching term.

Admission from Secondary School

Students interested in the Science One

URL:

http://www.students.ubc.ca/calendar/index.

cfm?tree=12,215,410,406

Present Calendar Entry:

Admission

Application for admission to the Faculty must be made through Enrolment Services. Procedures, policies, and admission requirements to UBC and the Faculty are specified in Calendar Chapter II, Admissions. Approved examinable Grade 11 and 12 courses are also listed there. Students may find it to their advantage to present credit for as many of Biology 12, Chemistry 12, and Physics 12 as possible. Certain programs have reduced requirements in one or more of these subjects for students with Grade 12 credit.

For applicants who meet minimum academic requirements but who do not meet the required competitive average for early admission, additional academic criteria, such as achievement in standardized tests, results from national or international competitions, or compelling evidence of outstanding leadership may be considered. Details are available at the Faculty website.

Students admitted to the Faculty by transfer from other post-secondary institutions must present credit for MATH 100 (or equivalent) and must either have met the English Requirement of the Faculty (see

program must, in addition to applying for admission to the Faculty, also submit a formal application directly to the Program Office (see <u>Science One Program</u>). Students interested in the Coordinated Science Program or in registering individually for courses need only to submit the general application for admission to the Faculty.

For applicants who meet minimum academic requirements but who do not meet the required competitive average for early admission, additional academic criteria, such as achievement in standardized tests, results from national or international competitions, or compelling evidence of outstanding leadership may be considered. Details are available at the Faculty website [insert link to www.science.ubc.ca/students/future].

Admission as a Post-Secondary Transfer

Students applying to the Faculty by transfer from other post-secondary institutions must present credit for MATH 100 (or equivalent) and must either have met the Communication Requirement [link to new Communication Requirement] of the Faculty under Bachelor of Science, Degree Requirements) or be eligible to enrol in first-year English at UBC at the time of admission.

Transfer applicants to Science must also present the required high school academic pre-requisites, as listed in Calendar Chapter II, <u>Admissions</u>. In some cases, university transferable coursework may satisfy these pre-requisites. Any transfer applicant who did not take Chemistry 11 or Physics 11 or acceptable equivalent from outside of BC must have taken transferable first-year courses as a replacement. These courses are critical to degree progression

Transfer Credit under Bachelor of Science, Academic Regulations, and English Requirement under Bachelor of Science, Degree Requirements) or be eligible to enrol in first-year English at the time of admission.

Students admitted by transfer and those admitted to a second-degree program (see Second Degree Studies under Bachelor of Science, Degree Requirements) will be admitted to the year level that is appropriate according to the First-Degree Promotion Requirements. The Promotion Requirements are based on the number of credits completed (both total and in Science courses) and degree of completion of the Lower-Level Requirements including English (see Lower-Level Requirements under Bachelor of Science, Degree Requirements).

Applicants who cannot meet the requirements as specified should submit an appeal to Enrolment Services with their application forms. The Dean, who has discretionary powers on admissions, will consider all appeals.

Students applying for admission from secondary schools outside of BC/Yukon must meet the minimum requirements applied to graduates from BC secondary schools for admission to first year. A student required to discontinue from another faculty may be permitted to register only by special permission, and should consult the Dean's Office. A student with unsatisfactory standing from another post-secondary institution will not be admitted.

Students interested in applying to the Science One program must apply through Enrolment Services for admission to the Faculty and, in addition, submit a formal application directly to the Program Office (see Science One Program).

within the Faculty.

A student with unsatisfactory standing from another post-secondary institution will not be admitted.

Students admitted by transfer and those admitted to a second-degree program (see Second Degree Studies [link to http://www.students.ubc.ca/calendar/index. cfm?tree=12,215,410,408#7478] under Bachelor of Science, Degree Requirements) will be admitted to the year level that is appropriate according to the First-Degree Promotion Requirements. The Promotion Requirements are based on the number of credits completed (both total and in Science courses), degree of completion of the Lower-Level Requirements including English (see Lower-Level Requirements under Bachelor of Science, Degree Requirements), and degree of completion of courses required for the chosen specialization. Because there are limits on the number of credits attempted before attaining each yearlevel standing, students who have exceeded those limits without qualifying for the appropriate year-level will not be admitted. For details, see Promotion Requirements [link to

http://www.students.ubc.ca/calendar/index.cfm?tree=12,215,410,408#14352] under Bachelor of Science, Degree Requirements.

To earn the B.Sc. degree, at least 50% of the credits required for the program must be completed as a B.Sc. student at UBC Vancouver.

See also Transfer Credit [insert new Calendar link] in this chapter.

Transfer from Another UBC Program

UBC students who wish to transfer to the **UBC** Vancouver Faculty of Science

International Baccalaureate and Advanced Placement [...]

Registration and Program Approval [...]

Type of Action:

Rename the section. Remove information not relevant to admission and add details of current practice on the timing of offers of admission and on policy on transfer that are not explicit in the Calendar. Structure into sub-sections. Place section after revised **Advising and Academic Information** section and before new **Registration** section.

Note: The link to "<u>Calendar Chapter II</u>, <u>Admissions</u>" in the entry on Admission as a Post-secondary Transfer should take prospective students to a new table submitted by Enrolment Services.

Rationale:

Much of the information in the current section relates to registration, not admission, and critical parts of it will appear in other sections of these regulations. To meet the goal of having transparent practices, information on admission not readily available to transfer applicants is added. With the developing trend toward making offers of admission on interim, rather than final grades, information is needed to inform students of the possible implications of being admitted early if final grades no longer support the early decision.

must follow the procedures, policies, and admission requirements specified in the Calendar under Readmission or Change of Degree Program/Campus.

Students applying for admission from another UBC program are subject to the requirements noted above under Admission as a Post-secondary Transfer except that an applicant who is eligible only for first-year standing in the B.Sc. program is not required to present credit for MATH 100.

A student with unsatisfactory standing from another UBC program will not be admitted directly. Successful completion of at least 30 credits of university-transferable credits at a recognized post-secondary institution with an average grade that meets the admission requirement set for the year of application is required before the previous unsatisfactory standing will be ignored.

Appeals on Admission Decisions

Please refer to the entry on Appeals in the Calendar Chapter II, Admissions.



UBC Undergraduate Admissions Proposal Form Change to Admission Requirements

Faculty: Land and Food Systems

Department: Food, Nutrition and Health Effective Session: 2009 Winter Session

Year for Change: 2008

Date: September 22, 2008 Contact Person: Karol Traviss

Phone: 7-5046

Email: karol.traviss@ubc.ca

URL:

http://www.students.ubc.ca/calendar/index.c fm?tree=12,194,261,11

Proposed Calendar Entry:

Dietetics Major

The Dietetics Major is... and includes courses and internship placements to assist students to develop knowledge and skills for dietetic practice.

Admission

Admission to the Dietetics Major is to third-year and is based on:

1. Initial screening for:

a) Prerequisite Requirements

Admission to the Dietetics Major is limited to students who will have completed a minimum of 54 credits of university or college coursework by April 30 of the year in which they are applying for admission. This must include the following prerequisites (or their equivalents): ENGL 112; BIOL 112, 121, 140, 200, and 201; CHEM 111/113 or 121/123, and CHEM 205/233 or 203/204; AGSC 250¹; AGSC 252²; FNH 200¹ and 250; Social Science¹ (6 credits; e.g., PSYC 100, SOCI 100). All of these prerequisites can be met by following years one and two of the Nutritional Sciences Major or Food, Nutrition and Health Major.

¹ Note that up to 9 credits of AGSC 250, FNH 200, and Social Science (6) can be deferred until a student has been accepted into the Dietetics Major, as long as 54 credits of university or college course work, including all other prerequisite courses, have been completed.

² Students who transfer into third-year Dietetics from other institutions may take a 3-credit statistics course in lieu of this

URL:

http://www.students.ubc.ca/calendar/index
.cfm?tree=12,194,261,11

Present Calendar Entry:

Dietetics Major

The Dietetics Major is... and includes courses and internship placements to assist students to develop knowledge and skills for dietetic practice.

Admission

Admission to the Dietetics major is to third-year and is based on three components:

1. Academic Performance (60% of Admission Score)

Admission to the Dietetics Major is limited to students who will have completed a minimum of 54 credits of university or college coursework by April 30 of the year in which they are applying for admission. This must include the following prerequisites (or their equivalents): ENGL 112; BIOL 112, 121, 140, 200, and 201; CHEM 111/113 or 121/123, and CHEM 205/233 or 203/204; AGSC 250¹; AGSC 252²; FNH 200¹ and 250; Social Science¹ (6 credits; e.g., PSYC 100, SOCI 100). All of these prerequisites can be met by following years one and two of the Nutritional Sciences Major or Food, Nutrition and Health Major.

Note that up to 9 credits of AGSC 250, FNH 200, and Social Science (6) can be deferred until a student has been accepted into the Dietetics Major, as long as 54 credits of university or college course work, including all other prerequisite courses, have been completed.

²Students who transfer into third-year Dietetics from other institutions may take a 3-credit statistics course in lieu of this requirement.

Admission is based on a minimum academic standing of 70%, calculated as a cumulative average of grades from all prerequisite (years 1

equirement.

b) Academic Performance

Admission is based on a minimum academic standing of 70%, calculated as a cumulative average of grades from all prerequisite (years 1 and 2) and any program courses (years 3 and 4) taken. Elective courses are not included in this calculation. Note that due to enrollment limitations, the academic standard required for admission is typically higher than the published minimum.

 Non-academic application components (cover letter, resume, and references)

These application components are used to assess an applicant's interest in and suitability for the profession of dietetics. Applicants should refer to guidelines and forms posted on the faculty website http://www.landfood.ubc.ca/programs/dietetics_ug.htm.

The above admissions components are assessed using standardized forms which address the following indicators:

- Commitment to the dietetics profession (demonstrated interest in and understanding of the profession; demonstrated effort to seek professionallyrelevant experiences)
- Critical thinking skills (ability to analyze and integrate information and apply knowledge to make sound judgements)
- Decision-making skills (ability to make sound, timely decisions)
- Dependability (ability to work with minimal supervision, be consistently dependable)
- Initiative/self-directedness (ability to independently initiate activities, seek new opportunities)
- Leadership skills (ability to gain support of and lead others)
- Learning approach (ability to learn quickly and independently, quest for knowledge)
- Organizational/planning skills (ability to develop sound plans with attention to detail)
- Perseverance (ability to function effectively despite discouragement and setbacks)
- Response to feedback (ability to accept

and 2) and program courses (years 3 and 4) taken. Elective courses are not included in this calculation. Note that due to enrollment limitations, the academic standard required for admission is typically higher than the published minimum.

2. Test of Critical Thinking, Reading, and Writing (20% of Admission Score)

Candidates write a formal academic essay, of at least 300 words, in response to a proposition drawn from a short reading. The topic of the essay is not directly related to dietetics. Applicants are required to attain a minimum level of achievement on the test to gain consideration in the final selections (regardless of the performance in other criteria). This test can be written at UBC or at another institution if the applicant can arrange for it to be proctored.

Essays are assessed on four main criteria:

- the precision and relevance of the response to the topic,
- the clarity and depth of thought about the topic expressed in the response,
- the coherence and development of the argument, and
- the command of expression, grammar, and punctuation demonstrated in the response.

Each essay is assessed anonymously and independently by two reviewers. The review process is overseen by an expert facilitator and completed over a short time. It is not possible to re-evaluate essays.

This is not the type of test for which applicants can study. However, activities or courses that promote development of reading, writing, and critical thinking skills may assist applicants to perform well on this test.

3. Personal Profile (20% of Admission Score)

At the time of writing the test of critical thinking, reading, and writing, candidates also complete a written Personal Profile. This has two components:

 a brief (maximum two page) Summary of Experience, prepared in advance (using a template available on the faculty website), and brought to the testing session; and



constructive feedback, develop plans for improvement and implement these plans)

- Suitability for health care environment (potential to work in a fast-paced environment with diverse patients and clients who face health challenges)
- Team skills (ability to work cooperatively and effectively with others)
- Time management skills (ability to consistently manage time effectively and efficiently)
- Written communication skills (ability to write clearly, concisely, accurately)

2. Interview (short-listed applicants only)

Short-listed candidates will be invited to participate in a brief (10-15 minute) personal interview at UBC (expected timing: late April) with a small panel of admissions committee members (2-3). Applicants who reside outside the Lower Mainland and are unable to come to UBC for an interview will be interviewed by telephone.

The main purpose of the interview is to assess oral communication skills (ability to convey information clearly and effectively), as strong oral communication skills are essential for dietetic practice. The interview will also be used (in addition to the cover letter, resume, and references) to assess an applicant's commitment to dietetics as a career choice.

The interview guide will vary each year. Questions will focus on skills and not specific areas of knowledge related to the profession.

A criteria-based scoring form and a consensus process will be used to assess interview performance.

Admission Score

Applicants are admitted on the basis of a final admissions score, as follows:

Academic Performance: 40% Cover letter/resume: 25%

References: 5% Interview: 30%

Each assessment component includes minimum acceptable criteria which must be met in order for the applicant to be considered (regardless of scores obtained in other components).

a short set of questions that will allow candidates to explain why they have chosen to pursue a career in dietetics, their understanding of the role of the dietitian, and why they think their background and skills are appropriate for the profession. The specific questions may vary from year to year. Candidates who have researched the profession and/or have volunteer or work experience in nutrition/dietetics will be better able to answer the questions.

Application

The annual application date is February 28 for September admission.

Application procedures:

- Students not already enrolled in the B.Sc. (FNH) program in UBC's Faculty of Land and Food Systems must apply for this program by February 28 through UBC Enrolment Services.
- All applicants must submit a completed program application form (available on the faculty website) to the Faculty of Land and Food Systems, along with a cheque for the application fee of \$50.00.

Only those applicants who meet minimum academic requirements for admission are invited to participate in the March applicant testing session. All testing participants are required to bring a completed Summary of Experience form (listing relevant educational, work and volunteer experience) to the testing session. The template for the form is available on the faculty website.

Applicants are informed about their admission status by mid-June.

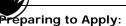
Program Information...

Type of Action:

Revised program narrative to reflect proposed changes to admissions process.

Rationale:

 The current admissions process for dietetics was implemented in 2004 when the program transitioned from a campus-based academic



Dietetics is a professional program and it is essential that all prospective applicants take steps to consider whether this is an appropriate career choice for them, and obtain relevant skills and experience prior to applying.

To prepare, prospective applicants should:

- Investigate the profession thoroughly (including all areas of practice) and seek exposure to dietitians through volunteer and work roles and events dietitians are involved in
- Undertake a process of self-reflection to consider personal suitability for this career choice.
- Investigate the program thoroughly so they fully understand all that is required of students in the program.
- Subscribe to the dietetics-volunteering listserv (instructions on dietetics website http://www.landfood.ubc.ca/programs/dietetic s_ug.htm) to learn about available volunteer and paid employment opportunities related to the profession and to receive program updates.
- Seek experiences that assist in development of general skills applicable to a variety of career and academic pursuits (e.g., critical thinking, decision-making, leadership, communications).

Application

The annual application date is February 28 for September admission.

Application to the Dietetics Major has two components:

- Online application to enter the B.Sc. (FNH) program in UBC's Faculty of Land and Food Systems (LFS)
- A paper Dietetics Major application package to be submitted to LFS Student Services.

Application procedures:

 Non-UBC students must apply online by February 28 through Enrollment Services to enter the B.Sc. (FNH) program in UBC's Faculty of Land and Food Systems (LFS). External applicants are encouraged to contact LFS Student Services in advance of applying

- program to a full professional training program with internship placements included.
- We have now used this process to admit 5
 cohorts of students to the program, 2 of which
 have now completed the program. This year,
 our admissions committee took the
 opportunity to review and reflect on the
 admissions process to date and to review
 admissions processes used by other UBC
 health science training programs.
- We would like to move away from a selection process that relies heavily on written submissions prepared during a testing session.
- Given the importance of verbal communication to the profession of dietetics we feel that interviewing short-listed candidates would be advantageous.
- To further assess professional potential of our applicants we would like to add a cover letter, resume and reference requirement.
- The current admissions process involves administration of a written test of critical skills (critical thinking, reading and writing).
 Although we believe strongly in the value of these skills for dietetics, the test itself has not helped us to differentiate applicants as the scores tend to be clustered (and low). Clearly, ongoing efforts are needed to promote these skills (across the campus and within our own program) but use of this test is not assisting us in applicant selection.
- As per other UBC health science training programs, we would like to avoid publishing detailed applicant scoring criteria within the calendar entry. This will give us the ability to review and refine our approach to assessing applicants without having to update the calendar entry each time. We hold information meetings for applicants each year and share scoring criteria in use with them at that time.

to ensure they have met prerequisite course requirements.

- Current UBC students who are not already enrolled in the B.Sc. (FNH) program must apply online through Enrollment Services to enter the program. In the event of an unsuccessful application, students in good standing have the ability to remain in their original program/faculty.
- All applicants must submit a paper Dietetics Major application package (prepared using forms and guidelines posted on the faculty website) to the Faculty of Land and Food Systems. Each application package must include:
 - Completed application form
 - Transcripts (as required)
 - Cover letter
 - Resume
 - Two completed reference forms in sealed envelopes
 - A \$50 application fee cheque

Short-listed candidates are identified for the interview component based on a preliminary applicant score which considers both academic and non-academic application components.

Final applicant scores are computed once interviews are complete and final marks for the term are available. Applicants are informed about their admission status by early June.



Vancouver Senate Admissions Committee c/o
Enrolment Services |Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall
Vancouver BC V6T 1Z1
Tel: (604) 822-8141 | Fax: (604) 822-5945
amandeep.breen@ubc.ca

December 5, 2008

To: Vancouver Senate

From: Admissions Committee

Re: Motion to Extend Reporting Deadline (approval)

At the December 2007 meeting of Senate, the Admissions Committee was directed to undertake a review of UBC's undergraduate admission policies with a view to determining the efficacy of meeting the goals of Trek 2010 and the UBC Academic Plan and report back to the Senate by the December 2008 meeting of the Senate with recommendations on any necessary changes.

While the reporting responsibility delegated to the Committee was completed in part by its report on the *Review of UBC Undergraduate Admission Policies: Principles of Effective Undergraduate Admission to UBC*, the review of admission policies and practices is ongoing.

As such, the Committee requests that Senate resolve as follows:

That the Senate Admissions Committee be permitted to report back at the April 2009 meeting of Senate in lieu of the December 2008 meeting specified by Senate.

Respectfully submitted,

Dr. David Fielding Chair, Admissions Committee

THE UNIVERSITY OF BRITISH COLUMBIA Item 9 p.1



December 4, 2008

CURRICULUM COMMITTEE Vancouver Senate 2016 - 1874 East Mall Vancouver, B.C. Canada V6T 1Z1

To: Vancouver Senate

From: Senate Curriculum Committee

Re: December Curriculum Proposals (approval)

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:

Motion: That the new and changed courses and programs brought

forward by the Faculties of Applied Science, Commerce and Business Administration, Graduate Studies (College of Health

Disciplines, College for Interdisciplinary Studies, and

Education) and Science be approved.

Respectfully submitted,

Peter Marshall, Chair Senate Curriculum Committee



2 December 2008

Enrolment Services Senate and Curriculum Services 2016 – 1874 East Mall Vancouver, BC V6T 1Z1 ginette.vallee@ubc.ca T: 604-822-0140; F: 604-822-5945

To: Vancouver Senate

From: Senate Curriculum Committee

Re: CURRICULUM PROPOSALS FROM THE FACULTIES OF APPLIED SCIENCE

Attached please find submitted category 1 curriculum proposals from the Faculties of Applied Science, Applied Science (School of Architecture and Landscape Architecture), and Land & Food Systems for your consideration.

APPLIED SCIENCE

The following **program changes**:

Minor in Arts – new option

BASc Mining Engineering, 2nd year course list

The following **new courses**:

EECE 498 (3)

EECE 499 (3)

MECH 368 (3)

MECH 433 (3)

MINE 224 (4)

MINE 291 (3)

MINE 292 (3)

Faculty: Applied Science

Faculty Approval Date: November 6, 2008

Effective Date: September 2008

Date: June 30, 2008

Contact Person: Bruce Dunwoody

Phone: 604-822-6556

Email: bruce.dunwoody@ubc.ca

APSC Undergraduate Program Change(s)

Proposed Calendar Entry: Minor in Arts

A student in an engineering program may undertake a Minor in Arts. An acceptable Minor program must comprise courses in the Faculty of Arts that are for credit toward a B.A. degree and consists of 18 upper level credits in a single subject or field of specialization. A student should design a coherent and academically sound course of studies for his or her proposed Minor. The program must be approved by an advisor in Engineering Student Services on the recommendation of an advisor from the appropriate department or program office within the Faculty of Arts. All courses must be acceptable for a B.A. major in the proposed subject area or field but the student is not bound by other requirements of the Faculty of Arts.

