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www.sfu.ca/vpacademic**MEMORANDUM**

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<b>ATTENTION</b>	Senate	<b>DATE</b>	December 11, 2013
<b>FROM</b>	Jon Driver, Vice-President, Academic and Provost, and Chair, SCUP	<b>PAGES</b>	1/1
<b>RE:</b>	Beedie School of Business and Faculty of Environment: Full Program Proposal for a Bachelor of Business Administration/Bachelor of Environment Joint Major in Sustainable Business (SCUP 13-66)		

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At its November 20, 2013 meeting, SCUP reviewed and approved the Full Program Proposal for a Bachelor of Business Administration/Bachelor of Environment Joint Major in Sustainable Business within the Beedie School of Business and the Faculty of Environment, effective Fall 2014.

**Motion:**

That Senate approve and recommend to the Board of Governors the Full Program Proposal for a Bachelor of Business Administration/Bachelor of Environment Joint Major in Sustainable Business within the Beedie School of Business and the Faculty of Environment, effective Fall 2014.

c: A. Gemino  
A. Clapp  
D. Burns

A handwritten signature in black ink, appearing to be "Jon Driver".



OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

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**MEMORANDUM**

<b>ATTENTION:</b>	Senate Committee on University Priorities	<b>DATE</b>	November 8, 2013
<b>FROM</b>	Gordon Myers, Chair Senate Committee on Undergraduate Studies	<b>PAGES</b>	1/1
<b>RE:</b>	Beedie School of Business/Faculty of Environment (SCUS 13-48g)		

Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of November 7, 2013, gives rise to the following recommendations:

**Motion**

That SCUP approve and recommend to Senate the Full Program Proposal for the Bachelor of Business Administration/Bachelor of Environment Joint Major in Sustainable Business within the Beedie School of Business and the Faculty of Environment.

The relevant documentation for review by SCUP is attached.

**Full Program Proposal**  
**Bachelor of Business Administration/Bachelor of Environment**  
**Business and Environment Joint Major**  
**December 10, 2013**

**Executive Summary**

This document proposes a new joint major between the Beedie School of Business and the Faculty of Environment under the following two credentials: a Bachelor of Business Administration (BBA) and the new credential, a Bachelor of Environment (BEnv). This program will be informally referred to as a Joint Major in Sustainable Business. A separate Full Program Proposal (FPP) for the BEnv credential accompanies this proposal. This program would be one of only a few Bachelor degree programs in Canada focusing on business, sustainability and the environment, proposed to begin September 2014. The content of this FPP is the result of three years of joint work between Beedie and FENV, including consultation with SFU faculty, staff, students, alumni and prospective employers.

This Beedie School of Business (Beedie)/Faculty of Environment (FENV) joint major is targeted to students who seek careers in the private, non-profit and public sectors in areas such as green entrepreneurship and innovation, supply chain management, accounting related to environment and sustainability, environmental impact assessment and mitigation, energy and materials management, and management within resource and environmental companies. Because of the distinctive nature of the joint major program, some recruitment is anticipated from other Canadian provinces, the U.S. and from other nations.

This joint major would take full advantage of the expertise existing across FENV and Beedie. It includes a core of lower and upper division courses in both the socio-economic and biophysical aspects of the environment; business disciplines including accounting, economics, finance, and organizational theory; and quantitative methodologies used in decision-making. Upper division required courses integrate business and sustainability. Flexibility in selecting additional upper division courses will allow students to gain depth in areas at the intersection of business and environment. Finally, a project management and capstone course will provide students with the opportunity to practice application of their skills and knowledge.

Mounting the joint major can be carried out at a relatively low cost by using primarily existing FENV, Beedie and other SFU courses, increasing class sizes where appropriate and taking advantage of existing administrative capacity in Beedie and the FENV Dean's Office. Four new courses would need to be developed and taught, and additional sections of existing courses may ultimately be required.

**Credential to be awarded**

Joint Major Bachelor of Business Administration (BBA) or Bachelor of Environment (BEnv).

**Location of Program**

Burnaby Campus, with some courses being offered at Harbour Centre and Surrey.

**Faculty Offering New Degree Program**

Beedie School of Business and Faculty of Environment.