A Minor in Mathematics, Computer Systems, Cognitive Systems or where there is significant overlap between the student's engineering program and the proposed subject or field for the Minor is not permitted. A Dual Degree and a Minor in Arts cannot be combined although a student may pursue a Minor within the B.A. degree.

Upon successful completion of the Minor program, the notation "Minor in Arts" will be added to the student's transcript.

Students wanting a subject-specific Minor may also undertake a Minor in a specific Arts discipline's *Minor Program*, which requires the completion of at least 30 credits in a single subject field of specialization, of which at least 18 credits must be numbered 300 or higher.

URL:http://www.students.ubc.ca/calendar/inde x.cfm?tree=12,195,272,0

The proposed entry would follow the heading for "Degree Requirements" and would precede the heading for the "Minor in Commerce".

Present Calendar Entry: None

Type of Action: New option.

Rationale: Some engineering students would like to include substantial non-engineering studies within their education.

This Minor in Arts provides the opportunity for a structured extension of their education and to have their extra efforts recognized on their transcripts. Faculty: Applied Science

Department: Mining Engineering

Faculty Approval Date: November 6, 2008

Effective Session: September 2009

MINE Program Course Change(s)

Date: October 8, 2008

Contact Person: Dr. Michael Hitch

Phone: 827-5089

Email: mhitch@mining.ubc.ca

URL:

http://www.students.ubc.ca/calendar/index.cfm?tree=12,195,272,45

Present Calendar Entry:

Second Year	
APSC 201	3
CIVL 210	4
EOSC 210	3
EOSC 324	3-
MATH 253	3
MATH 255	3
MECH 260	3
MECH 280, CIVL 215 or CHBE 251	3 (4)
MINE 290-	3-
MINE 293	1
MINE 295-	3-
STAT 251	3
Complementary Studies Electives ¹	3
Total Credits	38 (39)

Type of Action: Changes to curriculum.

Rationale: EOSC 324 and MINE 338 will be combined into a 4 credit MINE 224 (Applied Mineralogy and Petrology) reflecting the specialized needs of process engineers. MINE 290 will be split into two independent 3-credit courses (MINE 291 and MINE 292) reflecting increased course content for mining and mineral process components. MINE 295 will be moved to 3rd year and renamed MINE 395.

Proposed Calendar Entry:

Second Year	
APSC 201	3
CIVL 210	4
EOSC 210	3
MINE 224	4
MATH 253	3
MATH 255	3
MECH 260	3
MECH 280, CIVL 215 or CHBE 251	3 (4)
MINE 291	3
MINE 292	3
MINE 293	1
STAT 251	3
Complementary Studies Electives ¹	3
Total Credits	39(40)

Faculty: Applied Science

Department: Electrical & Computer Engineering Faculty Approval Date: November 6, 2008

Effective Session: September 2009

Date: October 8, 2008 Contact: Steve Wilton Phone: 822-1263

URL: n/a

Email: stevew@ece.ubc.ca

Proposed Calendar Entry:

EECE 498 (3) Optimization of Power System Operation

Application of linear and nonlinear optimization methods in power systems; constrained optimization; optimal power flow; economic dispatch; electricity market; local prices for active and reactive power; security-constrained OPF; state estimation, reliability analysis [3-0-0].

Co-requisites: EECE 458

Present Calendar Entry:

Type of Action: New course.

Rationale: This course is presently offered under the temporary number 490V. Optimization methods have advanced significantly in the past decade and their application to Electrical Energy Systems is increasing rapidly. This technical elective course will be offered in the first term of the academic year in parallel with the Electrical Energy Systems Option Core course EECE 458 Power Systems Analysis. The students will develop a thorough understanding of optimization methods and their applications in power systems. Optimization is the backbone of the electricity pricing in the electricity market, transmission costing and congestion management.

Proposed Calendar Entry:

EECE 499 (3) Decision Support Methods in Power Systems Operation

Principles; acceptable regions of operation; energy management systems; load flow methods; static and dynamic security; contingency analysis; transient and voltage stability; on-line stability assessment [3-0-0].

Pre-requisites: EECE 458

URL: n/a

Present Calendar Entry: None

Type of Action: New course.

Rationale: This course is presently offered under the temporary number 491V. Computer applications and decision support tools have advanced significantly in the past decade and their application to Electrical Energy Systems is increasing rapidly. This trend is expected to continue as the result of need for safe and economic operation of power systems, increasing complexity of the systems as well as the advancing computer technologies. This course will be offered in the second term of the academic year to follow up the Electrical Energy Systems Option core course EECE 458 Power Systems Analysis. The students will develop a thorough understanding of the main objectives and processes of power system

operations as well as become familiar with the decision support tools required for modern power systems.

Faculty: Applied Science

Department: Mechanical Engineering Faculty Approval Date: November 6, 2008

Effective Date: September 2009

Date: October 8, 2008

Contact Person: Dr. Gary Schajer

Phone: 604-822-6004 Email: schajer@mech.ubc.ca

URL: n/a

Proposed Calendar Entry:

MECH 368 (3) ENGINEERING MEASUREMENTS AND INSTRUMENTATION

Industrial measurement needs, modeling, analog sensors and instrumentation, digital sensors and instrumentation, actuators.

Prerequisite: All of MECH 220, MECH 221, MECH 222, MECH 223. [3-1-0]

Present Calendar Entry: None.

Type of Action: New course.

Rationale: Parts of this course were implicitly covered in a mixture of other courses. This important material is consolidated in this new course so that it can be presented in an explicit and organized way. Several teachers with the required specialized knowledge are available within the Mechanical Engineering Department to teach the course.

Proposed Calendar Entry:

MECH 433 (3) BIOFLUIDS

Review of principles, biorheology, circulatory biofluid mechanics, synovial fluid in joints, biofluid dynamics of the human brain, respiratory biofluid mechanics, flow and pressure measurement techniques in human body. Credit will be granted for only one of MECH 433 or MECH 533.

Prerequisite: One of MECH 222, MECH 280, CIVL 215. [3-0-1]

URL: n/a

Present Calendar Entry: None

Type of Action: New Course.

Rationale: This course is designed as a technical elective available to students in the undergraduate Biomedical Option. The course content was taught in 07W as MECH 410L (Special Topics in Mechanical Engineering) and will be taught again in 08W. Student interest and enrollment have been sufficient to justify the establishment of a specialized course. The previous MECH 410L course was co-taught with MECH 550L. (A proposal to renumber 550L to 533 is being considered by the Graduate Sub-Committee).

Faculty: Applied Science Department: Mining Engineering

Faculty Approval Date: November 6, 2008

Effective Date: September 2009

Proposed Calendar Entry:

MINE 224 (4) Mineralogy for Mining Engineering

Fundamentals of the main techniques used by the industry to characterize raw materials and troubleshoot processing plants. [3-0-2]

Date: October 8, 2008

Contact Person: Dr Michael Hitch

Phone: 827-5089

Email: mhitch@mining.ubc.ca

URL: n/a

Present Calendar Entry:

Type of Action: New course.

Rationale: This new course is intended to provide instruction in industry specific mineralogy and mineralogical problem solving. EOS 324 (Mineralogy and Petrology) and MINE 338 (Process Mineralogy) will be combined into a new course, eliminating duplication, focusing on mining/ processing applications.

Proposed Calendar Entry:

MINE 291 (3) Introduction to Mining

Leading practices and technologies employed in the design, planning and operation of mining systems. Life cycle of surface and underground mining systems. [3-0-2]

URL: n/a

Present Calendar Entry: None

Type of Action: New course

Rationale: MINE 290 (Introduction to Mining and Mineral Processing) will be split into two separate courses to accommodate increased course content.

Proposed Calendar Entry:

MINE 292 (3) Introduction to Mineral Processing

Overview, and extracting a mineral or final product from an ore. [3-0-2]

URL: n/a

Present Calendar Entry: None

Type of Action: New Course

Rationale: MINE 290 (Introduction to Mining and Mineral Processing) will be split into two separate courses to accommodate increased course content.



Enrolment Services Senate and Curriculum Services 2016–1874 East Mall Vancouver, BC V6T 1Z1 ginette.vallee@ubc.ca T: 604-822-0140; F: 604-822-5945

2 December 2008

To: Vancouver Senate

From: Senate Curriculum Committee

Re: GRADUATE PROPOSALS

Attached please find submitted category 1 graduate curriculum proposals for your consideration.

College for Health Disciplines

New Course:

IHHS 409 (3) International Indigenous Experiences of Colonization

College for Interdisciplinary Studies

Program Entry:

Human-Computer Interaction Sub-specialization Media and Graphics Interdisciplinary Centre, HCI entry

Faculty of Commerce and Business Administration

New Course:

BA 501 (1.5) M.B.A. Core Capstone

Program Entry:

Add BA 501 as requirement to M.B.A. program entries

Faculty of Education

New Course:

EPSE 684 (3) Item Response Theory



UBC Curriculum Proposal Form Change to Course or Program

Category: (1)

Faculty: College of Health Disciplines **Department:** Division of Aboriginal Peoples Health, Department of Family Practice **Faculty Approval Date:** April 30, 2008

Effective Session: 2009W Term 2

Date: June 18, 2008

Contact Person: Leah May Walker and Lyana

Patrick

Phone: 604-682-2344 (ext: 63077 or 63475)

Email: <u>leah.walker@ubc.ca</u> and aph.assist@familymed.ubc.ca

Proposed Calendar Entry:

IHHS 409 (3) International Indigenous Experiences of Colonization

An online, interprofessional, comparative inquiry of indigenous experiences of global colonization and the manifestations of that experience in the contemporary socio-cultural environment. Informed and guided by indigenous knowledge and drawing upon a range of disciplines such as public health, history, sociology and public policy.

Type of Action: New Course

Background:

First Nations communities have described the experience and ongoing effects of the residential school system as the primary issue they want professionals, particularly health professionals, to know about. Input from First Nations people throughout the development of this project is critical.

Below is a list of the project's rationale:

- The system of residential schools in Canada, and specifically in this case, British Columbia, had, and continues to have, a profound effect on the wellbeing of and opportunities for Indigenous peoples.
- Online role-playing provides educational infrastructure for students to learn about the rationale for the residential school system, as well as Indigenous responses to it. Students are generally unaware of residential schools and should consider the systems' effects in their future professional practices.
- Immersion of students into a rich, multimedia role-play context provides students with an opportunity to consider the social and cultural factors which influenced decision making in other times and places.
- An online role-play lends itself to international collaboration, encouraging staff and student mobility, and in this case to build upon and consolidate a relationship with University of Melbourne.

UBC Curriculum Proposal Form Change to Course or Program

Category: 1

FACULTY: CFIS
DEPARTMENT: MAGIC

DATE: May 30, 2008
Effective Date for Change: Summer 2009

Proposed Calendar Entry:

SUB-SPECIALIZATIONS

Human-Computer Interaction (HCI):

Participating Graduate Programs:

Computer Science

(http://www.students.ubc.ca/calendar/index.cf m?tree=12,204,828,1139), Electrical and Computer Engineering

(http://www.students.ubc.ca/calendar/index.cf m?tree=12,204,828,1155), Psychology (http://www.students.ubc.ca/calendar/index.cf m?tree=12,204,828,1221), Technology Studies Education

(http://www.students.ubc.ca/calendar/index.cf m?tree=12,204,828,1240

Program Overview:

The Media and Graphics Interdisciplinary Centre offers a sub-specialization in the field of Human-Computer Interaction. The program is called the "MAGIC Applied Graphics and Usability Studies" program, or MAGUS.

MAGUS is an interdisciplinary subspecialization for students in any UBC graduate program whose Master's-level graduate work is in the area of Human-Computer Interaction. Students who meet the requirements for the sub-specialization will have the following added to their Master's degree: "sub-specialization in Human-Computer Interaction". The subspecialization in HCI, along with the transcript and the endorsement of the program, will identify Master's Graduates as having attained special training in the interdisciplinary field of HCI.

All inquiries about whether a student may be enrolled as an HCI sub-specialization

Present Calendar entry

Nothing exists in current calendar.

This will be added under a new section called: **Degree Program Sub-Specializations**http://www.students.ubc.ca/calendar/index.cfm

?tree=12,204,0,0 This will be in between

"Degree Programs" and "Degree Programs

Administered by Disciplinary Faculties"

Type of Action:

- New section in Calendar to reflect the addition of "Degree Program Sub-Specialization".
- 2. addition of new sub-specialization code to read: "Human-Computer Interaction"

Rationale:

Human-Computer Interaction (HCI) is an interdisciplinary field of study that explores human behaviour in technology-rich environments with the goal of informing the design and testing of new technologies. Currently, a number of students are studying and researching HCI in different departments across the university. Informally, these students have been taking HCI related courses from departments other than their home departments as the field of research spans different disciplines. The sub-specialization designation is a formal process and acknowledgement for students seeking HCI sub-specialization.

The main features of the sub-specialization are:

- 1. Students must fulfill the requirements for the Master's degrees in their own departments. Students graduate with a degree from their home departments.
- 2. Students are required to complete the Methods sequence given in the HCI sub-specialization curriculum.
- 3. Students are required to complete one

student should be addressed to the Director of the HCI sub-specialization program.

Admission Requirements

Students should submit their registration information to the Director of the HCI subspecialization as early as possible. Applicants must be students in good standing in a Master's-level degree program at UBC. Students may be admitted at any point in their program, but it is recommended that they have an HCI project or thesis topic identified. Acceptance is based upon a student's demonstrated commitment to the field of HCI. If accepted, they will then be classified as an HCI sub-specialization student and placed on the mailing list for announcements of HCI events (such as lectures and special courses).

A student in good standing in his/her graduate program may petition the Director of the HCI sub-specialization for admission as an official student for the sub-specialization in HCI.

Under special circumstances a student may be admitted to the sub-specialization in HCI at the time they are first admitted to a graduate program at UBC. Such a student will have an exceptional record and a demonstrated commitment to the interdisciplinary study of HCI. Also under special circumstances a student may petition the HCI Committee for equivalent-credit for courses taken elsewhere or for independent research work.

Program Requirements

It is the student's responsibility to ensure his/her coursework meets the requirements for the Master's degree in his/her graduate program. In order to receive the subspecialization, students must meet three additional criteria:

- additional course from the list of approved HCI sub-specialization courses.
- 4. Students are required to complete a major project or thesis relating to HCI research. The HCI sub-Specialization Committee coordinated by MAGIC approves project/thesis topics for students wishing to obtain their HCI sub-specialization.

The intent behind the sub-specialization is that the required courses will normally count towards a student's degree, thus, no additional courses will be required for sub-specialization beyond their Department requirements for the Master's degree. The student's project/thesis project in an HCI field should be chosen so as to fulfill the requirements for a Master's degree in their home department. The sub-specialization Program is designed to be as inclusive as possible, but some may need to take extra courses and/or acquire necessary prerequisites prior to taking the Methods Sequence.

UBC currently has the curriculum in place to support the complete sub-specialization in Human Computer Interaction without additional resources. The description of the proposal attached (MAGIC 02-12-3) lists the current set of courses and a more complete discussion of the full sub-specialization.

We propose that MAGIC provide the administration of the sub-specialization through coordination of the HCI sub-specialization Committee. The Committee will work to expand the list of Qualifying Courses, establish standards, and ensure each student meets the requirements for sub-specialization.

The goal of the HCI sub-specialization designation is to provide a structured way for students enrolled in various graduate programs to study and carry out research in HCI with guidance from relevant faculty advisors, and to bring interested students from different departments together in a graduate student community integrated into the general university research community.

- 1. Successful completion of a sequence of qualifying Methods courses:
 - i. One Foundations of HCI Course
 - a. CPSC 544
 - ii. One Empirical Methods and Analysis course
 - a. PSYC 546A or equivalent
 - iii. One Design + Evaluation course
 - a. CPSC 543 or
 - **b.** EECE 596

Additions and changes to the list of qualifying Methods courses will be made by the HCI Committee in consultation with the departments in which the courses are held. Graduate courses may not be offered every year. Students who need to take required courses that are not offered in the current year must contact the HCI director for suitable replacements.

- 2. A minimum of 3 credits from at least one additional HCI theory and applications course approved by the HCI Committee. Qualifying courses are selected so as to provide an opportunity for cross-disciplinary studies as well as permitting students to satisfy the requirements for the sub-specialization using courses from within their department. A current list of qualifying courses can be found on the Web at http://www.magic.ubc.ca. Additions to the list of qualifying courses can be proposed to the HCI Committee by students or members of the faculty.
- 3. Completion of a major research project with an HCI focus (6 credit minimum). Depending upon the requirements of the candidate's department this project may take the form of a thesis, studio project or major project. Project proposals must be approved by the HCI Committee. The student will then choose a MAGIC affiliate faculty as project advisor. The role of the project advisor will be to certify that the finished project meets

ID Number for supporting Documents:

Faculty Approval Date: 16 Dec 2002

all requirements for the sub-specialization.

HCI sub-specialization students who do not already have a MAGIC affiliate faculty supervisor will be directed toward a MAGIC affiliate faculty advisor who will advise them with regard to research requirements for the HCI sub-specialization. This faculty member may be a co-advisor if the student has a supervisor in his/her department.

MORE INFORMATION

Additional information on the subspecialization in Human-Computer Interaction may be obtained directly from the Director of the Media and Graphics Interdisciplinary Centre (MAGIC), #3640 Forest Science Centre, 2424 Main Mall, Vancouver, BC, V6T 1Z4, Canada; telephone: +1 604 822-8990; by visiting the MAGIC website: http://www.magic.ubc.ca or from the Dean of the Faculty of Graduate Studies.

Category: 1

FACULTY: Graduate Studies

DEPARTMENT: MAGIC **Effective Date for Change:** Summer 2009

Proposed Calendar Entry:

MEDIA AND GRAPHICS INTERDISCIPLINARY CENTRE

The Media and Graphics Interdisciplinary Centre (MAGIC) was created at UBC to foster research covering the entire spectrum of new computer-based and computerassociated media. Typical examples include multimedia, computer animation, 3-D modelling, interactive Web-based applications, hypermedia, computer music and computer-based tools for collaboration in education, medicine and entertainment. The Centre highlights UBC's commitment to the use of advanced media technology. and brings together existing efforts and new initiatives from various research programs. MAGIC serves as a catalyst to assimilate and exploit new technology in research and education at UBC and to strengthen interaction with industry through collaborative research. Projects affiliated with MAGIC have their own funding, although MAGIC provides shared facilities and personnel to assist in the start-up phases of projects and in the design and evaluation of research prototypes.

MAGIC coordinates the MAGIC Applied **Graphics and Usability Studies (MAGUS)** sub-specialization in Human-Computer Interaction (HCI) (refer to content to be added in above proposal (URL to be determined). Human-Computer Interaction is an interdisciplinary field of study that explores human behaviour in technologyrich environments with the goal of informing the design and testing of new technologies. MAGIC does not grant degrees, however students earning degrees in participating departments can also earn a sub-specialization in Human-Computer Interaction by successfully completing the sub-specialization requirements in addition to those necessary for their Master's degree.

TIDI

http://www.students.ubc.ca/calendar/index.cfm?tree=10.243.662.0

Present Calendar entry

DATE: 03 / Feb / 2004

MEDIA AND GRAPHICS INTERDISCIPLINARY CENTRE

The Media and Graphics Interdisciplinary Centre (MAGIC) was created at UBC to foster research covering the entire spectrum of new computer-based and computer-associated media. Typical examples include multimedia, computer animation, 3-D modelling, interactive Web-based applications, hypermedia, computer music and computer-based tools for collaboration in education, medicine and entertainment. The Centre highlights UBC's commitment to the use of advanced media technology, and brings together existing efforts and new initiatives from various research programs. MAGIC serves as a catalyst to assimilate and exploit new technology in research and education at UBC and to strengthen interaction with industry through collaborative research. Projects affiliated with MAGIC have their own funding, although MAGIC provides shared facilities and personnel to assist in the start-up phases of projects and in the design and evaluation of research prototypes. MAGIC does not grant degrees directly. Students earn degrees in existing programs, conducting research within MAGIC projects.

Type of Action:

Update to reflect:

- 1. new director
- 2. addition of sub-specialization
- 3. addition of contact information

Rationale:

- 1. Director has changed to Sidney Fels.
- 2. see above. MAGIC will be administering the sub-specialization

The goal of the sub-specialization in HCI is to provide a structured way for students enrolled in various graduate programs to study and carry out research in HCI with guidance from relevant faculty advisors, and to bring interested students from different departments together in a graduate student community integrated into the general university research community.

CONTACT INFORMATION

Additional information on MAGIC or the sub-specialization in Human-Computer Interaction may be obtained directly from the Director of the Media and Graphics Interdisciplinary Centre (MAGIC), #3640 Forest Science Centre, 2424 Main Mall, Vancouver, BC, V6T 1Z4, Canada; telephone: +1 604 822-8990; by visiting the MAGIC website:

http://www.magic.ubc.ca

or from the Dean of Graduate Studies.

- in HCI. The change to the calendar entry reflects the addition role of MAGIC.
- 3. contact information for MAGIC is not currently listed in the calendar.

ID Number for supporting Documents:

Faculty Approval Date: 16 Dec 2002

Faculty: Sauder School of Business Department: MBA Programs Office Faculty Approval Date: January 2008 Date: January 17, 2008 Contact Person: Dale Griffin

Phone: 2-0156

Email: dale.griffin@sauder.ubc.ca

Effective Session _2008W_ T2_ for Change

Proposed Calendar Entry:

BA 501 (1.5) MBA Core Capstone Pass/Fail

URL:

N/A

Present Calendar Entry:

N/A

Type of Action: New course

For the registration system:

 This course is restricted to students in one of these programs: MBA -ORin one of these programs: JDMBA ORin one of these programs: MBAMAA

Rationale:

Since the time when our current 15-month MBA program was re-structured in 1995, the Integrated Core portion at the start of the program has been an award-winning success. At that time, it was planned that a capstone piece would be developed.

It is proposed that a second follow-up piece of the Integrated Core take place annually in our 15-month MBA at the end of Period 3. It is to be named *MBA Core Capstone* and it will contain 1.5 academic credits (minimum of 20 instruction contact hours). The objective of this additional course is to give students a chance to re-integrate their knowledge after having completed some depth of studies in post-core modules in a variety of specializations.

Assessment will be on a Pass/Fail basis.

No other departments or faculties will be affected by this proposal.

Faculty: Sauder School of Business Department: MBA Programs Office Faculty Approval Date: January 2008

Phone: 2-0156

Date: January 17, 2008

Contact Person: Dale Griffin

Effective Session 2009W T1 (new class

admitted in 2009W)

Email: dale.griffin@sauder.ubc.ca

Proposed Calendar Entry:

Core (15-month)

The 15-month M.B.A. core consists of the 18credit required course, BA 500, taken from September to December in the first year of studies and of the 1.5 credit required course, BA 501 taken later in the program.

URL:

http://www.students.ubc.ca/calendar/index.c fm?tree=12,199,506,1267

Present Calendar Entry: Core (15-month)

The 15-month M.B.A. core consists of the 18credit required course, BA 500, taken from September to December in the first year of studies.

Type of Action: Add BA 501 to M.B.A. program requirements. Increase total credits required for M.B.A. from 51 credits to 52.5 credits.

Rationale:

The current M.B.A. contains 51 credits. Addition of the 1.5-credit required course BA 501 will make the M.B.A. a 52.5 credit program in total.

Faculty: Education	Date: Nov 22, 2006
Department: ECPS	Contact Person: Sandra Mathison
Faculty Approval Date:	Phone:
	Email: sandra.mathison@ubc.ca
Effective Session for Change	
W2009 T1	
	URL: n/a
Proposed Calendar Entry:	
	Present Calendar Entry: n/a
EPSE 684 (3) ITEM RESPONSE	
THEORY. Prerequisite: EPSE 528 or	Type of Action: New course
equivalent introductory measurement	
course	Rationale: This course has been developed
	within the umbrella of a special topics
	course and piloted as EPSE 681 (3) Special
	Topics: Item Response Theory. This course
	has been developed within the umbrella of a
	special topics course. Due to successful
	implementation, this course will now have a
	separate number and title.



Enrolment Services Senate and Curriculum Services 2016 – 1874 East Mall Vancouver, BC V6T 1Z1 ginette.vallee@ubc.ca T: 604-822-0140; F: 604-822-5945

2 December 2008

To: Vancouver Senate

From: Senate Curriculum Committee

Re: CURRICULUM PROPOSALS FROM THE FACULTY OF SCIENCE

Attached please find the submitted category 1 undergraduate curriculum proposal from the Faculty of Science for your consideration.

The following program changes:

Bachelor of Science > Geography: change program description and requirements

The following new and changed courses:

BIOL 304 (3)

BIOL 306 (3)

BIOL 440 (3)

MRNE 402 (3-12) D

EOSC 118 (3)

EOSC 340 (3)

EOSC 372 (3)

EOSC 373 (3)

GEOG → GEOB (various courses)

GEOB 270 (3)

GEOB 308 (3)

GEOB 370 (3)

GEOB 400 (3)

GEOB 405 (3)

GEOB 472 (3)

GEOB 479 (3)

GEOB 448 (3/4) C

GEOB 490 (3)

GEOGRAPHY

Effective Date for Change: 09WT1 Proposed Calendar Entry:

Geography

The Department of Geography offers opportunities for study leading to bachelor's, master's, and doctoral degrees. Students who wish to pursue a Bachelor of Science degree in Geography should opt for the Geographical Biogeosciences Major. The program focuses on the fundamental interactions between life (including human societies) and the Earth's atmosphere, hydrosphere, and geosphere. **Students in the Geographical Biogeosciences** program will build upon a broad base in the basic sciences by completing at least two of five upper year "concentrations" in biogeography, climatology, geographic information science, geomorphology or hydrology. With appropriately selected electives, this degree forms a suitable basis for completing the academic requirements for registration as a **Professional Geoscientist, which is legally** required of all people practicing Geoscience in Canada. Students are also encouraged to consider Biogeoscience related electives in other departments. For additional information on the program, see the Geography website. Please contact the Geography Department at **604-822-2663** with any questions.

An honours degree in Climatology and a combined honours degree in Geographical Biogeosciences and Geology are also offered. Students entering either of the honours programs must consult the science advisor of the Department of Geography.

For information on Bachelor of Arts degrees in Geography see <u>Geography</u> under Bachelor of Arts in the Faculty of Arts section. For information on graduate degrees, see <u>Geography</u> in the Faculty of Graduate Studies section.

URL:http://www.students.ubc.ca/calendar/index.cf m?tree=12,215,410,425

Present Calendar Entry:

Geography

The <u>Department of Geography</u> offers opportunities for study leading to bachelor's, master's, and doctoral degrees. For information on the Bachelor of Arts, see <u>Geography</u> under the Bachelor of Arts in the Faculty of Arts section. For information on graduate degrees, see <u>Geography</u> in the Faculty of Graduate Studies section.

Students entering the major, honours, or a combined honours program must consult the science advisor of the Department of Geography. Students in the upper years of a major program must choose a concentration in at least *two* topic areas (Biogeography, Climatology, Geomorphology, Hydrology) and select their courses accordingly (see Department of Geography Undergraduate Guide).

Students registered in the Bachelor of Science Geography program must take at least 6 credits of Arts courses outside the Department of Geography in addition to 100 level English.

The following geography courses may be used as free electives, with due regard to prerequisites. They may not be used for either science or Arts 'designated' credit: GEOG 210, 310, 311, 312, 315, 316, 317, 318, 319, 371, 374, 375, 410, 412.

Programs

Major (0216) Physical Geography (PGEO)

First Year
ENGL 100 level¹ 6
MATH 100 or 102 or 104 (or 120
or 180 or 184) 3(4)
MATH 101 or 103 or 105 (or 121) 3(4)
CHEM 121, 123 (111,113) 8

	GEOG 102 or 103 3
	PHYS 101, (107) ² 3 Science Elective ⁴ 6
Programs	Total Credits 32(34)
Major (0216): Geographical Biogeosciences	10tal Cicatis 32(54)
(GEOB)	Second Year
(GLOB)	GEOG 200, 206,207, SOIL 200 12
First Year	One of GEOG210, 290 3
ENGL 100-level ¹	, , , , , , , , , , , , , , , , , , ,
CHEM 121, 123 (111, 113)	
BIOL 121 ² 3	
MATH 100 or 102 or 104 or 110 or 180	Science Electives 6
or 184 (or 120) 3(4	
MATH 101 or 103 or 105 (or 121)	
PHYS 101 ³ (107) 3) Total Cicatis
Electives ^{4,11} 6	Third Year
Total Credits 32(3	
James Or Carlos	Two of GEOG 300,307,308 EOS 329 6
Second Year	
GEOB 200 ⁵ or 204	GEOG 373 or 376 3 Arts Elective ⁷ 6 Electives ⁷ 6
GEOB 206 ² , 207 ² , 270	Electives 4
MATH 200 or MATH 221 or EOSC 211 3	Total Credits 30
Electives ^{6,11} 15	
Total Credits 30	
	Two of GEOG 318, 319, 404, 410, 412 6
Third and Fourth Years	Four of ATSC 301, 303, GEOG 304, 12
Areas of Concentration ⁷ 18	401,402,403,405,406,407,408,409,
GEOB 305, 309 ⁸ , 400 ⁹	EOSC 350 ⁵ , 429, BIOL 324
STAT 200 or GEOG 374 or BIOL 300 3	Arts Elective 3
APBI 200 or SOIL 200 3	Electives 7 9
Electives ^{6,10,11} 27	Total Credits 30
Total Credits 60	Minimum credits for degree 122
Minimum Credits for Degree 122	
	⁴ ENGL 112 is recommended. Qualified students
Areas of Concentration in Geographical	are encouraged to consider ENGL 120 and/or 121.
Biogeoscience.	3 credits of first-year English may be deferred until
Students must select two of the following	second year.
concentrations for a total of 18 credits:	² Students without Physics 12 must take PHYS 100
Biogeography: GEOB 307 & two of GEO	
407, BIOL 304, 324	³ Special arrangements may be made for students
• Climatology: GEOB 300 & two of GEOI	unable to take this course in first year.
304, 401, 402, ATSC 301, or 303.	⁵ -Prerequisite MATH 200.
Geographic Information Science: GEOB	⁴ PHYS 102 (108) or EOSC 250 ⁵ recommended.
370, 373, & one of GEOB 372, 479, 472.	Students who take PHYS 107 and 108 should
Geomorphology: GEOB 308 & two of	strongly consider PHYS 109. Students without
GEOB 404, 405, 406 or EOSC 350.	BIOL 11 or 12 must take 3 credits of biology.

- Hydrology: three of GEOB 403, 408, EOSC 329, 429
- ¹ ENGL 112 is recommended. Oualified students are encouraged to consider 120 and/or 121. Three credits of English may be deferred until second year.
- ² Students without Biology 12 must take BIOL 111 or 112 before taking BIOL 121.
- ³ Students without Physics 12 must take PHYS 100 before taking PHYS 101 or 107. Students may defer taking PHYS 101 or 107 to second
- year.

 ⁴ Students are encouraged to complete at least one of GEOB 102, 103. However, special arrangements are made for Science students who do not meet prerequisites for GEOB 206 and GEOB 207.
- ⁵ GEOB 200 is required to complete the climatology concentration.
- ⁶ Electives must be chosen so that along with required courses, the program minimum total of 121 credits includes a minimum of 72 science credits, 12 Arts elective credits (see below), 9 credits in fields outside the Areas of Concentration (all of GEOG and GEOB), and 48 upper-level credits, of which 30 must be in science.
- ⁷ See Areas of Concentration above.
- ⁸ Field Course must be taken in May preceding 4th year; extra fee to be paid.

 ⁹ Must be taken in 4th year.
- ¹⁰ Students interested in pursuing registration as a Professional Geoscientist should consult the Geography department science advisor and select their electives accordingly. Students are also encouraged to consider Biogeoscience related courses in other departments

http://www.geog.ubc.ca/undergraduate/index.h tml).

¹¹ Coursework in Social Sciences & **Humanities:** As the natural sciences are conducted within a societal, economic and historical context, students are strongly

- Field course taken in May; extra fee to be paid.
- ⁷ Enough elective credits must be numbered 300 or higher that the total 300 level or higher courses in the program, including specified courses, is at least 48 credits; at least 9 credits must be outside the field of major, the field of major comprising all courses in geography.
- Selected to satisfy the requirements for two areas of concentration. See the Department of Geography **Undergraduate Course Guide.**

Type of Action: Change the title of the major and then reorganize and update the description of the major.

Rationale: The rearrangement of the major will give better focus to the program and concentrations within the program. The more specialized honours degrees in Climatology and in Geography and Geology will be retained.

The new title for the major reflects the increasingly interdisciplinary nature of what has traditionally been called "Physical Geography". The new proposed title accurately describes the research conducted by the physical scientists in the Geography department and also reflects the new teaching interests of the department of Geography's three most recent hires in physical science.

The Geographical Biogeosciences Major includes several updates to the previous description of the Physical Geography Major. The number of required courses has been reduced in order to free up electives space to provide flexibility for students to more effectively pursue their interests. We have updated the areas of concentration to include Geographic Information Science in order to recognize the importance of data acquisition, analysis, and visualization in the Geographical Biogeosciences. The concentrations implicit in the previous PGEO degree have been more explicitly defined. A new final capstone course (GEOB400) has been added to the core of the program to reflect the Program focus. Footnote (11), which directs students to explore the social context within which the Biogeosciences are situated, is needed to draw

encouraged to take courses that prepare them to think critically about these issues. All Geographical Biogeoscience students are encouraged to select elective credits from the Nature and Society suite of courses (GEOG 310, 312, 315, 316, 317, 318, 319, 410, 412, 419). Students interested in a more rigorous exposure to these ideas are encouraged to complete a minor in Human Geography.

their attention to a detail that might affect their careers.

Supporting Documents: SCI-08-1-GEOB

BIOLOGY

Effective Date for Change: 09WT1

Proposed Calendar Entry:

BIOL 304 (3) FUNDAMENTALS OF ECOLOGY.

Dynamics of plant and animal populations, structure of ecological communities and functioning of ecosystems. Interpretation of research results and application to environmental issues. Labs meet once a month. (Consult the Credit Exclusion list within the Faculty of Science section of the Calendar.) Prerequisite: BIOL 121. [3-3*-0]

Present Calendar Entry:

None.

Action: New course.

Rationale: BIOL 302 and BIOL 303 were originally designed to be taken as a complementary pair. Although this division of the third-year ecology material into population and community ecology suited the original audience of a small number of ecology-focused students, several developments have made it untenable:

- (1) In both BIOL 303 and BIOL 302, only half the students have taken, or are planning to take, the partner course. In particular, a large number of Biology students (ca. 45%) are now in the Cell Biology & Genetics stream in which students take only one of BIOL 302 or BIOL 303. This means that many Biology students are currently not obtaining the breadth of ecological knowledge required to become informed citizens. We propose to fix this by covering a wide range of ecological concepts in BIOL 304, but at an introductory level. The syllabus in BIOL 306 will extend the concepts learnt in BIOL 304 to a more advanced level.
- (2) As BIOL 303 is currently not a prerequisite for BIOL 302, nor vice versa, concepts developed in one course cannot be built upon in the other course. Thus both courses must be taught at an introductory level. We propose to fix this by making BIOL 304 a prerequisite for BIOL 306. Students taking both courses will develop a deeper and more integrated understanding of ecology than

possible in the current system. BIOL 304 will be taught both fall and spring terms.

(3) Course size has increased substantially over time. BIOL 303 currently has two sections of >250 students each, and BIOL 302 has two sections of >200 students each. Funding has not kept pace, with the result that labs were replaced in the mid-1980s with a one-hour tutorial that meet 3 times a term. Our ecology students therefore experience no hands-on ecology in the third year. We propose to fix this by having monthly outside labs in BIOL 304 and 306 which will allow students to apply abstract theory to real natural systems. In other courses, students report that such field experiences have a profound impact on their understanding of ecology.

Supporting Documents: SCI-08-1-BIOL 304

Effective Date for Change: 09WT1
Proposed Calendar Entry:

BIOL 306 (3) ADVANCED ECOLOGY. Ecology of populations, communities and ecosystems. Tests of ecological theory with experiments and application to environmental issues. Labs meet once a month. (Consult the Credit Exclusion list within the Faculty of Science section of the Calendar.) Prerequisite: One of BIOL 302, 303, 304. [3-3*-0] **URL:**

Present Calendar Entry:

None.

Action: New course.

Rationale: BIOL 302 and BIOL 303 were originally designed to be taken as a complementary pair. Although this division of the third-year ecology material into population and community ecology suited the original audience of a small number of ecology-focused students, several developments have made it untenable:

- (1) In both BIOL 303 and BIOL 302, only half the students have taken, or are planning to take, the partner course. In particular, a large number of Biology students (ca. 45%) are now in the Cell Biology & Genetics stream in which students take only one of BIOL 302 or BIOL 303. This means that many Biology students are currently not obtaining the breadth of ecological knowledge required to become informed citizens. We propose to fix this by covering a wide range of ecological concepts in BIOL 304, but at an introductory level. The syllabus in BIOL 306 will extend the concepts learnt in BIOL 304 to a more advanced level.
- (2) As BIOL 303 is currently not a prerequisite for

BIOL 302, nor vice versa, concepts developed in one course cannot be built upon in the other course. Thus both courses must be taught at an introductory level. We propose to fix this by making BIOL 304 a prerequisite for BIOL 306. Students taking both courses will develop a deeper and more integrated understanding of ecology than possible in the current system. BIOL 304 will be taught both fall and spring terms.

(3) Course size has increased substantially over time. BIOL 303 currently has two sections of >250 students each, and BIOL 302 has two sections of >200 students each. Funding has not kept pace, with the result that labs were replaced in the mid-1980s with a one-hour tutorial that meet 3 times a term. Our ecology students therefore experience no hands-on ecology in the third year. We propose to fix this by having monthly outside labs in BIOL 304 and 306 which will allow students to apply abstract theory to real natural systems. In other courses, students report that such field experiences have a profound impact on their understanding of ecology.

Regarding the prerequisites: Although most students will enter BIOL 306 after taking BIOL 304, we allow BIOL 302 or 303 to also be prerequisites to BIOL 306 to ensure that no existing student has his or her degree planning disrupted by changes in the third year ecology courses.

Supporting Documents: SCI-08-1-BIOL 306

Present Calendar Entry:

None.

Action: Add new course.

Rationale: Structural and comparative genomics is a very dynamic and rapidly expanding field with major discoveries being made from genome sequencing projects and analyses of the genomes of several agricultural and model system plants. There are numerous applications of genomics approaches to questions in genetics, evolution, and ecology. The proposed course will help keep the

Effective Date for Change: 09W Term 1

Proposed Calendar Entry:

BIOL 440 (3) PLANT GENOMICS. Concepts, principles, and recent discoveries in genome structure and comparative genomics in plants with a focus on economically important plants. Applications of genomics approaches to questions in plant genetics, evolution, and ecology. Co-requisite: BIOL 335. [3-0-0]

Effective Date for Change: 09S Proposed Calendar Entry:

MRNE 402 (3-12) **D**. SPECIAL TOPICS IN MARINE BIOLOGY.

This course will be offered, as opportunities arise, by distinguished scientists visiting at the Bamfield Marine Sciences Centre. This course will be of a specialized nature and at a level appropriate to graduate or senior undergraduate students.

Biology curriculum current.

Supporting Documents: SCI-08-1-BIOL 440

Present Calendar Entry:

MRNE 402 (3). SPECIAL TOPICS IN MARINE BIOLOGY.

This course will be offered, as opportunities arise, by distinguished scientists visiting at the Bamfield Marine Sciences Centre—who are prepared to offer a course extending over a 3—week period. This course will be of a specialized nature and at a level appropriate to graduate or senior undergraduate students.

Action: Increase the number of life-time credits. **Rationale:** The change is needed to permit students to take the course more than once for credit. MRNE 402 is a special topics course whose content changes depending on availability of visiting scientists at the Bamfield Marine Sciences Centre. Students often stay at Bamfield over the summer and take several versions in sequence; see www.bms.bc.ca/university/courses2008/index.htm for examples of topics. These hands-on offerings incorporating laboratory and field work provide an invaluable and enriching experience, and therefore we very much support the students' interest in taking the course multiple times with different topics. The department would assign credit ("D") so as to enforce the restriction that credit would be assigned for multiple instances only if their topics were different. The maximum of 12 credits is not overly generous; a full summer slate of courses at Bamfield would be 18 credits.

Supporting Documents: SCIE-08-1-MRNE 402

EARTH AND OCEAN SCIENCES

Effective Date for Change: 09S Proposed Calendar Entry:

EOSC 118 (3) Earth's Treasures: Gold and Gems.

Origin, properties, valuation, prospecting and geology of gold, platinum, silver, diamonds, rubies, emeralds, and other precious metals and gems. [3-0-0]

Present Calendar Entry:

None.

Action: Add new course.