**Anticipated New Program Start Date**

September 2014 (See enrollment plan for development timeline)

**Description of the proposed program: Aims, Goals and Objectives**

The Beedie/FENV joint major will provide students with skills and knowledge in both business and environment. A comprehensive core of lower and upper division courses provides students with content on both the social and biophysical aspects of environment as well as business disciplines including accounting, economics, finance, and organizational theory. Flexibility in selection of additional upper division courses will allow students to gain some depth in areas at the intersection of business and environment.

**Linkages between the educational goals and the curriculum**

This joint major was designed to meet the educational goals of both the BBA and BEnv as well as educational goals specific to the major in Sustainable Business. These educational goals were developed using information gained through extensive consultation with faculty, staff, students, alumni and potential employers.

**Educational Goals of the Bachelor of Environment**

The Natural Sciences

Students will have a basic understanding of:

- Earth Systems - earth processes including earth history, landforms, soils, atmosphere, hydrosphere and cryosphere, and their interrelationships and roles in climate and ecosystems.
- Ecology – Diversity of microorganisms, plants, and animals, and the abiotic and biotic factors that control the distribution and development of ecosystems.
- Biology – basic biochemical and physiological mechanisms of living organisms.

## The Social Sciences

Students will have a basic understanding of:

- Human role in nature – the interaction of humans, natural resources and the biophysical environment in the past and the present. Human cultural development, landscapes, livelihoods and industries.
- Social and built environments – human settlements, urban structure, and socio-spatial organization; the interaction of the built environment with transportation, housing, and public policy.
- Stewardship and governance – normative ethical theories and their application to the natural environment and the obligations that humans bear with respect to it. Ecosystem services, externalities, and environmental policy, science and values.
- The global scale – global environmental change and its causes, including population growth, the human ecological footprint, and social organization and technology as they affect land, ecosystems and food supply. The cumulative effects of urbanization, energy, raw materials and climate change at the global scale.

## Methodology, Practice and Communication

- Quantitative and geospatial analysis – Students will have a foundational knowledge of and abilities in geospatial analysis or modeling, quantitative data collection, statistics and probability, and the use of these techniques in environmental problem solving.
- Students will have specific knowledge of research methods and experience applying those methods in models, laboratories, or fieldwork, and skills in communicating the results of those applications to both professional and general audiences.

## Integrative Learning Outcomes

Students will have a basic understanding of:

- Complexity and controversy – the complexity of environmental systems, their potential social and biophysical impacts at various temporal and spatial scales, and their communication and resolution in environmental decision-making processes.
- Systems thinking – theories of systems and organizations, including their structure and internal processes and how they are linked to external forces. Students will understand the role of strategy and technology in organizational function and change.

- Sustainability concepts and strategies –the various concepts of sustainability and sustainable futures. Students will be familiar with sustainability strategies at multiple spatial, temporal and comparative scales.
- Students will be able to integrate and demonstrate the knowledge and skills gained through their undergraduate study within a project-based capstone course using analytical methodologies and communicating environmental complexity.

### **Sustainable Business Educational Goals**

Students will:

- Recognize the need to adapt business practices to the opportunities and challenges of an evolving global environment – This joint major will pay particular attention to this in terms of sustainability.
- Demonstrate ability to apply ethical reasoning to address issues in corporate governance, corporate responsibility and sustainability in a business context.
- Identify, evaluate, analyze, interpret and apply information to address problems and make reasoned decisions in a business context (using both qualitative and quantitative methodologies).
- Communicate in a business context in clear, concise and coherent and professional manner (both oral and written).
- Apply business discipline knowledge in an integrative manner to business problems.
- Demonstrate the understanding and ability to apply professional standards, theory and research to address business problems at the intersection of business, sustainability and environment.
- Be able to utilize basic knowledge and skills in economics, finance and accounting.
- Have a working knowledge of information and information systems as applied to business, environment and sustainability.
- Have a basic understanding of law as it applies to business, environment and sustainability.
- Have a basic understanding of ethics and corporate responsibility as they apply to business, environment and sustainability.
- Understanding of business organization function and change and their relation to strategy.
- Students will have experience in using a variety of concepts and tools such as risk assessment, cost-benefit analysis, and triple bottom line accounting.