Rationale: Use existing EOSC department expertise in gold and gems to enable students to understand the characteristics and value of these natural treasures. This survey course with no prerequisites will form one of our suite of first year

Effective Date for Change: 09WT1 **Proposed Calendar Entry:**

EOSC 340 (3) Global Climate Change. Mechanisms and processes of past and future global environmental and climate change. Prerequisites: Either (a) one of PHYS 101, PHYS 107, PHYS 153 and one of CHEM 111, CHEM 121, CHEM 154 and one of MATH 101, MATH 103, MATH 105, MATH 121; or (b) **SCIE 001. [3-0-0]**

Effective Date for Change: 09WT1

Proposed Calendar Entry:

EOSC 372 (3): Introductory Oceanography: Circulation and Plankton.

Physical and chemical processes and their controls on the distribution of plankton in the ocean.

Prerequisites: Either (a) one of PHYS 101, **PHYS 107, PHYS 153 and one of CHEM 111,** CHEM 121, CHEM 154 and one of MATH 101, MATH 103, MATH 105, MATH 121; or (b) **SCIE 001. [3-0-0]**

courses that introduce students to the breadth of EOSC – a discipline not taught in high school. We will initially offer it as a distance education course and then add face-to-face lecture sections later.

Supporting Documents: SCI-08-1-EOSC 118

Present Calendar Entry:

None.

Action: New course.

Rationale: It is our societal obligation to teach as many Science students as possible the science of global climate change so that they can participate in the debates and the preparation of mitigating solutions and adaptation from an informed position. EOSC plans to reach Science students through two courses: a modified EOSC 112 course and the third year course described here. Comparable material is not taught to science students elsewhere. This course is intended for a broad range of UBC

science students including: Environmental Science, Earth and Ocean Science, General Science, Biology, Geography, Chemistry, Physics, Psychology and for Applied Science students. It is expected to be a large enrollment course (200 students)

Supporting Documents: SCI-08-1-EOSC 340

Present Calendar Entry:

None

Action: New course.

Rationale:

We propose to replace EOSC 370, 371 with two new courses EOSC 372, 373 which cover much the same material but in a different order and with a different emphasis. Oceanography is switching from being multidisciplinary to interdisciplinary and as we "do" oceanography we are attacking a problem from a number of disciplines at the same time. We wish to teach the subject in the same

This course will have ERTH credit for General Science students.

Supporting Documents: SCI-08-1-EOSC 372

Present Calendar Entry:

Effective Date for Change: 09WT1

Proposed Calendar Entry:

EOSC 373 (3): Introductory Oceanography: Climate and Ecosystems.

Physical, chemical and biological processes in the ocean and their interaction with climate and marine food-webs.

Prerequisite: EOSC 372. [3-0-0]

None.

Action: New course.

Rationale: We propose to replace EOSC 370, 371 with two new courses EOSC 372, 373 which cover much the same material but in a different order and with a different emphasis. Oceanography is switching from being multidisciplinary to interdisciplinary and as we "do" oceanography we are attacking a problem from a number of disciplines at the same time. We wish to teach the subject in the same way.

This course will have ERTH credit for General Science students.

Supporting Documents: SCI-08-1-EOSC 373

GEOGRAPHY

Effective Date for Change: 09W Term 1

Proposed Calendar Entry:

GEOB: Geographical Biogeosciences

Faculty of Science

Geography courses identified with the subject code GEOB have Science credit.

GEOB 101 (6) Introduction to Physical Geography...[3-2*-0;3-2*-0]

GEOB 102 (3) Introduction to Physical Geography: Climate and Vegetation...[3-2*-0] GEOB 103 (3)

Introduction to Physical Geography: Water and Landscapes...[3-2*-0]

GEOB 200 (3) Atmospheric Environments... [3-2*-0]

GEOB 204 (3) Forest and Agricultural Climatology...[3-2-0]

GEOB 206 (3) Principles of Geomorphology... [3-2*-0]

GEOB 207 (3) Introduction to Biogeography... [3-2*-0]

GEOB 270 (3) Introduction to Geographic Information Science...[2-2-0]

GEOB 300 (3) Microscale Weather and Climate...

[3-0-0]

GEOB 304 (3) Synoptic Meteorology and

Climatology... [2-2-0]

GEOB 305 (3) Introduction to Hydrology...

Present Calendar Entry:

GEOG 101...

GEOG 443... GEOG 444...

GEOG 479...

List of course descriptions not included to save space/paper but except for 448 and 490 each course changed to GEOB corresponds to the original GEOG course with the corresponding number.

Type of Action: Change the prefix of the GEOG courses with science credit to GEOB and place them in a separate section of the calendar under the heading GEOB – Geographical Biogeosciences. Leave the human geography courses in the original GEOG section of the calendar.

Add the appropriate vector to most of the GEOB courses (but not GEOG courses).

Change the course number for GEOG 443 to GEOB 490. Change the course number of GEOG 444 to GEOB 448 and place them in the correct numerical sequence for the GEOB courses. In all the other listings the original GEOG number was retained when the course was given the GEOB prefix. Delete the GEOG entry for the courses that were

[3-2*-0]	changed to GEOB.
GEOB 307 (3) Biogeography and Global	Rationale: It is currently awkward to distinguish
Change[3-2*-0]	geography courses with arts credit from geography
GEOB 308 (3) Quaternary and Applied	courses with Science credit. Geography courses that
Geomorphology[3-2*-0]	have Arts credit will be identified using the existing
GEOB 309 (3) Physical Geography Field	GEOG subject code and all courses with Science
Course[0-3-0]	credit will be identified using the new GEOB
GEOB 370 (3) Advanced Geographic Information	subject code.
Science[2-2-0]	Vectors already exist but are not shown in Arts
GEOB 372 (3) Cartography[2-2-0]	course listings. The vectors are now listed to bring
GEOB 372 (3) Cartography[2-2-0] GEOB 373 (3) Introductory Remote Sensing	GEOB course listings into line with science
[3-2*-0]	practice. GEOG 443 and 444 were changed to
. To the control of t	1 1
GEOB 401 (3) Urban Meteorology[3-0-0]	GEOB 490 and 448 to bring them in line with the
GEOB 402 (3) Air Pollution Meteorology[3-0-0]	numbering system used for other Science courses
GEOB 403 (3) Catchment Hydrology[3-0-0]	with a similar purpose
GEOB 404 (3) Natural Hazards Analysis[3-0-0]	
GEOB 405 (3) Fluvial Geomorphology[2-3-0]	
GEOB 406 (3) Watershed Geomorphology	
[2-2-0]	
GEOB 407 (3) Vegetation Dynamics: Disturbance,	
Climate and Human Impacts[2-3-0]	
GEOB 408 (3) Snow and Ice Processes[3-0-0]	
GEOB 448 (3/4) c Directed Studies in Physical	
Geography	
GEO <mark>B</mark> 449 (3/6) d Honours Essay	
GEOB 472 (3) Research in Cartography[3-2*-0]	
GEOB 479 (3) Research in Geographic Information	
Science[2-2-0]	
GEOB 490 (3) Student Directed Seminar in	
Physical Geography	
Effective Date for Change: 09WT1	Present Calendar Entry:
Proposed Calendar Entry:	
GEOB 270 (3) Geographic Information Science	GEOG 270 (3) Geographic Information Systems
[2-2-0]	Type of Action: Change course prefix, update
[= = 0]	course title and add vector
	Rationale: Revised course title reflects the current
	name for this topic area. Vector reflects GEOB
	science designation. The revised prefix shows it
	has Science credit.
Effective Date for Change: 09WT1	Present Calendar Entry:
Proposed Calendar Entry:	Tresent Calcinal Entry.
GEOB 308 (3) Quaternary and Applied	GEOG 308 (3) Quaternary and Applied
	- _ - _ -
Geomorphology	Geomorphology
Quaternary landscape development emphasizing	Quaternary landscape development emphasizing the
the history of glaciation with special reference to	history of glaciation with special reference to

western North America; applications of geomorphology in resource development and land management; interpretation of quarternary materials. Weekend field trips required.

Prerequisite: GEOB 206.

[3-2*-0]

western North America; applications of geomorphology in resource development and land management; interpretation of quarternary materials. Weekend field trips required.

Prerequisite: One of GEOG 306, EOSC 330.

Type of Action: Change course prefix, update

prerequisite and add vector.

Rationale: GEOG 306 changed to GEOG 206 in 07W and is being changed to GEOB 206 this winter session. Vector reflects GEOB science designation. The revised vector shows that it has Science credit.

Effective Date for Change: 09WT1 **Proposed Calendar Entry:**

GEOB 370 (3) Advanced Geographic Information Science

Theoretical and practical aspects of Geographic Information Systems, including cartographic modelling, digital terrain models, management issues and spatial interpolation. Preclusion: Not available to those who completed GEOG 470 before September 2005.

Prerequisite: GEOB 270 or completed second year of Geography B.Sc. with some introductory knowledge of GIS.

[2-2-0]

Present Calendar Entry:

GEOG 376 (3) Advanced Geographic Information Systems

Theoretical and practical aspects of Geographic Information Systems, including cartographic modelling, digital terrain models, management issues and spatial interpolation. Preclusion: Not available to those who completed GEOG 470 before September 2005.

Prerequisite: GEOG 270 or completed second year of Geography B.Sc. with some introductory knowledge of GIS.

Type of Action: Change course prefix, update in course number and course title. Add vector.

Rationale: The change in number brings course in line with departmental numbering stream. The slight change in course title reflects the current name for this topic.

Vector reflects GEOB science designation. The revised vector shows that it has Science credit.

Effective Date for Change: 09WT1 Proposed Calendar Entry:

GEOB 400 (3)

GLOBAL BIOGEOCHEMISTRY

Processes controlling the planetary cycles of elements like carbon, nitrogen and phosphorus, the human perturbation of these biogeochemical cycles, and the consequences for the atmosphere, terrestrial ecosystems, and aquatic ecosystems. Prerequisite: BIOL121 and CHEM 121(111).

Present Calendar Entry:

None.

Action: New course.

Rationale: This course is necessary to provide students with the essential conceptual and scientific foundation necessary to understand the changing chemistry of the Earth System, and global challenges like climate change, land use change and nutrient pollution. It will be the final integrative

[3-0-1]

component of the Geographical Biogeosciences core.

Supporting Documents: SCI-08-1-GEOB

Effective Date for Change: 09WT1 Proposed Calendar Entry:

GEOB 405 (3) Fluvial Geomorphology Introduction to open channel flow and sediment transport. River morphology and channel types. Palaeohydrology. The development of channel networks.

Prerequisite: GEOB 206.

[2-3-0]

Present Calendar Entry:

GEOG 405 (3) Fluvial Geomorphology Introduction to open channel flow and sediment transport. River morphology and channel types. Palaeohydrology. The development of channel networks.

Prerequisite: GEOG 306.

Type of Action: Change course prefix, update

prerequisite. Add vector.

Rationale: GEOG 306 was changed to GEOG 206 in 07W. GEOG 206 has now been changed to

GEOB 206.

Vector reflects GEOB science designation

Effective Date for Change: 09W T1 Proposed Calendar Entry:

GEOB 472 (3) Research in Cartography Use of cartography in primary research applications. Discuss contemporary topics in cognitive, social and technical cartography and data visualization.

Prerequisite: One of GEOB 270, GEOB 372.

Preference given to Human Geography or
Geographical Biogeoscience Majors with at least
75 credits completed.

[3-2*-0]

Present Calendar Entry:

GEOG 472 (3) Advanced Cartography Seminar course to discuss a wide range of contemporary topics in cognitive, social and technical cartography and data visualization. Includes reading assignments, discussions and computer mapping projects.

Prerequisite: One of GEOG 270, GEOG 372 or permission of instructor.

Type of Action: Change course prefix, update title and prerequisite. Clarify description. Add vector. **Rationale:** Course title and description better reflects the current name for this topic and the research nature of course content. The prerequisite allows us to limit class-size and facilitate research experience for senior Majors. Vector reflects GEOB science designation. The revised prefix shows that it has Science credit.

Effective Date for Change: 09WT1 **Proposed Calendar Entry:**

GEOB 479 (3) Research in Geographic

Information Science

Students use GIS in primary research applications in conservation biology, crime analysis, and health geography; theoretical and practical aspects considered in a hands-on

Present Calendar Entry:

GEOG 471 (3) Applied Concepts in Geographic Information Systems

Applications in conservation biology, crime analysis, and health geography; theoretical and practical aspects considered in a hands-on environment.

environment.

Prerequisite: GEOB 370. Preference given to Human Geography or Geographical Biogeoscience Majors with at least 75 credits completed.
[2-2-0]

Prerequisite: GEOG 376.

Type of Action: Update title and prerequisite. Clarify description.

Rationale: Course title and description better reflects the current name for this topic and the research nature of course content. The prerequisite is narrowed in order to limit class-size and facilitate research experience for senior Majors.

Type of Action: Change course prefix. Change in course number, title and prerequisite. Add vector. Rationale: The change in number brings course in line with departmental numbering stream. The prerequisite statement changed to reflect change to GEOG 376 and narrowed in order to limit class-size and facilitate research experience for senior Majors. The course title and description change reflects the current name for this topic and emphasizes the research nature of course content. Vector reflects GEOB science designation. The revised prefix shows that it has Science credit.

Effective Date for Change: 09WT1

Proposed Calendar Entry:

GEOB 448 (3/4) C Directed Studies in Geographical Biogeoscience

For fourth-year students in Geography to permit investigation of a topic to be agreed upon by a member of the faculty and the student. Permission of the department head and of a supervisory faculty member is required. Credit will be given for only one of GEOB 448 and GEOG 448.

Present Calendar Entry:

GEOG 444 (3/4) C Directed Studies in Physical Geography

For fourth-year students in Geography to permit investigation of a topic to be agreed upon by a member of the faculty and the student. Permission of the department head and of a supervisory faculty member is required. Credit will be given for only one of GEOG 444 and 448.

Type of Action: Change course prefix. Change course number and course title.

Rationale: Bring course into line with the faculty of Science number system for directed studies. Change title to reflect new title of Major. The revised prefix shows that it has Science credit.

Effective Date for Change: 09WT1 **Proposed Calendar Entry:**

GEOB 490 (3) Student Directed Seminar in Geographical Biogeoscience

Self-directed, collaborative studies in physical geography, in a group-learning environment, initiated and coordinated by senior undergraduate students with the supervision of a faculty advisor.

Present Calendar Entry:

GEOG 443 (3) Student Directed Seminar in Physical Geography

Self-directed, collaborative studies in physical geography, in a group-learning environment, initiated and coordinated by senior undergraduate students with the supervision of a faculty advisor.

Course structure, enrolment, and delivery methods will comply with the "Handbook for Student Directed Seminars." This course carries science credit. Credit will not be granted for both GEOG 442 and **GEOB 490**.

Prerequisite: Third-year standing in **Geographical Biogeoscience** (GEOB).

Course structure, enrolment, and delivery methods will comply with the "Handbook for Student Directed Seminars." This course carries science credit. Credit will not be granted for both GEOG 442 and GEOG 443.

Prerequisite: Third-year standing in physical geography (PGEO).

Type of Action: Change course prefix. Change course number and course title.

Rationale: Bring course into line with the faculty of Science number system for directed studies. Change title to reflect new title of Major. The revised prefix shows that it has Science credit.



December 5, 2008

CURRICULUM & ADMISSIONS COMMITTEES Vancouver Senate

2016 - 1874 East Mall Vancouver, B.C. Canada V6T 1Z1

To: Senate

From: Senate Curriculum & Admission Committees

Re: New Program Proposals:

- a) Bachelor of Science in Applied Biology
- b) Master of Food and Resource Economics

a) Bachelor of Science in Applied Biology (B.Sc. (Applied Biology))

The Senate Curriculum and Admissions Committees have reviewed the material forwarded to it by the Faculty of Land and Food Systems, and are pleased to recommend as follows:

That Senate approve the Bachelor of Science in Applied Biology (B.Sc. (Applied Biology)) program and its associated courses as set out in the attached report.

b) Master of Food and Resource Economics (M.F.R.E.)

The Senate Curriculum and Admissions Committees have reviewed the material forwarded to it by the Faculty of Graduate Studies (Faculty of Land and Food Systems), and are pleased to recommend as follows:

"That Senate approve the Master of Food and Resource Economics (M.F.R.E.) program and its associated courses as set out in the attached report."

Note: As per the *University Act*, after academic approval has been granted by the Senate, the consent of the Board of Governors and the Minister of Advanced Education must be given before any new degree program may be offered by the University.

Respectfully Submitted,

Dr. David W. Fielding, Chair, Senate Admissions Committee

Dr. Peter Marshall, Chair, Senate Curriculum Committee



Enrolment Services Senate and Curriculum Services 2016 – 1874 East Mall Vancouver, BC V6T 1Z1 ginette.vallee@ubc.ca T: 604-822-0140; F: 604-822-5945

1 December 2008

To: Vancouver Senate

From: Senate Admissions and Curriculum Committees

Re: **NEW UNDERGRADUATE DEGREE PROGRAM**

Attached please find the Bachelor of Science in Applied Biology (B.Sc. (Applied Biology)) degree program proposal for your consideration.

LAND & FOOD SYSTEMS

The following **new program**:

B.Sc. in Applied Biology

The following **new courses**:

APBI 210 (4)	APBI 398 (3)
APBI 235 (3)	APBI 422 (3)
APBI 318 (4)	APBI 440 (3)
APBI 324 (3)	LFS 400 (3)

APBI 397 (3)

The following **changed courses:**

Change course codes from AGSC to LFS for the following course numbers:

LFS 100 (1)	LFS 350 (3)
LFS 250 (6)	LFS 450 (3)
LFS 252 (3)	LFS 490 (3)
LFS 301 (3)	LFS 496 (3/6) d

LFS 302 (3/6) d

Change course codes from AGRO to APBI for the following course numbers (those proposals marked with an asterisk also contain additional changes)

APBI 244 (4)	APBI 342 (3)	APBI 423 (3)
APBI 260 (6)*	APBI 360 (4)*	APBI 426 (3)
APBI 311 (3)	APBI 361 (3)*	APBI 427 (3)*
APBI 312 (3)*	APBI 401 (3)	APBI 428 (3)
APBI 314 (3)	APBI 402 (3)	APBI 444 (3)
APBI 315 (3)*	APBI 403 (3)	APBI 460 (3)*
APBI 316 (3)	APBI 411 (3)*	APBI 490 (3)*
APBI 322 (3)	APBI 414 (3)*	APBI 495 (3)*
APBI 351 (4)*	APBI 418 (3)*	APBI 497 (2-6) d
APBI 326 (4)	APBI 419 (3)*	APBI 498 (3)
APBI 327 (3)	APBI 420 (3)	APBI 499 (6)
APBI 328 (4)	APBI 421 (3)*	

Change course code from SOIL to LFS for the following course number:

APBI 200 (3)



Executive Summary Proposed B.Sc. in Applied Biology Faculty of Land and Food System, UBC November 25, 2008

Faculty History

The Faculty of Land and Food Systems (LFS) at the University of British Columbia (UBC) has evolved considerable over the past decade. In the early 1990s, the Faculty was named Agricultural Sciences and it had a traditional departmental configuration (e.g., animal science, plant science, soil science, food and nutritional sciences, and agricultural economics). The increasing pressure to significantly modify the curriculum due to the changing needs of students and the need for a more global perspective prompted a major Faculty restructuring, beginning in 1997. In particular, departments and specific degrees were eliminated and three new degree programs were created: B.Sc. in Agroecology (AGRO), B.Sc. in Food, Nutrition and Health (FNH) and B.Sc. in Global Resource Systems (GRS). As a result of this change, both student enrollment and student quality began to climb steadily, particularly in FNH and GRS. In 2005, the Faculty changed its name to the current Land and Food Systems to better reflect the diversity of its academic programs and research initiatives.

Faculty Mission and Academic Goals

The mission of the UBC Faculty of Land and Food Systems is to develop life-long learners and create knowledge to make our land, food and community healthy and sustainable.

The UBC Faculty of Land and Food Systems uses student-centered learning to educate new generations of scientists equipped to solve the most fundamental issues faced by society — those focused around human health, a sustainable food supply and the responsible use of finite land and water resources. Grounded in science, the Faculty is a leader in integrated research and education that addresses global issues surrounding health and sustainable land and food systems.

Rationale for B.Sc. in Applied Biology Degree

There are currently 1157 students registered in the Faculty of Land and Food Systems (LFS), which is up about 12 percent from five years ago. The B.Sc. in Food, Nutrition and Health (FNH) program has witnessed the largest growth: rising 42 percent from five years ago to the present enrollment of 916. The B.Sc. in Global Resource Systems (GRS) program has grown by 15 percent over the past five years (current enrolment is 100). However, enrollment in the B.Sc. in Agroecology (AGRO) program is down 44 percent from five years ago, currently standing at 141 students.