Educational goals in critical thinking, problem solving, community and stakeholder engagement, facilitation, conflict resolution, leadership and team building, rather than being addressed by specific courses, could be integrated within courses and other activities (e.g. Coop).

## **Content and Summary of Requirements for Graduation**

The structure of the joint major would be comprised of 1) lower and upper division Business core requirements 2) lower and upper division Environment core requirements and 3) focus courses and a capstone course.

Students will complete upper and lower division courses in both Beedie and FENV. In many cases students may choose either a Beedie or FENV course in order to satisfy a particular program requirement. Because elective course options vary between 3 and 4 units, the total units required to complete all program requirements vary by as much as 10 units depending on the course combinations chosen by the student.

Joint Major Summary:	Units
Lower Division	44-47
Upper Division	54-59
TOTAL	98-106

### **Program Requirements: Lower Division**

Students complete all of:

- BUS 251-3           Financial Accounting I
- BUS 254-3           Managerial Accounting I
- BUS 272-3           Behavior in Organizations
- ECON 103-4          Principles of Microeconomics
- ECON 105-4          Principles of Macroeconomics

and 1 of:

- BUEC 232-4          Data and Decisions I \*
- STAT 270-3          Introduction to Probability and Statistics \*
- GEOG 251-3          Quantitative Geography \*

and 1 of:

- BUS 237-3           Business Technology Management
- GEOG 255-3          Geographic Information Science I

and 1 of:

- MATH 150-4          Calculus I with Review
- MATH 151-3          Calculus I
- MATH 154-3          Calculus I for Biological Sciences
- MATH 157-3          Calculus I for Social Sciences

and 1 of:

- ENGL 101W-3        Introduction to Fiction
- ENGL 102W-3        Introduction to Poetry
- ENGL 103W-3        Introduction to Drama

- ENGL 104W-3 Introduction to Prose Genres
- ENGL 105W-3 Introduction to Issues in Literature and Culture
- ENGL 199W-3 Introduction to University Writing
- PHIL 100W-3 Knowledge and Reality
- PHIL 120W-3 Introduction to Moral Philosophy
- WL 101W-3 Writing About Literature
- WL 103W-3 Pre-Modern World Literature
- WL 104W-3 Modern World Literature

and 1 of:

- BISC 101-4 General Biology
- BISC 102-4 General Biology
- EVSC 100-3 Introduction to Environmental Science
- GEOG 215-3 Biogeography
- HSCI 100-3 Human Biology

and 1 of:

- EASC 101-3 Dynamic Earth
- GEOG 111-3 Earth Systems

and 1 of:

- ARCH 100-3 Ancient People and Places
- GEOG 100-3 Society, Space and Environment: Introducing Human Geography

and 1 of:

- ENV 221-3 Systems Thinking
- ENV 222-3 Environmental Controversy
- GEOG 241-3 Social Geography
- GEOG 261-3 Introduction to Urban Geography
- REM/SCD 201-3 Introduction to Sustainable Community Development

and 1 of:

- ARCH 286-3 Cultural Heritage Stewardship in Global Context (new)
- DEVS 201-3 Introduction to Development and Sustainability
- GEOG 221-3 Economic Geography
- HSCI 160-3 Global Perspectives on Health
- REM 100-3 Global Change
- REM 200-3 Introduction to Resource and Environmental Management (new)



## **Program Requirements: Upper Division**

Students complete all of:

- BUS 312-4 Introduction to Finance
- BUS 343-3 Introduction to Marketing
- BUS 361-3 Project Management
- BUS 475-3 Sustainable Operations
- BUS 360W-4 Business Communications
- ENV 321-3 Ecological Economics

and 1 of:

- BUS 374-3 Organizational Theory
- BUS 381-3 Introduction to Human Resource Management

and 1 of:

- BUS 336-4 Data and Decisions II\*
- REM 412-3 Environmental Modeling
- GEOG 352-4 Spatial Analysis

and 1 of:

- BUS 303-3 Business, Society, and Ethics
- ENV 320W-3 Ethics and the Environment
- PHIL 328-3 Environmental Ethics

and 1 of:

- BUS 393-3 Commercial Law
- ENV 319-3 Environmental Law

and 1 of:

- BUS 489-3 Management Practices for Sustainability
- BUS 453-3 Sustainable Innovation

and 5 of:

- ARCH 363-3 Landscape Archaeology
- ARCH 365-3 Archaeological Perspectives on Human Ecology
- ARCH 386-3 Archaeological Resource Management
- DEVS 401-4 Issues, Concepts and Cases in Development and Sustainability
- GEOG 321-4 Geographies of Global Capitalism
- GEOG 322-4 World Resources
- GEOG 323-4 Industrial Location
- GEOG 324-4 Geography of Transportation
- GEOG 325-4 Geographies of Consumption
- GEOG 327-4 Geography of Tourism
- GEOG 385-4 Agriculture and the Environment
- REM 370-3 Global Resource Issues in Oceanography (new)

- REM 350-3 Sustainable Energy and Materials Management
- REM 356-3 Institutional Arrangements for Sustainable Environmental Mgmt.
- REM 445-3 Environmental Risk Assessment
- REM 471-3 Forest Ecosystem Management
- SCD/REM 301-4 Sustainable Community Development Theory and Practice
- SCD/REM 401-4 Social Enterprise for Sustainable Community Development
- SCD/REM 403-4 Leadership in Sustainable Community Development

and 1 of:

- ENV 497-4 Environmental Capstone (new)
- ENV 491-4 Directed Study in Environment (if approved as a capstone)
- GEOG 426-4 Industrial Change and Local Development
- SCD 404-4 Project in Sustainable Community Development

\* Students wishing to take BUS 336-4 must take BUEC 232-4 or STAT 270-3. GEOG 251-3 does not satisfy the prerequisite requirements of BUS 336-4.

### **Business Career Passport Requirements**

Students who are admitted to the Beedie School of Business beginning in the fall 2012 term will complete the Business Career Passport. During the BBA program, students register in and complete six mandatory Business Career Passport workshops. The workshops may be completed in any order. However, it is recommended that students complete the self-assessment workshop sometime within their first 60 units of study. Enrolment and participation in workshops must be recorded with the Career Management Centre. For more information about the workshops, or to register, visit [the Beedie Community link](#) on the [Career Management Centre website](#).

### **Residency Requirements and Transfer Credit**

The University's residency requirement stipulates that, in most cases, total transfer and course challenge credit may not exceed 60 units, and may not include more than 15 units as upper division work.

### **Distinctive characteristics**

This joint major is founded on the combined capacities of Beedie and FENV, and would include the distinctive characteristics of both the BBA and the proposed BEnv (see BEnv Credential FPP). Its design includes courses from a large number of SFU units (i.e. ARCH, BUS, BUEC, DEVS, ECON, ENGL, ENV, GEOG, MATH, PHIL, REM, SCD, STAT, WL) with course selection driven by applicability to sustainable business. In terms of Canadian universities, only Waterloo and Dalhousie have a major that specifically focuses on environment, sustainability and business, the former not partnering with a business school.

### **Target Audience**

This joint major is targeted to those students who seek careers in the private, non-profit and public sectors in areas such as "green" entrepreneurship and innovation, supply chain management, accounting related to environment and sustainability, environmental impact

assessment and mitigation, energy and materials management, and management within resource and environmental companies. Because of the distinctive nature of the joint program, some recruitment is anticipated from other Canadian provinces, the U.S. and from other nations.

Recruitment will focus on four potential sources of students: students in both faculties, undecided students at SFU, transfer students, and international students. In order to gain admission into the joint major program, students will need to first be admitted to either Beedie or FENV. Next, they must apply to the counterpart Faculty for admission into the joint program. We hope to admit 15 students in the first year, building to 30 students after 5 years. This would translate to a steady enrolment of approximately 100 students in the joint major once it has matured.

### **Delivery Methods**

Core and elective courses will be offered primarily as face-to-face courses on the Burnaby Campus, with some courses also offered at the Harbour Centre and Surrey campuses.

### **Anticipated Completion Time in Semesters**

The joint major can be completed in 8 terms.