This trend in student interest toward the food and health side of the Faculty, and away from the production agriculture (agroecology) side of the Faculty, is primarily because a large majority of LFS students come from an urban background. They tend to have limited awareness and interest in primary agriculture, but have strong career interests in the health sector, including human nutrition and dietetics. At the present time, the undergraduate programs in the Faculty of Science at UBC are largely oversubscribed, with many Science students having few obvious career choices. LFS believes that a B.Sc. in Applied Biology Program will be attractive to both first year students and transfer students from



Science for reasons similar to those of students who are entering the FNH and GRS programs in growing numbers. After implementation of the proposed B.Sc. in Applied Biology degree, the existing B.Sc. in Agroecology degree will be phased out over the next three years.

Overview of Proposed B.Sc. in Applied Biology Degree

Before or after completing their first year in the Faculty, students who are interested in this Applied Biology degree will choose one of three majors: (i) Applied Animal Biology; (ii) Applied Plant and Soil Sciences; and (iii) Food and the Environment. The Applied Animal Biology Major is intended for students with a strong interest in animals, including companion, laboratory and farm animals, as well as wildlife affected by human activities. This program is ideally suited for "pre-vet" students. Students in the Applied Plant and Soil Sciences Major will utilize multi-disciplinary, transformational and integrative approaches to understanding plant-soil-atmosphere systems, with an emphasis on the science of managed ecosystem sustainability. The Food and Environment Major, which builds on the core features of the existing Agroecology program, is committed to provide an agricultural education that integrates disciplinary knowledge within a framework of ecological principles.

Students in each of the three majors will take Faculty core courses, program core courses, non-LFS required program courses and restricted and unrestricted electives. The core courses will ensure that students will learn general principles of land, food and environmental sustainability within an integrated systems framework, and will also ensure cross-program student interaction.

Details of Proposed Degree

The B.Sc. in Applied Biology will be offered at the UBC Vancouver Campus. The degree will be offered by the Faculty of LFS, which is located primarily in the MacMillan Building. Several of the classes which will be taken by students in this proposed new degree program are cross-listed with the Faculty of Science and with the Faculty of Forestry. The anticipated start date for the proposed degree is September, 2009 (i.e., the current first year group of students in LFS, as well as new and transfer students, will be able to choose the Applied Biology program for the 2009/2010 academic year by May, 2009). All three majors in the proposed Applied Biology degree consist of 120 credits over four years (eight semesters) of study.

Program Summary

The proposed B.Sc. in Applied Biology will be attractive to students because of its: (i) focus on problem solving and application of theory to issues relevant to today's society; (ii) emphasis on skill development in the areas of research methods, literacy and communication; and (iii) unique career opportunities arising from society's growing concern over various aspects of nutrition, and health, food safety and security, food production methods (e.g., animal welfare and plant biotechnology) and environmental impacts of food production. These attributes are highly consistent with UBC's Trek 2000 and 2010 goals and strategies (http://www.trek2000.ubc.ca/principles/learning.html), which include:

• ... ensure that all students develop a greater awareness of their responsibilities as global citizens and of the issues surrounding social, environmental, and economic sustainability.



- Renew our commitment to help students in all disciplines develop good analytic and communication skills.
- Recognize interdisciplinarity as an important principle in academic planning for undergraduate and graduate programs.
- Encourage Faculties to continue developing innovative approaches that expose undergraduates to research-based and experiential learning, including co-operative education and problem-based learning.
- Make the big small wherever appropriate: provide individualized services and experiences to students within Faculty-based or program-based communities.

Each of the three majors will emphasize student involvement in research or industry work experience or both. Required courses include classes on quantitative methods, research methods, options to complete a 3-credit essay or 6-credit thesis, and a 6-credit fourth year experience (e.g., thesis, work placement, internship or study abroad). These courses will strengthen significantly the skill set of students when they seek post-graduation employment in areas such as animal health and welfare, wildlife management, aquaculture, conventional plant breeding, plant biotechnology, the greenhouse and nursery sector, urban agriculture, environmental protection, urban and regional planning, international development. All three programs will also prepare students for continuing their education in graduate programs.

The program will primarily be delivered with in-class lecture, lab and problem-based learning formats. Several of the courses will be offered with a distance learning option. Class sizes will generally be small enough to facilitate a variety of interactive learning techniques.

There are no other programs in Canada which offer a B.Sc. in Applied Biology. There are programs in Agricultural Biology at the University of Saskatchewan, and Environmental Biology at the University of Regina and University of Guelph, but none of these emphasize land, food and environmental sustainability as a framework for their learning outcomes and course delivery.

At the current point in time, LFS has not sought feedback from other post-secondary institutions and relevant regulatory and professional bodies. LFS has designed the curriculum to ensure that existing accreditation in professional bodies such as the British Columbia Institute of Agrologist will be maintained. LFS will soon contact the relevant professional bodies to inform them of the proposed new degree offering.

Contact Person

Dr. Jim Vercammen Chair of LFS Curriculum Committee Faculty of Land and Food Systems 2357 Main Mall Vancouver, BC B6T 1Z2 james.vercammen@ubc.ca Ph. (604) 822-5667 or (604) 822-8475

Fax: (604) 822-6394



Background

While overall undergraduate enrolment in the Faculty of Land and Food Systems has increased considerably in recent years (up close to 50% compared to 2000-01), there has been a significant shift in demographics within the Faculty. The B.Sc. program in Food, Nutrition and Health (FNH) has been responsible for the lion's share of this increase, and now constitutes almost 80% of our undergraduate body. Over the same period, enrolment in the BSc Agroecology has been in steady decline.

There are a number of reasons for these trends. The majority of our students come from an urban background, with limited or no awareness nor interest in primary agriculture *per se* (i.e., food production = farming). Primary agriculture employs less than 40,000 in British Columbia, < 2% of the provincial work force. On the other hand, students show strong career interest in the *health sector*, including human nutrition and dietetics. Our Dietetics Program receives three to four applications for every student accepted, and students who are not admitted continue in the nutrition or mixed majors of the FNH B.Sc. program. This situation is mirrored on a larger scale in the Faculty of Science where the majority of students at the outset are seeking admission into medical or dental schools; most of these students end up in biology or general science majors. Students seeking admission to veterinary schools used to make up a large number of students enrolling in the former BSc (Agriculture) program, majoring in Animal Science, but the evolution of that program into the current BSc Agroecology made it less attractive to many of those students.

Biology programs in Science appear to be over-subscribed while Land and Food Systems has some under-utilized capacity. When our faculty members give occasional lectures or provide other teaching in Science, they frequently note that students are captivated by subjects that place biology in a real-world context – precisely the areas of expertise in Land and Food Systems. However, we lack critical mass in certain aspects of animal, plant and soil sciences to deliver a full undergraduate curriculum independently. To provide the best possible programs for students with these interests, we need to partner with other academic units. The present proposal creates curricular paths that draw expertise not only from Land and Food Systems personnel, but also from the Departments of Botany, Zoology and Forest Sciences. Indeed, the proposed undergraduate program may provide a model for trans-faculty collaboration in delivering a package to undergraduate students that takes advantage of the best faculty experts in a given field irrespective of their home academic units. At the same time, the field of agroecology is preserved within the proposed BSc Applied Biology program, albeit with a name change to "Food and Environment" which will more closely align its learning objectives to the mission of the Centre for Sustainable Food Systems at UBC Farm.

Consultation Process

Between May and October, 2008 three working groups of LFS Faculty constructed three program areas for the proposed B.Sc. in Applied Biology degree together with the associated degree requirements, learning outcomes and new course proposals. LFS Faculty have had three face-to-face opportunities to openly discuss the new degree proposal. The first opportunity was at a LFS Faculty retreat in May 2008; the second and third opportunities were at LFS Faculty meetings on September 17, 2008 and October 23, 2008. The LFS Curriculum Committee also provided comments on the proposal during a September 16, 2008 meeting.

On October 28, 2008, after addressing the comments that arose during the October 23rd meeting, the proposal was sent out for external UBC academic consultation. The Library Consultation Form was sent to Rita Dahlie (Head, Woodward Biomedical Library). This current draft of the proposal was sent to all LFS Faculty members on November 17, 2008 for final comments and a vote. The e-mail votes tallied on November 19, 2008 revealed LFS approval of the proposed degree.



UBC Curriculum Proposal Form Change to Course or Program

Category: 1

Faculty: Land and Food Systems

Department:

Faculty Approval Date: November 19, 2008

Effective Session __W__ Term _1__

Year_09/10__ for Change

Phone: 822-5667, 822-8475 Email: james.vercammen@ubc.ca

Contact Person: Jim Vercammen

Date: November 19, 2008

Proposed Calendar Entry:

B.Sc. in Applied Biology (APBI)

Introduction

Students pursuing a B.Sc. in Applied Biology will learn to apply the principles of biology in one of three program areas: (1) Applied Animal Biology (AABI); and (2) Applied Plant and Soil Sciences (APSS); and (3) Food and the Environment (FENV). AABI, which is intended for students interested in studying and/or working with animals (e.g., veterinary medicine), will provide students with sound upto-date fundamentals in the field of animal science based on both theoretical and applied principles. APSS, which is intended to integrate diverse topics in plant-soilatmosphere systems, emphasizes a systemsbased approach, with an emphasis on the application of ecological theory to improving the sustainability of managed ecosystems. FENV brings together agricultural sciences, ecology and environmental thought, to provide the background to issues surrounding the management of land and water to produce food, other agricultural products and ecological services. Students in FENV will make extensive use of the Centre for Sustainable Food Systems at UBC Farm, as a living laboratory for experiential learning.

Advising Office

See the Academic Advising Office.

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Add new degree program: B.Sc. in Applied Biology.

Rationale:

There are currently 1157 students registered in the Faculty of Land and Food Systems (LFS), which is up about 12 percent from five years ago. The B.Sc. in Food, Nutrition and Health (FNH) program has witnessed the largest growth: rising 42 percent from five years ago to the present enrollment of 916. The B.Sc. in Global Resource Systems (GRS) program has grown by 15 percent over the past five years (current enrolment is 100). Enrollment in the B.Sc. in Agroecology (AGRO) program is down 44 percent from five years ago, currently standing at 141 students. Within the AGRO program, the largest major is Animal Studies with about 50 students.

Over this same time period, the General Biology and General Science programs in the Faculty of Science are oversubscribed, including many students for whom there are no obvious career opportunities.

LFS believes that a B.Sc. in Applied Biology program will be attractive to both first year students and transfer students from Science for reasons similar to why students are entering the FNH and GRS programs in growing numbers. These reasons include: (i) a focus on problem solving and application of theory to issues pertinent to today's society; (ii) an emphasis on skill development in the areas of research methods, literacy and communication; and (iii)

UBC

THE UNIVERSITY OF BRITISH COLUMBIA

Admission

Students should refer to Calendar Chapter II, Admissions. Students may gain admission directly from secondary school or transfer from a recognized university or college with a minimum of 24 credits, or as mature students.

For admission to the Bachelor of Science in Applied Biology, students from Grade 12 British Columbia schools must meet the general University admission requirements and must have completed English 11 and 12; Social Studies 11; an approved language 11; Principles of Mathematics 11 and 12; at least two of Biology 11, Chemistry 11 and Physics 11; one of Chemistry 12, Physics 12, Biology 12 and Geology 12; and a course chosen from among the approved examinable Grade 12 courses.

Academic Regulations

See <u>Academic Regulations</u> as listed under Faculty of Land and Food Systems.

Degree Requirements and Minors

Candidates for the B.Sc. (APBI) degree must complete the requirements as required for each major.

unique career opportunities due to society's growing concern over various aspects of nutrition, and health, food safety and security, food production methods (e.g., animal welfare and plant biotechnology) and environmental impacts of food production.

LFS believes that enrollment in the Applied Biology program will increase significantly over the next five years. The B.Sc. in Agroecology program will gradually be phased out once the B.Sc. in Applied Biology program is in place.

LFS will structure its B.Sc. in Applied Biology around three majors: Applied Animal Biology (AABI); Applied Plant and Soil Sciences (APSS); and Food and Environment (FENV). The AABI Major is intended for students interested in various aspects of animal health and care. The APSS Major will allow students to tailor their interest to various aspects of plant and soil sciences, ranging from cellular and molecular topics to organismal and ecological topics. The FENV Major will enable students to apply ecological concepts and principles to the design and management of integrated food production systems.

Please see Appendix A for the list of new and existing LFS courses which will be offered as part of the Applied Biology program.

Proposed Calendar Entry:

Applied Animal Biology Major

The Faculty of Land and Food Systems> Bachelor of Science in Applied Biology> Applied Animal Biology

Applied Animal Biology is intended for students with a strong interest in animals and wanting to pursue careers working with animals (e.g., veterinary medicine). This major will provide students with fundamentals in the

URL:

n/a

Present Calendar Entry:

n/a

Type of Action: Add calendar description and degree requirements for the Applied Animal Biology Major in the proposed B.Sc. in Applied Biology.

Rationale:

This new program in Applied Animal Biology (AABI) is specifically designed for students



field of animal science and will provide considerable flexibility to students when selecting courses that meet their specific interests. Students are exposed to a challenging capstone research experience in the 3rd and 4th years of the program.

Degree Requirements

First Vear

First Year	
LFS 100	1
ENGL 112	3
BIOL 112/121	6
BIOL 140	2
CHEM 121/123 (111/113) ¹	8
MATH 102 or equivalent ²	3 3 3
PHYS 101 ³	3
Restricted Elective ⁴	3
Total Credits	29
Second Year	
LFS 250	6
LFS 252	Ü
(or FRST 231 or BIOL 300)	3
BIOL 200/201	6
CHEM 233/235	4
MICB 201	3
Restricted Electives ⁴	9
Total Credits	31
Third Year	
APBI 398	3
Restricted Electives ⁴	21
Unrestricted Electives	6
Total Credits	30
Fourth Year	
APBI 498/499 (essay/thesis	3/6
Restricted Electives ⁴	15/12
Unrestricted Electives	12
Total Credits	30
	20
Overall four-year total	120
,	

- 1. CHEM 111 is not for students with Chemistry 12
- 2. Students who have not completed Calculus 12 must take MATH 180 or 184 to fulfill their first year Math requirement. Students planning

with a strong interest in animals, including companion, laboratory and farm animals, as well as wildlife affected by human activities. Students intending to apply for advanced study in veterinary medicine or research are good examples. The learning outcomes of this proposed major will be achieved through two required faculty courses (LFS 100 and LFS 250), a required course in statistics (e.g., LFS 252), a 3 credit research methods course, a 3 credit essay or 6 credit thesis, and a set of restricted and unrestricted electives, all of which currently exist at UBC.

Learning Outcomes:

In addition to fulfilling the learning objectives for the Faculty of Land and Food Systems, the following are specific to students who wish to pursue the Applied Animal Biology major:

- 1. Define, discuss and critically evaluate the basic biological (developmental, ecological, evolutionary, genetic, nutritional, physiological) and sociological principles relevant to animal systems;
- 2. Apply the basic biological and sociological principles to animal systems;
- 3. Recognize the diverse role played by animals in different human cultures and societies, including their role in food, agriculture, and the environment;
- 4. Critically read (question perceived knowledge), evaluate and report on scientific research in a relevant field;
- 5. Identify important basic concepts from the primary literature and be able to generalize these concepts and apply these to practical problems in animal agriculture and other areas:
- 6. Have hands-on research experience; and
- 7. Recognize the limits of their knowledge and developed a defined information-seeking strategy

Restricted Electives:

See Appendix C



to study Veterinary Medicine must take Math 103 or Math 105 as a restricted elective.

- 3. Students planning to study Veterinary Medicine must take PHYS 102 as a restricted elective.
- 4. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIOL and FNH. For suggested courses see the Faculty website.

Proposed Calendar Entry:

Applied Plant and Soil Sciences Major

The Faculty of Land and Food Systems> Bachelor of Science in Applied Biology> Applied Plant and Soil Sciences Major

Applied Plant Biology and Soil Sciences uses a systems-based approach to assess, design, and manage human-made ecosystems by applying best practices derived from agriculture, ecology, soil science, biotechnology, and other disciplines. Crop and non-crop plants will be studied in terms of interactions between natural and human-influenced factors, addressing the vulnerability of these systems to external and internal factors (e.g., climate change), and at a range of scales (from modified genomes to ecosystems).

Degree Requirements

First Year	
LFS 100	1
ENGL 112	3
BIOL 112/121	6
BIOL 140	2
CHEM 121/123 (111/113) ¹	8
MATH 102 or equivalent ²	3
Restrictive Electives ³	3
Unrestricted Elective	3
Total Credits	29
Second Year	
Econ 101 or 102	3
LFS 250	6
LFS 252	

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Add a calendar description and degree requirements for the Applied Plant and Soil Sciences Major in the proposed B.Sc in Applied Biology.

Rationale:

First year students and transfer students from Science are likely to be interested in multidisciplinary, transformational and integrative approaches to understanding plant-soilatmosphere systems, with an emphasis on the science of managed ecosystem sustainability. To maximize program appeal, the Applied Plant and Soil Sciences (APSS) Major will: (i) offer a set of new courses which emphasize applied plant and soil science in an integrated framework; (ii) provide students with the flexibility to tailor their degree towards a major area of interest; and (iii) provide students with the opportunity to develop an independent research project. APSS students will be required to take a course in statistics (e.g., LFS 252) and four courses which feature general principles of land and food systems: LFS100/250 (required courses for all students in the Faculty) and LFS 350/450 (required courses for most students in the Faculty). Students in the APSS major will further integrate knowledge of the principles of applied plant and soil sciences by taking a course on scientific inquiry (APBI 397) and a three credit essay or six credit thesis (APBI 498/499).



(or FRST 231 or BIOL 300)	3
APBI 200	3
APBI 235	3
BIOL/APBI 210	4
Restricted Electives ³	6
Unrestricted Electives	3
Total Credits	31
Third Year	
LFS 350	3
APBI 397	3
Restricted Electives ³	18
Unrestricted Electives	6
Total Credits	30
Fourth Year	
LFS 450	3
APBI 498/499 (essay/thesis)	3/6
Restricted Electives ³	18/15
Unrestricted Electives	6
Total Credits	30
Overall four-year total	120

- 1. CHEM 111 is not for students with Chemistry 12
- 2. Students who have not completed Calculus 12 must take MATH 180 or 184 to fulfill their first year Math requirement.
- 3. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIOL and FNH. For suggested courses see the <u>Faculty website</u>. Students interested in studying soils should take PHYS 101.

Learning Outcomes:

In addition to achieving the Faculty's learning outcomes, upon completing the course requirements in this major, students will have:

- Gained a greater awareness of issues surrounding social, environmental, and economic impacts on environmental sustainability and the responsibilities associated with being stewards of managed ecosystems;
- 2. Identified and characterized components of the soil-plant-atmosphere continuum and their interactions using an interdisciplinary perspective;
- 3. Assessed the impacts of crop domestication, genetics, and biotechnology on the sustainability of managed ecosystems;
- 4. Applied information of fundamental ecological processes and functions to sustainable managed ecosystems;
- 5. Described in detail important physical, chemical and biological processes and cycles that occur in managed ecosystems, such as water and energy flows, the roles of secondary metabolites and phytochemicals, and decomposition and succession;
- 6. Developed expertise and skills in solving problems associated with the sustainability of managed ecosystems; and
- 7. Developed the required analytical and communication skills to propose, conduct, analyze, and present an independent research project.

Restricted Electives:

See Appendix C

Proposed Calendar Entry:

Food and Environment Major

The Faculty of Land and Food Systems> Bachelor of Science in Applied Biology> Food and Environment Major

The Food and Environment (FENV) Major is

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Add a calendar description and degree requirements for the Food and Environment Major in the proposed B.Sc. in



intended for students interested in the application of agroecological concepts and principles to the design and management of integrated food production systems. It brings together agricultural sciences, ecology and environmental thought, to provide the background to issues surrounding the management of land and water to produce food, other agricultural products, and ecological services. This major provides students with the flexibility to tailor their learning experiences to a diversity of emphases including resource economics, conservation of wildlife habitat and biodiversity as related to agriculture, integrated agro-ecosystem management, or self-directed areas of study. FENV also provides students the option to gain hands-on experience through an intensive practicum. The FENV major will be strongly focused on the Centre for Sustainable Food Systems at UBC Farm - an on-campus living laboratory for experiential learning.

Degree Requirements

First Year

LFS 100	1
ENGL 112	3
BIOL 112/121	6
BIOL 140	2
MATH 102 or equivalent ¹	3
Restricted elective ^{2,3}	11
Unrestricted Elective	3
Total Credits	29
Second Year	
ECON 101 or 102	3
LFS 250	6
LFS 252	
(or FRST 231 or BIOL 300)	3
APBI 200	3
APBI 260	6
Restricted Electives ³	6
Unrestricted Elective	3
Total Credits	30
Third Year	
LFS 350	3
APBI 360/361	7

Applied Biology.

Rationale:

Sustainable food systems are founded on the science of agroecology - the application of ecological concepts and principles to the design and management of integrated food production systems. The Food and Environment (FENV) Major, which builds on the core features of the existing Agroecology program, is designed to provide an agricultural education that integrates disciplinary knowledge within a framework of ecological principles. It provides students with the flexibility to tailor their learning experiences to a diversity of emphases including resource economics, and conservation of wildlife habitat and biodiversity as related to agriculture. Its curriculum will be fully integrated with the learning opportunities available at the Centre for Sustainable Food Systems at UBC Farm. FENV students will take four Faculty courses (LFS 100/250/350/450) and will gain specific knowledge of agroecology principles from four additional required courses APBI 260/360/361/460 plus a 6-12 credit internship/practicum and/or a study abroad semester. FENV students will also be required to take a course in statistics (e.g., LFS 252) and a course in communications (LFS 400), with their remaining program made up with courses from a set of selected restricted and unrestricted electives.

Learning Outcomes:

In addition to achieving the Faculty's learning outcomes, upon completing the course requirements in this major, students will have:

- 1. Become qualified to pursue a professional career related to sustainable agriculture;
- 2. Acquired the academic foundation required for postgraduate studies in agroecology and in its underlying disciplines;
- Defined, discussed, applied and evaluated the ecological principles and approaches needed to critique, design and/or manage sustainable food production systems;
- 4. Formulated strategies to promote



Restricted Electives ³	18	
Unrestricted Elective	3	
Total Credits	31	
Fourth Year		
LFS 400	3	
LFS 450	3	
APBI 460	3	
Fourth Year Experience ⁴	6	
Restricted Electives ³	12	
Unrestricted Elective	3	
Total Credits	30	
Overall four-year total	120	

- 1. Students who have not completed Calculus 12 must take MATH 180 or 184 to fulfill their first year Math requirement.
- 2. Some students may be advised to take first year Chemistry and/or Physics courses depending on their academic plans and interests. They should consult with an FENV advisor.
- 3. To be selected in consultation with a program advisor. Typically includes courses in APBI, BIOL and FNH. For suggested courses see the Faculty website.
- 4. To be selected in consultation with a program advisor. Credits can include APBI 496 (3-6) and/or a semester studying at another approved institution including those outside Canada. Students can also combine the Fourth Year Experience with restricted credits to complete a season-long practicum at the Centre for Sustainable Food Systems at UBC Farm, at other approved farms, or at an approved educational or research institution.

- sustainability and innovation in food production systems, based on appropriate ecological concepts;
- 5. Described, discussed and analysed the interrelationships among food production systems, other components of the food system, and other ecosystems and land uses;
- 6. Critically evaluated the ecological, economic and social impacts of different food production systems; and
- 7. Developed analytical and communication skills to function effectively as global citizens knowledgeable in food security and related issues.



New Course Proposals

Category: 1

Proposed Calendar Entry:

APBI 210 (4) Vascular Plants

A comparative study of pteridophytes, gymnosperms and angiosperms, integrating form, function and ecology. [3-3] Prerequisite: Either (a) all of BIOL 121, BIOL 140 or (b) all of SCIE 001, BIOL 140. Or (c) 7 credits of first-year biology.

Equivalency: BIOL 210

Proposed Calendar Entry:

APBI 235 (3) Biotechnology in Agricultural Food Production

Genetics, genomics, and biotechnology concepts with applications to agricultural food production and food safety.

Prerequisites: BIOL 112, BIOL 121, BIOL 140

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Create a new course through use of a cross listing with an existing course, BIOL 210

Rationale: This course is designed to introduce students to the basic elements of plant structure, biodiversity, and evolution. A major emphasis is placed on the flowering plants, which form the basis of nearly all agricultural systems. APBI 210 is one of the core courses in the second-year of the proposed Applied Plant and Soil Sciences major. Sean Graham from LFS is currently co-teaching BIOL 210.

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Add new 3-credit course: APBI 235 Biotechnology in Agricultural Food Production

Rationale: The Faculty of LFS does not offer any introductory courses in genetics and molecular biology. This currently restricts the eligibility of LFS students to enroll in any advanced genomics courses offered by LFS faculty members (e.g. BIOL 430, BIOL/FNH 436, BIOL 440) and limits learning opportunities in biotechnology for LFS undergraduates. The 200-level course proposed here will cover introductory genetics, molecular biology, genomics, and biotechnology subject matter. By offering this 200-level course to LFS undergraduate students early in their degree programs, those students inspired to pursue a career in biotechnology in animal, plant, or food sciences can then track through relevant advanced courses taught by LFS faculty and/or faculty in Science. Those students who do not opt to specialize in a



biotechnology field in their 3rd and 4th years will be better equipped to make informed decisions about their choices of foods and medicines developed using genomics technologies, as well as the ideological stances they form towards genomics, in a future likely impacted more and more by biotechnology.

Learning Outcomes

Students who enroll in this course will learn:

- 1. Fundamental concepts in molecular biology (nucleic acid (DNA) and protein biochemistry, gene regulation);
- 2. Fundamental concepts in Mendelian genetics and gene mapping;
- 3. Genomics and approaches to genomic studies (basic concepts in gene sequencing, sequence bioinformatics, and gene expression analyses);
- 4. Biotechnology concepts including genetic modification (GM) and non-GM applications to agricultural food production; and
- 5. Regulatory and ethical issues in biotechnology with a focus on Canadian policies.

Proposed Calendar Entry:

APBI 318 (4) Applied Plant Breeding

Small-scale classical (i.e., non-biotechnological) plant breeding. Hands-on, application-oriented approach to techniques and procedures for managing seed inventories, designing and implementing a simple plant breeding program, and evaluating the impact of selection on breeding populations and desired outcomes. [3-1-0]

URL:

n/a

Present Calendar Entry:

Type of Action: Add new 4-credit course: APBI 318 Applied Plant Breeding

Rationale:

Andrew Riseman from LFS currently teaches AGRO 424/BIOL 443- Plant Breeding and Biotechnology. This current pair of cross-listed courses will not be taught by Andrew after APBI 318 has been approved. In the near future, LFS will ask Science to delete BIOL 443 and to create a cross-listing of APBI 318 under the name BIOL 318.

This action is in response to several issues. These include the development of APBI 235, which is specifically designed to address



agricultural biotechnology theory and applications. In addition, there are no courses currently offered at UBC that address the practical aspects of plant breeding and represents a significant deficiency for those students interested in learning the specifics of how to manage on-farm genetic resources. Finally, there are comparatively few 300 level courses available as restricted electives for APSS students, and the course will be targeted toward both third and fourth year students. This is why the course will be offered at the 300 level rather than at the 400 level.

This course will use problem-based learning as the primary pedagogy. Therefore, the primary learning experience will occur in the tutorials.

Learning Outcomes:

Upon successful completion of this course, the students should be able:

- 1. To design and implement a simple plant breeding program;
- 2. To predict the potential for successful plant improvement for a particular breeding objective, given the nature of the plant species and the genetic inheritance of the trait:
- 3. To create and manage plant populations in terms of specific genetic composition; and
- 4. To develop genetic hypotheses and apply the appropriate statistical methods for their evaluation.

Proposed Calendar Entry:

APBI 324 (3) Introduction to Seed Plant Taxonomy

Introduction to seed plant taxonomy emphasizing descriptive morphology and identification. Each student will be required to submit a plant collection. [2-3-0]

Prerequisite: BIOL 121 Equivalency: BIOL 324

URL:

n/a

Present Calendar Entry:

n/a.

Type of Action: Create a new course through use of a cross listing of an existing course, BIOL 324

Rationale: This course provides skills in plant identification suitable for ecologists, weed scientists, conservation biologists and environmental consultants. It is thus an important component of the overall APSS program. Furthermore, the treatment of the



biological basis of plant variation will be useful background for other APSS courses such as the proposed course in Applied Plant Breeding (APBI 318) and Plant Domestication (APBI 422). Quentin Cronk from LFS is currently coteaching BIOL 324.

Proposed Calendar Entry:

APBI 397 (3) Scientific Inquiry in Plant and Soil Sciences

Information literacy, the scientific method, framing scientific questions, critical analysis of primary literature, evaluating scientific research outcomes, designing experiments, data analysis, writing research proposals and reports, and presenting seminars. [2-0-1]

URL: n/a

Present Calendar Entry: n/a.

Type of Action: Add new 3-credit course: APBI 397 Scientific Inquiry in Plant and Soil Sciences

Rationale:

This course is designed to prepare students for the completion of an individual research project or major essay in their forth year [APBI 498/499]. Topics to be addressed include information literacy, the scientific method, framing scientific questions, hypothesis development, experimental design, data collection and analysis, and information dissemination/manuscript development. This course will provide the required framework for students to propose, design, conduct, and share an individual, multi-year research project.

Learning Outcomes:

At the completion of this course students will:

- 1. Understand the historical origins of scientific thought in western philosophy;
- 2. Understand the concept of null hypothesis and the designed experiment;
- 3. Be aware of ethical issues in science including scientific integrity;
- 4. Analyse data statistically and graphically;
- 5. Be aware of the issues involved in writing a technical report or paper.
- 6. Know how to develop grant and research proposals;
- 7. Develop hypotheses and design experiments;
- 8. Be able to use a range of analytical procedures;
- 9. Distinguish type I and type II error;
- 10. Distinguish types of replication and pseudoreplication; and
- 11. Write a research proposal.





Proposed Calendar Entry:

APBI 398 (3) Research Methods in Applied Animal Biology

Research methods including research design, scientific critique, writing proposals and reports, and oral presentation.

Prerequisite: Third year standing in the Applied Animal Biology program.

URL: n/a

Present Calendar Entry: n/a

Type of Action: Add new 3-credit course: APBI 398 Research Methods in Applied Animal Biology

Rationale:

This course is required for students in Applied Animal Biology – 3rd year standing in this program is a prerequisite. The course introduces students to research methods in this field and helps students develop the research and critical thinking skills essential for the success in the essay / thesis (APBI 498/499) required in 4th year. This course responds to the TREK 2010 aim of better integrating undergraduates in research, and provides a foundation for linking undergraduates with graduate students and other researchers in applied animal biology. The course relies upon the active participation of the other researchers, and builds a team environment for students and faculty within the Applied Animal Biology program.

Learning Outcomes:

- 1. Students will become familiar with research approaches in applied animal biology.
- 2. Students will learn how to present to a general audience.
- 3. Students will learn how to present to a research audience.
- Students will gain experience in summarizing and critiquing published research articles and reviewing an area of research.
- 5. Students will generate their own ideas for new research, and gain experience in the development of research proposals.

Proposed Calendar Entry:

APBI 422 (3) Plant Domestication

Outstanding scientific questions raised by the major groups of domesticated plants in tropical and temperate regions; emphasis on soja, brassicas, cassava, cacao and sunflower and

Present Calendar Entry: n/a

Action: Add new 3-credit course: APBI 422 Plant Domestication

Rationale: An advanced course in domesticated plants and the process of domestication is central to APBI. The course



cereals.

Prerequisites: APBI 235 and either BIOL 324 or APBI 325

builds on BIOL 343 (Plants and People) and BIOL 324 (Seed Plant Taxonomy). It is intended to be complementary to BIOL 440 and APBI 325. The course will develop the ideas on the biosystematics of crop plant complexes introduced in BIOL 324 and the general interest in crop plants encouraged by BIOL 343. Students inspired by these two courses have not hitherto had the means of developing this material to a high level. The course is intended to be a useful introduction for a career working with crop plants.

In the near future, LFS will ask Science to create a cross-listing of APBI 422 under the name BIOL 422.

Learning outcomes:

Upon successful completion of this course students should be able to

- (1) demonstrate familiarity with the major crop plant systems
- (2) conduct a test for selection on crop plant genes relative to those of wild species
- (3) set up a designed experiment to screen for traits relevant to crop plants, such as salinity and drought tolerance
- (4) use genomic resources to determine the origin of domesticates

Proposed Calendar Entry:

APBI 440 (3) Plant Genomics

Concepts, principles, and recent discoveries in genome structure and comparative genomics in plants with a focus on economically important plants; applications of genomics approaches to questions in plant genetics, evolution, and ecology.

Prerequisites: BIOL 334, and BIOL 335 (or taken concurrently).

Equivalency: BIOL 440

URL:

n/a

Present Calendar Entry:

n/a

Type of Action: Add new 3-credit course APBI 440 Plant Genomics

Rationale:

The proposed new 3 credit course is intended as a fourth year course to be cross-listed between Biology and the undergraduate curriculum in the Faculty of Land and Food Systems. A formal request for the Science cross-listing is currently being processed by Science's Curriculum Committee.

<u>History</u>: A course substantially like that proposed will be taught under the listing of



Topics in Agricultural Sciences, AGSC 490B, during the spring semester 2009. AGSC 490B has been approved as an elective for the Cell Biology and Genetics, Plant Biology, and Evolutionary Biology options within the Biology major.

Background: Plant genomics currently is a very dynamic and exciting field with discoveries being rapidly made from genome sequencing projects and analyses of the genomes of several agricultural and model system plants that have been published recently and that are ongoing. Genomics is at the cutting-edge of plant biology and its importance will increase in the future especially as new sequencing technologies allow more rapid and cost-effective sequencing that can be applied to a range of biological questions. Genomics approaches are being used in genetics, evolution, and ecology to gain new insights into important problems in each field.

The proposed course will help prepare students for research jobs in government, universities, and the biotechnology industry, as well as for graduate studies in genomics, genetics, evolution, and other aspects of plant biology.

Precedent: Many universities across North America have a Plant Genomics course for fourth year undergraduates. At UBC Vancouver the only current courses that include plant genomics are BIOL/FNH 436 Integrated Functional Genomics, and BIOL 430 Genome Evolution. BIOL/FNH 436 has a focus on functional genomics and the use of genomics technologies to answer questions in plant molecular biology. The proposal Plant Genomics course will focus on structural and comparative genomics, and the use of genomics approaches to answer questions in genetics, evolution, and ecology. The proposed course is being coordinated with the instructors of BIOL 436, Sunita Chowrira and Steve Lund, to be complementary and avoid overlap. Both instructors are supportive of this proposal and indicated that there will be minimal overlap with BIOL/FNH 436. Structural and comparative genomics in plants is only a small



part of BIOL 430 (instructor: Keith Adams) and that aspect will be minimized to avoid overlap once the proposed course is in place. There is considerable student demand for both BIOL 436 and BIOL 430 each year; indeed the registration and wait lists for both courses fill up during the first week of registration in the summer and remain full through the first week of classes. Some students who want to take the courses are unable to do so because of the limited number of seats. The proposed course will help accommodate the high demand and allow more students to learn about genomics in small fourth year courses.

Learning Outcomes:

- 1. Students will achieve a good working knowledge of concepts, principles, and recent discoveries in structural and comparative genomics of plants.
- 2. They will be able to apply genomics approaches to answer questions in genetics, evolution, and ecology, as well as to crop plant improvement.
- 3. Students will be able to discuss and critically evaluate recent research papers in plant genomics.
- 4. They will be able to use web resources in plant genomics for research and general knowledge.

Proposed Calendar Entry:

LFS 400 (3) Digital Communication and Topics in Agriculture

Summarize, evaluate, and synthesize information pertaining to agricultural topics; distinguish between unbiased and biased reports; effectively communicate using digital media. [1-2-0]

URL:

n/a

Present Calendar Entry:

n/a

Type of Action: Add new 3-credit course: LFS 400 Digital Communication and Topics in Agriculture

Rationale:

No course currently available at UBC addresses modern communication skills and their use to inform the public on agricultural topics. This course will integrate discipline-based knowledge with ways of contextualizing and disseminating it to the public. Students will understand, design and produce both unbiased and promotional digital content.



Learning Outcomes:

Upon successful completion of this course, the students will have:

- 1. Discussed the ways information is contextualized and manipulated for a predetermined outcome;
- 2. Understood how to best position information for a desired outcome;
- 3. Designed, produced, and released communication products that present information in an unbiased context and in a biased or promotional context through digital media;
- 4. Developed the required technological skills to produce high quality digital content (e.g., podcast);
- 5. Integrated discipline knowledge into effective communication vehicles designed for a predetermined outcome;
- 6. Characterized the advantages and disadvantages of releasing information using traditional media outlets and social networks; and
- 7. Engaged with rudimentary data visualisation tools and determined how they can be used effectively to enhance communication.



Relabeling of Existing Courses

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Proposed Calendar Entry:	URL:
Except where otherwise noted, please use the	IV d
calendar description of the corresponding AGSC course.	Present Calendar Entry:
LFS 100 (1) Introduction to Land, Food and	AGSC 100 (1) Introduction to Land, Food
Community	and Community Orientation to the programs, learning environment and core values of the Faculty of Land and Food Systems; career programs; survey of professional opportunities and requirements. [1-0-0]
LFS 250 (6) Land, Food and Community I	AGSC 250 (6) Land, Food and Community I
	Introduction to managed systems and concepts of sustainability; economic, ecological and social components; managed landscapes, agri-food systems, and communities; urban and rural systems; the land, food, nutrition and human health continuum. [4-0-4]
LFS 252 (3) Land, Food, and Community:	AGSC 252 (3) Land, Food, and Community:
Quantitative Data Analysis	Quantitative Data Analysis
	Introduction to tools needed for data analysis of the economic, ecological, health, and scientific components of land and food systems. Prerequisite: AGSC 250 and one of MATH 100, MATH 102, MATH 104, MATH 180, MATH 184.
LFS 301 (3) Aquaculture Field Studies	AGSC 301 (3) Aquaculture Field Studies
	An orientation to the aquaculture system in BC. Given jointly with Malaspina University-College. Participating students are assessed a
	fee.
LFS 302 (3/6) d International Field Studies	AGSC 302 (3/6) d International Field Studies
	Field studies carried out abroad under staff direction. Participating students are assessed a fee.
LFS 350 (3) Land, Food, and Community II	AGSC 350 (3) Land, Food, and Community II
	Introduction to tools and skills required
	to assess the economic, ecological,
	social, and technological components
	of managed landscapes, agrifood
	systems and communities comprising



LFS 450 (3) Land, Food, and Community III

LFS 490 (3) Topics in Agricultural Sciences

LFS 496 (3/6) d Career Development Internship

the land, food, nutrition and health continuum. [3-0-0] *Prerequisite:* AGSC 250.

AGSC 450 (3) Land, Food, and Community III

Capstone course. Problem-based analysis of complex case studies selected from the land, food and community continuum. Cases are specifically designed to require development of integrated disciplinary and inter-disciplinary analysis. [1-0-3] *Prerequisite:* AGSC 350 and fourth year standing

AGSC 490 (3) Topics in Agricultural Sciences

Analysis and interpretation of current issues in agricultural sciences.

AGSC 496 (3/6) d Career Development Internship

Technical work experience appropriate to students' career goals. Enrolment subject to competition and availability of work placements.

Type of Action:

(1) Change course codes from AGSC to LFS

Rationale:

(1) These courses should reflect the name of the current faculty (Land and Food Systems) rather than the name of the old Faculty (Agricultural Sciences)



Proposed Calendar Entry:

Except where otherwise noted, please use the calendar description of the corresponding AGRO course.

APBI 244 (4) Forest and Agricultural Climatology

APBI 260 (6) Food and Environment I

Prerequisite: LFS 250.

APBI 311 (3) Animal Physiology I

APBI 312 (3) Animal Physiology II

Prerequisite: APBI 311.

APBI 314 (3) Animals and Society

APBI 315 (3) Animal Welfare and the Ethics of Animal Use

Prerequisite: At least third-year standing in any faculty.

URL:n/a

Present Calendar Entry:

AGRO 244 (4) Forest and Agricultural Climatology

An introduction to the basic principles and processes of climatology. Energy and water balance concepts.

Atmospheric motion. Microclimate modification and air pollution. Climate classification and land capability. [3-2-0]

Equivalency: GEOG 204.

AGRO 260 (6) Agroecology I

Introduction to the biophysical and socioeconomic factors affecting systems management and production in selected agroecosystems. A fee will be assessed each student to cover field trip costs. [1-3-6]

Prerequisite: AGSC 250.

AGRO 311 (3) Animal Physiology I

Physiological principles in animals, including vital life support systems, cellular communication, growth and development. [1-0-3]

Prerequisite: BIOL 201.

AGRO 312 (3) Animal Physiology II

Physiological systems of importance to animal production and wildlife management. digestion, reproduction, lactation and environmental adaptation. [1-0-3]

Prerequisite: AGRO 311.

AGRO 314 (3) Animals and Society

Contemporary use of animals for food production, companionship, recreation and science; social and ethical issues concerning human impacts on animals; animals in human culture; protection of animals by society and the law. *Prerequisite:* At least third-year standing in any faculty.

AGRO 315 (3) Animal Welfare and the Ethics of Animal Use

Scientific assessment of animal wellbeing, ethical concepts applied to animal use, and animal welfare issues



<u>~</u>	
	arising in agriculture, biomedical
	research and other areas. [1-0-3]
	Prerequisite: A minimum of third-year
	standing in any faculty.
APBI 316 (3) Equine Biology, Health and Nutrition	AGRO 316 (3) Equine Biology, Health and Nutrition
Nutrition	
	Physiology, growth and reproduction of the horse; nutrition, diet formulation
	and feeding practices; common diseases, their prevention and
	treatment. [3-0]
	Prerequisite: Permission of instructor
APBI 322 (3) Horticultural Techniques	AGRO 322 (3) Horticultural Techniques
AFBI 322 (3) Horticultural Techniques	An introduction to horticultural
	practice in an experiential learning
	format. Plant identification, seeding,
	-
	propagation, pruning, cultivation media, pesticide application and safety
	are examined in the context of
	integrated crop management. An
	additional fee may be required for the
	pesticide certification examination. [0-
	3-3]
APBI 351 (4) Plant Physiology	AGRO 324 (4) Plant Physiology
(1) I lant I hysiology	Mechanisms and regulation of
	functional processes contributing to the
	assimilation, transport and utilization
	of water, mineral nutrients and carbon
	by plants. [3-3-0]
	Prerequisite: BIOL 121 and either (a)
	CHEM 123 or (b) all of CHEM 111,
	CHEM 113. CHEM 233 is
	recommended.
	Equivalency: BIOL 351, FRST 311.
APBI 326 (4) Introductory Plant Pathology	AGRO 326 (4) Introductory Plant Pathology
	Study of the ecology of plant
	pathogenic organisms; principles of
	disease development and control. [3-2-
	0]
	Equivalency: BIOL 316.
APBI 327 (3) Introduction to Entomology	AGRO 327 (3) Introduction to Entomology
	A survey of the structure, classification
	and biology of insects; ecology and
	life-histories of insects; insect-plant
	relations. [2-3-0]
	Prerequisite: BIOL 121.
	Equivalency: BIOL 327.
APBI 328 (4) Weed Science	AGRO 328 (4) Weed Science
	Importance, identification,
	dissemination and biology of weeds;
	preventive, cultural, biological and



APBI 342 (3) Soil Biology

APBI 360 <mark>(4) Food and Environment II</mark>

Animals and Plants as Components of Agricultural Ecosystems.

The functions and interactions of plants and animals in agricultural systems using a systems approach. A fee will be assessed each student to cover field trip costs. [1.5-0-3]

Prerequisite: APBI 260.

APBI 361 (3) Key Indicators of Agroecosystem Sustainability

A detailed exploration of biophysical, economic and social ecosystem sustainability indicators for primary production subsystems. [1-0-3]

APBI 401 (3) Soil Processes

APBI 402 (3) Sustainable Soil Management

APBI 403 (3) Field and laboratory methods in soil science

APBI 411 (3) Reproductive Physiology and Technology

Prerequisite: APBI 312.

chemical methods of control. [3-2-0] *Equivalency:* BIOL 317.

AGRO 342 (3) Soil Biology

The diversity of soil organisms (bacteria, protozoa, fungi, animals, plants) in natural and managed ecosystems; roles in primary production, nutrient cycling, decomposition and reclamation; interactions between soil organisms; responses to environmental change. [2-3-0]

Prerequisite: BIOL 121. Equivalency: FRST 310.

AGRO 360 (3) Agroecology II

Animals and Plants as Components of Agricultural Ecosystems. This second course in the agroecology core uses a systems approach to investigate the functions and interactions of plants and animals in agricultural systems. A fee will be assessed each student to cover field trip costs. [1-0-3]

Prerequisite: AGRO 260.

AGRO 361 (3) Key Indicators of Agroecosystem Sustainability

This course builds on the foundation of agroecosystems in AGRO 260 and AGRO 360, and the key indicators of sustainability in the faculty core (AGSC 350) with a detailed exploration of biophysical, economic and social ecosystem sustainability indicators for primary production subsystems. [1-0-3]

AGRO 401 (3) Soil Processes

Integration of soil physics, chemistry and biology in understanding essential soil processes. [3-0-0]

AGRO 402 (3) Sustainable Soil Management Application of fundamental, unifying, soil science principles in sustainable ecosystem management. [1-0-3]

AGRO 403 (3) Field and laboratory methods in soil science

[1-3-0]

AGRO 411 (3) Reproductive Physiology and Technology

A comparative overview of reproductive physiology and



APBI 414 (3) Principles of Animal Breeding

Prerequisite: LFS 350. BIOL 334 or FRST 302 are recommended.

APBI 418 (3) Intensive Fish Production

Prerequisite: APBI 312.

APBI 419 (3) Fish Diseases

Prerequisite: Either (a) all of APBI 311, APBI 312 or (b) BIOL 353. APBI 418 is strongly recommended.

APBI 420 (3) Greenhouse Horticulture Systems

APBI 421 (3) Integrated Crop Management

Prerequisite: All of APBI 260, APBI 360.

APBI 423 (3) Ecophysiology and Horticulture

reproductive technologies in domesticated and laboratory animals. [1-0-3]

Prerequisite: AGRO 312.

AGRO 414 (3) Principles of Animal Breeding

The basic principles and tools used in animal breeding and genetics in birds, fish, and mammals. [1-0-3] *Prerequisite:* AGSC 350. BIOL 334 or FRST 302 are recommended.

AGRO 418 (3) Intensive Fish Production

Management of fin fish throughout the life cycle; broodstock, egg, larvae and juvenile. Control of environmental factors, including pathogens, for maximum productivity at all life stages. [3-2]

Prerequisite: AGRO 312.

AGRO 419 (3) Fish Diseases

Common diseases of fish.
Epidemiology, zoonotic potential, prevention and treatment of diseases.

Prerequisite: Either (a) all of AGRO 311, AGRO 312 or (b) BIOL 353.

AGRO 418 is strongly recommended.

AGRO 420 (3) Greenhouse Horticulture Systems

Integrated crop management in controlled environment systems. The primary focus of the course will be on greenhouse vegetable and floriculture production systems. [0-3-3]

AGRO 421 (3) Integrated Crop Management

Development and implementation of an integrated crop management program in horticulture. The course focuses on the linkages between crop production and protection in the management of a horticultural ecosystem. [0-3-3]

Prerequisite: All of AGRO 260, AGRO 360.

AGRO 423 (3) Ecophysiology and Horticulture

Ecophysiological processes in horticultural production systems. Transformations of energy and matter by horticultural crops. Regulation of crop development and performance by



APBI 426 (3) Plant-Microbe Interactions

APBI 427 (3) Insect Ecology

Prerequisite: Either (a) BIOL 205 or (b) all of BIOL 327, **APBI 327.** Equivalency: BIOL 411.

APBI 428 (3) Integrated Pest Management

APBI 444 (3) Agroforestry

APBI 460 (3) Advanced Agroecology
The relationship between biological diversity
and sustainability for the management of
agroecosystemes; emphasis on ecological
interactions between natural ecosystems and
agroecosystems, including connections
between agroecology and conservation biology.
A fee will be assessed each student to cover
field trip costs. [1-0-3]

Prerequisite: APBI 360 or equivalent.

APBI 490 (3) Topics in Applied Biology

biotic and abiotic environmental factors. [1-0-3]

AGRO 426 (3) Plant-Microbe Interactions Biology and physiology of selected plant-microbe relationships. Impacts of plant-microbe relationships on society. [3-2-0]

Prerequisite: BIOL 201. Equivalency: BIOL 421.

AGRO 427 (3) Insect Ecology

Behavioural, population and community ecology of insects. Interaction between insects and plants and the application of the principals of insect ecology to biological control of insects and weeds. [3-0] *Prerequisite:* Either (a) BIOL 205 or

(b) all of BIOL 327, AGRO 327. Equivalency: BIOL 411.

AGRO 428 (3) Integrated Pest Management Development and implementation of multi-disciplinary pest management programs in agricultural crops. [3-2] *Prerequisite:* BIOL 121.

AGRO 444 (3) Agroforestry

An introduction to the application of knowledge and principles of agroecology and forest ecology to global agroforestry systems. The course includes a one-weekend field trip that requires a supplemental fee. [1-0-3]

Prerequisite: An undergraduate course in ecology or equivalent.

Equivalency: FRST 444.

AGRO 460 (3) Advanced Agroecology

Focuses on the relationship between biological diversity and sustainability for the management of agroecosystemes. It builds on the core agroecology courses and emphasises ecological interactions between natural ecosystems and agroecosystems, including connections between agroecology and conservation biology. A fee will be assessed each student to cover field trip costs. [1-0-3]

Prerequisite: AGRO 360 or equivalent.

AGRO 490 (3) Topics in Agroecology

Analysis and interpretation of current issues in agroecology. Prior to



APBI 495 (3) Principles of Wildlife Management in Forests and Agricultural Environments

APBI 497 (2-6) d Directed Studies

APBI 498 (3) Undergraduate Essay

APBI 499 (6) Undergraduate Thesis

registration, students should consult with Student Services in the Faculty of Land and Food Systems. [0-0-3]

AGRO 495 (3) Principles of Managing Problem Wildlife in Forests and Agricultural Environments

Impacts of wildlife on crop productivity in temperate and tropical environments, the resiliency of wildlife populations to conventional control methodology, adoption of innovative methods to reduce crop damage, and the impact of introduced species on native fauna. [2-0-1] *Equivalency:* CONS 495.

AGRO 497 (2-6) d Directed Studies

AGRO 498 (3) Undergraduate Essay

Preparation of a comprehensive and analytical review of an approved topic under the supervision of a faculty member. Consultation with a program adviser is required.

AGRO 499 (6) Undergraduate Thesis

Design and execution of an experimental/analytical research project leading to the preparation of a thesis.

Prerequisite: Approval of a program adviser; consult before the end of classes in third year.

Type of Action:

- (1) Change course code from AGRO to APBI
- (2) Update calendar descriptions and course prerequisites to reflect new LFS and APBI labels.
- (3) Increase credits for APBI (AGRO) 360 from 3 credits to 4 credits.

Rationale:

- (1) These courses should reflect the name of the proposed new degree (Applied Biology) rather than the name of the existing degree to be phased out (Agroecology)
- (2) Update calendar descriptions and prerequisites as appropriate.
- (3) APBI 360 will continue to be taught with 1.5 hours of lectures and 3 hours of "learning experience" tutorials. This



	number of contact hours justifies the 4
	credits.
Proposed Calendar Entry:	URL:n/a
	Present Calendar Entry:
	AGRO 424 (4) Plant Breeding and
	Biotechnology
	Genetic Basis and methodology of breeding for
	improved crop and ornamental plants.
	Application of tissue culture and molecular
	biology to plan improvement. [3-0-2]
	Prerequisite: BIOL 201 and one of BIOL 334,
	FRST 302.
	Equivalency: BIOL 443.
	Type of Action:
	Delete course.
	Rationale: This course will not be used in the
	B.Sc. in Applied Biology degree program, and
	will not be offered to students who are
	finishing the B.Sc. in Agroecology program.

Proposed Calendar Entry:	URL:n/a
	Present Calendar Entry:
APBI 200 (3) Introduction to Soil Science	Physical, chemical and biological properties of soils; soil formation, classification, use and conservation. There are no prerequisites for this course, but background in Biology 12, Chemistry 12, and Physics 12 (or first-year university-level) is strongly advised.
	Type of Action: Change course code from SOIL to APBI. Course description remains the same.
	Rationale: SOIL 200 is an LFS course, and so it should have the APBI label (it previously should have been relabeled as AGRO, but this did not happen). SOIL 200 is currently a program requirement within other faculties (e.g., Forestry), so these faculties will be notified of this switch.



Enrolment Services Senate and Curriculum Services 2016–1874 East Mall Vancouver, BC V6T 1Z1 ginette.vallee@ubc.ca T: 604-822-0140; F: 604-822-5945

2 December 2008

To: Vancouver Senate

From: Senate Curriculum Committee

Re: **NEW GRADUATE DEGREE PROGRAM**

Attached please find the Master of Food and Resource Economics (MFRE) degree program proposal for your consideration.

LAND AND FOOD SYSTEMS

New Program:

Master of Food and Resource Economics (MFRE)

Program Entry:

New program entry for MFRE degree

New Courses:

AGEC 515 (3) Agribusiness Management

AGEC 547 (6) Graduating Project

Proposal for a Master of Food and Resource Economics (MFRE) degree program

November 3, 2008

Background:

The Faculty of Land and Food Systems launched its new Master of Food Science professional degree in September, 2008. Following its success, the Faculty wants to offer a similar professional degree in the area of food and resource economics. The Faculty's Food and Resource Economics (FRE) group believes that by developing a professional master's degree it will be able to attract a new type of graduate student as well as strengthen its existing M.Sc. degree in Agricultural Economics.

Need for program:

For three decades, FRE faculty members have seen many graduates from agricultural economics and related bachelor's degrees struggle to find a master's degree that suits their interests and background. Many find the M.Sc. in Agricultural Economics to be too research focused. Some consider degrees in public policy, while others consider an MBA, but in both cases they want a degree that is more economics based. They want a degree in applied economics that builds on their undergraduate degrees by extending their economic theory and applying it to the food and resource sectors. The proposed degree combines applied economics with policy analysis and agribusiness management. It is the type of professional degree that many graduates have said they wanted.

Credential:

Master of Food and Resource Economics (MFRE)

Location:

The University of British Columbia, Vancouver campus

Faculty offering the program:

Faculty of Land and Food Systems

Anticipated program start date:

September, 2009

Anticipated completion time in years or semesters:

1 year (Sept. to Aug.)

A summary of the proposed program

Objectives:

1. To provide a new opportunity for students from B.C., Canada, and the world to obtain the necessary skills and knowledge for careers as professional economists in the food and resource sectors, locally and globally. Target enrollment is 15-20 students each year, with a balance of recent graduates and working professionals, and international and domestic students.

Expected enrollment for the first year is three students from China, seven students from other countries, and five domestic students. For recruiting students from China, the MFRE program is expecting to partner with the same recruiting agency as the Master of Food Science does, namely Can-Zhong International Educational Consulting Service. A contract with Can-Zhong similar to Food Science's will be set up following the Senate approved guidelines.

2. To strengthen the overall graduate program of the FRE group in the Faculty of Land and Food Systems. As well as attracting more highly qualified students, the MFRE will be a full cost recovery program and will provide discretionary revenue to support the teaching and research of FRE. Students in the M.Sc. in Agricultural Economics will benefit from the certainty that a full complement of graduate courses will be offered each year.

It is anticipated that a small number of students will enter the MFRE program who would otherwise have enrolled in the M.Sc. program. This is not seen as a problem as it is consistent with the direction the FRE group wants to take the M.Sc. degree: towards a smaller number of students who are highly committed to research.

Contribution of the proposed program to UBC's mandate and strategic plan

- 1. Contributes to UBC's goal that all academic programs meet the highest standards of excellence by strengthening the overall graduate program of FRE.
- 2. Provides a new learning opportunity for students to become more aware of issues concerning economic, social and environmental sustainability.
- 3. Contributes to internationalization as each of the six required graduate courses presents students with global issues, concerns, and solutions.
- 4. Provides a new professional opportunity for UBC alumni and other life-long learners throughout B.C. and Canada to gain access to UBC.

Learning outcomes for the MFRE degree

Upon completing the MFRE degree, students will be able to:

- 1. Analyze the key economic and policy issues associated with the production, distribution, processing, and marketing of food in a global context.
- 2. Analyze how markets function with respect to time, space and form in the local and global food sectors.

- 3. Identify positive and negative natural resource and environmental externalities associated with food production and distribution.
- 4. Identify the role of the agri-food sector in emerging markets for greenhouse gas emissions and carbon offsets.
- 5. Apply analytical techniques to evaluate policies for food markets and the associated natural resource and environmental sectors.
- 6. Critically evaluate and interpret research results from economic studies relating to food markets and related natural resource and environmental sectors.
- 7. Analyze food and resource-based problems using quantitative techniques such as econometrics and math programming combined with data collection and handling.
- 8. Apply tools of institutional analyses to prices, markets, development (e.g. project evaluation) and the environment.
- 9. Present economic arguments in a professional manner, both in spoken and written form.

Program requirements

The MFRE requires students to complete 30 credits as follows: 18 credits of required graduate courses, 6 credits of restricted electives, and a 6 credit graduating project. The AGEC graduate courses are offered by the Food and Resource Economics group; "AGEC" reflecting the group's previous name (Agricultural Economics). Restricted electives must be chosen from the list below. Note that a maximum of 6 credits of upper-level undergraduate courses can be used towards the degree.

1. Required graduate courses (18 credits)

AGEC 501(3): Applied Demand Analysis

AGEC 502(3): Topics in Food Market Analysis

AGEC 503(3): Policy Analysis for Food, Environment and Resources

AGEC 515(3): Agribusiness Management (new course)

AGEC 520(3): Topics in Land and Forest Resource Economics

FRST 530 (3): Multiple Regression Methods

or FRST 533 (3): Problems in Statistical Methods

2. Restricted Electives (6 credits)

Students choose two courses from the following list of Restricted Electives:

- AGEC 521 (3): Topics in Agricultural Economics "Trade and the Environment"
- AGEC 540(3): International Agricultural Development
- ECON 370 (3): Benefit Cost Analysis and the Economics of Project Evaluation
- ECON 472 (3): Economics of Renewable Resources
- FOOD 510 (3): Introduction to Food Science
- FOOD 528 (3): International Food Laws and Regulations
- FRE 302 (3): Small Business Management in Agri-food Industries
- FRE 385 (3): Quantitative Methods for Business and Resource Management
- FRST 531 (3): Multivariate Statistical Methods

NB: Students who choose to take both FRST 530 and 533 can use one of these courses for 3 credits of Restricted Electives.

3. Required Graduating Project (6 credits)

AGEC 547 (6): Graduating Project (new course)

Because this is a professional degree, a master's thesis is not required. Instead, students carry out a summer research project under the supervision of FRE faculty and professional economists in industry and government.

The proposed calendar entry for the MFRE degree and the two new courses (AGEC 515 and AGEC 547) is in Appendix A.

Potential sectors of employment for graduates and opportunities for further study

There is unmet demand in Canada and around the world for professionals who can understand and analyze the economic relationships underlying the food and resource sectors. This demand has been increasing due to the prevalence and complexity of economic issues dealing with food security, safety, trade, and the effects of the food sector on the environment, combined with the inability of unspecialized managers to apply the necessary applied economics skills and industry know-how to deal with these issues. Governments and private industry, both in developed and developing countries, want professionals with applied economic skills and knowledge of the institutions, policies and other key features of the food and resource sectors. The MFRE is designed to meet the needs of economic practitioners in these sectors.

Graduates from the MFRE degree will have a solid foundation for entering a PhD program in Agricultural Economics and other areas that have an applied economics focus.

Delivery methods

Initially, the program will be delivered using standard scheduling and classroom delivery. But once the program has been operating for a few years, the FRE group will consider adding a part-time option, with more flexible scheduling and delivery methods. It is anticipated that some elements of distributed learning would be incorporated at this time.

Program strengths

Students will learn economic theory relevant to applications in the food and resource sectors through their FRE graduate courses. Four graduate courses will be taught by regular FRE faculty, who will bring their areas of research expertise to the classroom. The FRE faculty members have particular strengths in food economics, environmental economics, and policy analysis. Each faculty member brings direct experience working in the food and resource sectors, both domestically and internationally in Europe and Asia, particularly with developing countries.

Three graduate courses will be taught by sessionals drawn from professional economists who have work experience in industry or government. For example, for 2009/10, a Senior Policy Economist from Agriculture and Agri-Food Canada has expressed interest in teaching policy analysis (FRE 503), and a World Bank consultant who has spent his career working with economic incentives for small farmers and community forests in Indonesia is interested in teaching international development (FRE 540).

Relation to other established programs

In the Faculty of Land and Food Systems

M.Sc. in Agricultural Economics

The M.Sc. emphasizes skills required for quality economics research focused on the food and resource sectors. The MFRE emphasizes skills required by practitioners in the food and resource sectors who contribute to public policy issues and business decisions, where questions tend to be more applied than theoretical. Because the MFRE can be completed in one year, it will be more attractive for those students with a tighter time constraint, such as working professionals, and those for whom research is a lower priority.

Master of Food Science (MFS)

The MFS and MFRE are based in two very different disciplines, food science and economics. But they are structured in the same way, requiring six graduate courses, two restricted electives, and a summer project. Synergies will exist between the two programs in promotion and recruiting, the summer orientation program, and summer project placements.

In other Faculties at UBC

Master of Arts in Economics (MA)

Although course based, the MA in Economics is still considered a research degree, not a professional degree like the MFRE. Another major distinction between them is the subject matter. The MA focuses on broad questions of social importance, whereas the MFRE focuses on real world applications and issues related to food, agriculture, and environment.

Master of Business Administration (MBA) and Master of Management (MM)

These are professional degrees focusing on business management. While the MFRE will incorporate some aspects of agribusiness management, compared to the MBA and MM the MFRE is much less focused on management and more focused on applied economics. The MBA targets working professionals, while the MM targets new graduates from arts, engineering and science. The MFRE will target a balance of working professionals and new graduates.

Other B.C. Institutions

No other B.C. institution offers degrees in agricultural economics or in food and resource economics.

Other Canadian Institutions

M.Sc. in Agricultural Economics

This is the standard degree in the areas of agriculture, food and resource economics offered at major Canadian universities (typically with an updated title). The only professional degrees related to these areas in Canada are the joint MBA/Master of Agriculture degree at University

of Alberta, the MBA with a specialization in agribusiness management at University of Guelph, and the Master of Development Economics at Dalhousie University.

The MFRE is unique in Canada in combining applied economics with policy analysis and agribusiness management.

Admission procedures

The admission process will be the same as for other masters programs in the Faculty. Students must meet the general admission requirements for master's degree programs set by the Faculty of Graduate Studies. The FRE group will recommend to FOGS which applicants to admit. The MFRE admission process will be administered by the Faculty's Graduate Programs Office in conjunction with FOGS.

Resources

The new degree will be full cost recovery with all additional resources required for the program to be paid from program tuition. These include program administrators, sessional instructors, summer project supervisors, summer project coordinators, teaching assistants, and any space or library requirements.

a. Faculty

Additional responsibilities imposed on FRE faculty as a result of this new degree will be compensated for by an equivalent reduction in their other responsibilities. This will typically be achieved through hiring additional human resources. The program Director will be a regular FRE faculty member, on a rotating basis. A major responsibility of the program Director will be to recommend which students to accept to the MFRE program. Sessional instructors will be employed to teach three graduate courses and to assist with the supervision of summer research projects. The FRE group already has a small pool of qualified sessionals who have teaching, research, and industry experience.

b. Space requirements

As the program is primarily course-based, the space requirements will be classrooms, temporary office space for sessionals, and some flex space for MFRE students to study. The Faculty has a computer lab which the MFRE students may use.

c. Library resources

The current undergraduate and graduate courses offered by the FRE group are well served by the excellent library resources at the University. No additional resources are deemed to be required.

d. Administrative and support staff

The MFRE program will hire a Program Manager to oversee all operations of the new degree, except admission. The Program Manager will have a graduate degree in an area closely related to food and resource economics. He/she will hire support staff to coordinate the summer orientation program for international students and summer placements for the research projects.

e. Summer orientation program

The MFRE program will include a summer orientation similar to the Master of Food Science for students who have graduated from a university where courses are not taught in English. The orientation program will be 4-6 weeks in length, in the mid-July to late August period. It will include written and spoken English, disciplinary English, technical writing, adjustments to Canadian culture and academic environment, and an introduction to the local food and natural resource sectors. The purpose of the orientation is to ensure that students from different academic and cultural backgrounds will succeed in the MFRE program. The orientation will be highly recommended for international students, but not mandatory. Participants will be assessed a fee to cover the costs. All students in the MFRE program will begin Term 1 of the Winter Session in early September. Arrangements will be made with International Student Services to initiate medical insurance in early July for the students participating in the summer orientation program.

f. Tuition levels for the MFRE degree

Based on the costs to deliver this new program and the projected demand for it, the proposed tuition levels for the degree program are \$17,877 for domestic students and \$28,952 for international students. The tuition level for domestic students is lower than for international students in recognition of taxpayer contribution to this program. The tuition level for international students is identical to the Master of Food Science program. The proposed tuition levels for the MFRE are consistent with what UBC and other universities are charging for professional master's degree programs in related areas. For a comparison of relevant tuition levels, please see Appendix C.

g. Financial aid

The MFRE program will use scholarships and other forms of financial aid for both domestic and international students to increase the affordability for this professional master's degree. Funding for the financial aid program will come from the portion of gross tuition revenue that UBC central holds back for this purpose.

h. Budgetary impact of the proposal

The new degree program is expected to nearly break even in the first year (2009/2010), and for each year after that will be a net contributor of revenue to the Faculty. This new source of revenue will be used to support the academic mission of FRE and the Faculty. The budgetary impact statement plus an annual budget for the first five years of the program are given in Appendix D.

Consultations

Curriculum consultation request forms have been received back from the following UBC units. They all support the proposal.

Economics Department, Faculty of Arts Faculty of Forestry Fisheries Centre Library Sauder School of Business Consultation forms have been sent (on October 22, 2008) but have not been received back from the following UBC units:

Institute of Asian Research (MAAPS program)
Institute for Resources, Environment, and Sustainability (IRES)

Consultation forms were sent to the above two units to alert them to the new program on anticipation that a few of their students might want to take a course from the MFRE program.

Name, title, phone number and e-mail address of contact person

Mahesh Upadhyaya Associate Dean, Graduate Programs Faculty of Land and Food Systems

Tel: 604-822-6139

Email: mahesh.upadhyaya@ubc.ca

Appendix A: Proposed Curriculum Changes/Additions for Calendar

UBC Curriculum Proposal Form Change to Course or Program

Category: (1)	arse of Frogram	
Faculty: Land and Food Systems	Date: October 6, 2008	
Department: Food and Resource Economics	Contact Person: Mahesh Upadhyaya	
Faculty Approval Date:	Phone: 604-822-6139	
pre-approved Sept. 18, 2008	Email:mahesh.upadhyaya@ubc.ca	
Effective Session Winter Term 1 Year 2009		
for Change		
	URL:	
	http://www.students.ubc.ca/calendar/index.c	
	<u>fm?tree=12,204,828,1110</u>	
Proposed Calendar Entry:	Present Calendar Entry:	
	CALENDAR 2008/09	
CALENDAR 2008/09		
CALLINDAN 2000/03	IX. Faculties, Colleges, and	
IX. Faculties, Colleges, and	The Faculty of Graduate Studies >	
	Degree Programs > Agricultural	
The Faculty of Graduate Studies >	Economics	
Degree Programs > Agricultural		
Economics	Degree Offered: M.Sc.	
Degrees Offered: M.Sc., M.F.R.E	Members	
	Professor	
Members		
Professor	J. A. Vercammen.	
J. A. Vercammen.	Associate Professor	
Associate Professors	R. Barichello.	
D D		
R. Barichello.	Assistant Professors	
Assistant Professor	K. Baylis, S. Gulati.	
S. Gulati.	Program Overview	
Program Overview	The Food and Resource Economics (FRE)	
	Group offers the Master of Science (M.Sc.)	
The Food and Resource Economics (FRE)	degree in Agricultural Economics through the	
Group offers both a research master's	Faculty of Graduate Studies.	
dogues the Moster of Colones (M.Co.) in	1	

degree, the Master of Science (M.Sc.) in

Agricultural Economics, and a professional master's degree, the Master of Food and Resource Economics (M.F.R.E.). The M.Sc. is designed for careers where research is a main component, while the M.F.R.E. is designed for careers in industry or government.

In both degrees, coursework provides students with rigorous training in applied economics and quantitative methods. In the M.Sc., students develop specialized research skills by working with faculty throughout UBC on important real-world issues. In the M.F.R.E., students combine applied economics with policy analysis and agribusiness management, enabling them to analyze issues in the food and resource sectors.

FRE faculty members have direct experience working in the food and resource sectors, both domestically and internationally in Europe and Asia, particularly with developing countries.

Master of Science

Admission Requirements

Students admitted to the M.Sc. degree program will normally possess a bachelor's degree in agricultural economics or a related area, and are expected to meet the admission requirements of the *Faculty of Graduate Studies*.

Program Requirements

The M.Sc. program can normally be completed in 18 to 20 months. After completing at least 18 credits of coursework, a thesis is written under the guidance of a UBC-wide committee that is chaired by a FRE faculty member. On occasion a course-based option is pursued. With the thesis option, students with an adequate undergraduate background in economic theory, mathematical economics, and quantitative methods must complete AGEC 501, ECON 500, ECON 526, ECON 527, and two field courses, which may be at the senior

The coursework provides students with rigorous training in applied economics and quantitative methods. Students develop specialized research skills by working with faculty throughout UBC on important real-world issues.

FRE faculty members have been involved with projects in a variety of countries throughout Asia and other parts of the world (e.g., Dr. Barichello has extensive experience with food security issues in Indonesia). Formal educational linkages exist that allow FRE graduate students to study and research abroad.

Master of Science

Admission Requirements

Students admitted to the M.Sc. degree program will normally possess a bachelor's degree in agricultural economics or a related area, and are expected to meet the admission requirements of the *Faculty of Graduate Studies*.

Program Requirements

The M.Sc. program can normally be completed in 18 to 20 months. After completing at least 18 credits of coursework, a thesis is written under the guidance of a UBC-wide committee that is chaired by a FRE faculty member. On occasion a course-based option is pursued. With the thesis option, students with an adequate undergraduate background in economic theory, mathematical economics, and quantitative methods must complete AGEC 501, Econ 500, Econ 526, Econ 527, and two field courses, which may be at the senior undergraduate level. Students without an adequate background must take additional preparatory courses.

The thesis normally involves identifying a research topic mutually agreed upon by the student and supervising faculty, undertaking an extensive review of the literature, developing the appropriate theoretical framework, and then

undergraduate level. Students without an adequate background must take additional preparatory courses.

The thesis normally involves identifying a research topic mutually agreed upon by the student and supervising faculty, undertaking an extensive review of the literature, developing the appropriate theoretical framework, and then performing some form of empirical analysis.

Master of Food and Resource Economics

Admission Requirements

Students admitted to the M.F.R.E. degree program will normally possess a bachelor's degree in agricultural economics or a related area, and are expected to meet the admission requirements of the <u>Faculty of Graduate</u> <u>Studies</u>.

Program Requirements

The M.F.R.E. program requires 30 credits of course work over 12 months of intensive study, beginning in September. In Winter Session, students complete 18 credits of required graduate courses and 6 credits of restricted electives. The required graduate courses are:

AGEC 501(3): Applied Demand Analysis AGEC 502(3): Topics in Food Market Analysis AGEC 503(3): Policy Analysis for Food,

Environment and Resources AGEC 515(3): Agribusiness Management AGEC 520(3): Topics in Land and Forest

Resource Economics

FRST 530 (3): Multiple Regression Methods or FRST 533 (3): Problems in Statistical Methods

For the list of restricted elective courses, please see the Faculty website (www.landfood.ubc.ca).

In Summer Session, students undertake a 6-credit research project (AGEC 547) under

performing some form of empirical analysis.

Contact Information

Faculty of Land and Food Systems 270–2357 Main Mall

Vancouver, BC, Canada V6T 1Z4

Tel: 604-822-4593 Fax: 604-822-4400

Email: gradapp@interchange.ubc.ca

Web:

 $\underline{www.landfood.ubc.ca/programs/agec\ grad.htm}$

Kirsten Cameron, Graduate Programs

Manager

Type of Action: New Program

Rationale:

The M.F.R.E. degree program will provide a new opportunity for students from B.C., Canada, and the world to obtain the necessary skills and knowledge for careers as professional economists in the food and resource sectors, locally and globally.

the supervision of FRE faculty and professional economists in industry and government. Contact Information Graduate Programs Office Faculty of Land and Food Systems 270–2357 Main Mall Vancouver, BC, Canada V6T 1Z4 Tel: 604-822-4593 Fax: 604-822-4400 Email: gradapp@interchange.ubc.ca Web: www.landfood.ubc.ca	
Proposed Calendar Entry:	Type of Action:
AGEC 515 (3) Agribusiness Management	New Course
Product 313 (3) rigitousiness management	Rationale:
	This course ensures that students in the new Master of Food and Resource Economics degree program achieve learning outcomes in the area of agribusiness management. This is necessary for professional economists working in the food and resource sectors, in Canada and abroad.
Proposed Calendar Entry:	Type of Action:
AGEC 547 (6) Graduating Project	New Course Rationale:
	This course allows students in the new Master of Food and Resource Economics degree program to apply the concepts and skills acquired from 18 credits of required AGEC graduate courses plus 6 credits of restricted electives to a real world research problem.



Vancouver Senate Nominating Committee c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall
Vancouver BC V6T 121
Tel: (604) 822-8141 | Fax: (604) 822-5945
amandeep.breen@ubc.ca

December 5, 2008

To: Vancouver Senate

From: Nominating Committee

Re: Adjustments to Committee Membership and Quorum (approval)

I. Curriculum Committee Membership Adjustment (approval)

The Nominating Committee recommends that the Senate Curriculum Committee membership be adjusted to include the Chair of the Senate Admissions Committee as an ex-officio, voting member. The Chair of the Senate Curriculum Committee is an ex-officio member of the Admissions Committee, and a reciprocal representation will be very useful. As such, the Nominating Committee recommends to Senate the following:

Motion: That the membership of the Vancouver Senate Curriculum Committee be adjusted to include the Chair of the Vancouver Senate Admissions Committee as an ex-officio, voting member of the committee.

II. Academic Building Needs Quorum Adjustment (approval)

The Nominating Committee recommends that the quorum requirements for the Senate Academic Building Needs Committee be adjusted from six (6) to five (5) members, in order to follow the customary committee quorum (50% of committee membership, plus one (1)). As there are eight (8) appointed members of the Academic Building Needs Committee, the Nominating Committee recommends to Senate the following:

Motion: That the quorum for the Vancouver Senate Academic Building Needs Committee be reduced to five (5) voting members of the committee.

Respectfully submitted,

Dr. Rhodri Windsor-Liscombe Chair, Nominating Committee



Vancouver Senate Nominating Committee c/o
Enrolment Services |Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall
Vancouver BC V6T 121
Tel: (604) 822-8141 | Fax: (604) 822-5945
amandeep.breen@ubc.ca

December 5, 2008

To: Vancouver Senate

From: Nominating Committee

Re: Membership of the Council of Senates (approval)

Membership of the Standing Committees of the Council of Senate (approval)

Following a call for nominations for members of the Vancouver Senate to serve on the Council of Senates, the Nominating Committee is pleased to recommend the following:

"That Senate approve the following Standing Committee appointments:

Committee	Senator		
Council of Senates Vancouver	Dr. Robert Gardiner		
Representative Committee One			
Council of Senates Vancouver	Dr. Chris Orvig		
Representative Committee Two			
Council of Senates Vancouver	Dr. Trevor Young		
Representative Committee Three			
Council of Senates Vancouver	Ms. Aidha Shaikh		
Representative Committee Four			
Council of Senates Vancouver	Dean Mary Anne Bobinski		
Representative Committee Five			
Council Budget Committee	Dr. James Brander		
Council Budget Committee	Dr. Peter Marshall		
Council Budget Committee	Dr. Richard Anstee		
Council Budget Committee	Dr. William Dunford		
Council Budget Committee	Dr. Kenneth Baimbridge		
Council Budget Committee	Dr. Susan Grayston		
Council Budget Committee	Mr. Dean Leung		
Council Budget Committee	Mr. Alex Lougheed		
Council Budget Committee	Ms. Aidha Shaikh		
Council Elections Committee	Dean Mary Anne Bobinski		
Council Elections Committee	Mr. Christopher Gorman		
Council Elections Committee	Mr. Alex Lougheed		

And;

That these appointments are until the conclusion of this Senate (August 31, 2011), except in the case of Ms. Shaikh and Mr. Lougheed, whose appointment are until March 31, 2009, and are made with the understanding that should one of the above persons cease to be a member of Senate, he or she will be replaced on the relevant Committee by Senate at its earliest convenience."

Senators are reminded that despite the terms set out above, members of committees whose term of office on the Senate have ended are requested to continue to serve on their Committees until a successor is appointed, in accordance with Section 35 of the *Rules and Procedures of the Vancouver Senate*.

II. Election of Senators to the Council of Senates (approval)

As per section 38.1(e) of the *University Act*, the Vancouver Senate must elect four (4) representatives to the Council of Senates, with two (2) such representatives to be students. At the April 16, 2008 meeting of Senate, Mr. Blake Frederick and Mr. Rob McLean were acclaimed as elected. At this time, the Nominating Committee recommends to Senate the nomination of Dr. Ronald Yaworsky and Dr. Sally Thorne for election to the Council of Senates.

Motion: That Senate elect Dr. Ronald Yaworsky and Dr. Sally Thorne to the Council of Senates.

Respectfully submitted,

Dr. Rhodri Windsor-Liscombe Chair, Nominating Committee



Vancouver Senate Tributes Committee c/o Enrolment Services | Senate & Curriculum Services Brock Hall 2016 – 1874 East Mall Vancouver BC V6T 1Z1 Tel: (604) 822-8141 | Fax: (604) 822-5945 amandeep.breen@ubc.ca

December 1, 2008

To: Vancouver Senate

From: Tributes Committee

Re: Candidates for Emerita/Emeritus Status (approval)

The Tributes Committee recommends approval of the following motion:

Motion: That the attached list of individuals for emerita or emeritus status be

approved and that, pursuant to section 9(2) of the University Act, all persons with the ranks of Professors Emeriti, Associate Professors Emeriti, Assistant Professors Emeriti, Senior Instructors Emeriti,

Instructors II Emeriti, Instructors I Emeriti, General Librarians Emeriti

and Administrative Librarians Emeriti be added to the Roll of

Convocation.

Respectfully submitted,

Dr. Sally Thorne

Chair, Tributes Committee

	Faculty Members Eligible for Emeritus Status					
Retirements & Resignation June 30 to December 31, 2008						
Last Name	First Name	Rank	Faculty	Title		
Arlin	Marshall	Professor	Education	Professor Emeritus of Educational and Counselling Psychology and Special Education		
Brandak	George M.	General Librarian	VP Academic &Provost	General Librarian Emeritus		
Carden	Guy	Associate Professor	Arts	Associate Professor Emeritus of Linguistics		
Clark	Don Christoper	Professor	Dentistry	Professor Emeritus of Oral Health Sciences		
Donaldson	David	Professor	Dentistry	Professor Emeritus of Oral Biological and Medical Sciences		
Egerton	George W.	Associate Professor	Arts	Associate Professor Emeritus of History		
Flick	Jane M.	Associate Professor	Arts	Associate Professor Emerita of English		
Good	Graham	Professor	Arts	Professor Emeritus of English		
Gosline	John M.	Professor	Science	Professor Emeritus of Zoology		
Lamb	Charles W.	Assistant Professor	Science	Assistant Professor Emeritus of Mathematics		
Paterson	Douglas D.	Associate Professor	Applied Science	Associate Professor Emeritus of Architecture and Landscape Architecture		
Wallace	Michael D.	Professor	Arts	Professor Emeritus of Political Science		
Wong	David	Clinical Professor	Medicine	Clinical Professor Emeritus of Anesthesiology Pharmacology and Therapeutics		



Provost and Vice President Academic 6328 Memorial Road

Vancouver, BC Canada V6T 1Z2

Tel: 604-822-4948 Fax: 604-822-3134

MEMORANDUM

November 20, 2008

To:

UBC Senate (Vancouver)

c/o Lisa Collins, Assistant Registrar, Senate and Curriculum Services

From: David H. Farrar

Provost and Vice President Academic

Re:

Change of Name from the Centre for Hip Health to the Centre for Hip

Health and Mobility

Recommendation:

I recommend that Senate approve the change of name from the Centre for Hip Health to the Centre for Hip Health and Mobility, effective December 18, 2008.

Background:

The proposal to establish the Centre for Hip health was approved by Senate at its meeting in January, 2007. A motion to change the name of the Centre to the Centre for Hip Health and Mobility was approved by the Faculty of Medicine's Executive Committee on October 21, 2008. The name change has also been approved by the Centre's investigators.

Rationale:

The change in name to the Centre for Hip Health and Mobility ensures that the research undertaken by all members of the Centre is better represented, will continue to strengthen the breadth of scholarship within the Centre, emphasizes the Centre's overarching theme of knowledge translation and welcomes more community involvement.

The Centre consulted widely with government, the Vancouver Hospital Foundation, the general public and donors and there was unanimous support for the change in name. Stakeholders believe the new name will resonate more effectively with the general public, with government and with donors, and will enhance the Centre's chances of funding from these sources.