### **Enrolment plan for the length of the program**

We hope to submit FPPs for this joint major in fall 2013, with the target of getting Senate and BOG approval in January 2013. Allowing for the Ministry approval process, we hope that prospective students will be able to apply for admission to the joint major as early as spring 2014. If approved, we expect to admit 15 students in 2014, building to 30 students per year within 5 years. This would translate to a steady enrolment of approximately 100 students in the joint major once it has matured.

Prospective students would first need to be admitted to Beedie. Admission into the joint major would require students to apply for approval from the Faculty of Environment after completing the required courses and any other associated admission requirements as set out by that Faculty. Beedie has requirements and procedures for admission into its major that extend to all of its joint majors, including this one. FENV'S BEnv would allow for direct admission and internal transfer. The former students will be required to have a Math 12 equivalent, while the latter will need to have completed at least 15 units of required work in the joint major. Beedie and FENV will work together to ensure that each Faculty's admission requirements and procedures into the BBA/BEnv joint major are aligned.

### **Student Evaluation**

Student evaluation will be conducted as per the general regulations of the University, the Beedie School of Business and the Faculty of Environment.

## **Anticipated Contribution to the Mandate and Strategic Plan of the Faculty of Environment and the Beedie School of Business**

The role of FENV is to co-ordinate environmental programming at SFU, which was mandated in the formation of the Faculty in 2009. Promoting integration and interdisciplinary in teaching are key objectives. One of the five areas of focus in the FENV Academic Plan 2013-2018 is to “Continue with the development and consolidation of new undergraduate and graduate programming that ensures exposure to interdisciplinary and experiential learning opportunities, and differentiates SFU from other Environment Faculties/Schools.” This plan highlights the priority on development of inter-departmental and inter-Faculty degree programs and specifically mentions the Beedie/FENV joint major. This proposed joint major between Beedie and the FENV would be the first new undergraduate joint major in the FENV since its inception. This joint major, as part of the broader BEnv initiative, is intended to be one of FENV’s flagship undergraduate programs. Finally, this proposal, together with the inclusion of the BUS courses in the Certificate in Environmental Literacy and the modification of the Corporate Environmental and Social Responsibility Certificate, represent strategic steps in building a relationship between Beedie and FENV in the promotion of sustainability.

The commitment to sustainability is specifically stated in Beedie’s mission: “By creating and communicating powerful ideas, we educate and inspire the founders, leaders and managers of organizations that are internationally competitive, locally responsive, and sustainable.” Beedie’s strategic focus is built upon four themes, one of which is “Society, Environment and Governance.” This joint major is well aligned with the mission, strategic direction and focus of the school, with its intent of educating future leaders at the intersection of business, environment and sustainability.

### **Program Assessment**

All academic units are subject to external review every seven years. The joint major will be governed and managed by Beedie and FENV in conformity with Faculty and University regulations. A committee of the Beedie and FENV representatives will meet once each year to discuss curriculum-related matters and administration of the joint major.

### **Level of Support and Recognition from other Post-Secondary Institutions**

As per SFU’s transfer credit procedures, students may transfer from BC and non-BC colleges or universities to SFU, at which point students may apply for admission into this program. The Joint Major program in Business and Environment has been developed from mainly Business and Environment courses, which have already been articulated with the various post secondary institutions in British Columbia. Students who are part of this Program can transfer the courses to Business, Environment or Science Programs in other post secondary institutions. Because this Joint Major between Business and Environment is unique in British Columbia, students cannot move to a similar program at another institution. Letters requesting support are being sent to BC universities and colleges 1) whose students might transfer to SFU into this proposed joint major, 2) with graduate programs that are likely to appeal to graduates of this joint major, and 3) that have degree program(s) similar to this joint major.

## Evidence of Student Interest and Labour Market Demand

The Globe Foundation estimates that by 2020 the number of direct “green” jobs in BC could grow to more than 200,000, an increase of almost 75 percent over the 2008 estimate (Careers for a Sustainable Future: a reference guide for green jobs in B.C., Globe Foundation, 2012).

Several recent surveys emphasize the growing importance that corporate executives place on environmental and social sustainability, yet also highlight the gap that remains in implementing the sustainability agenda (Accenture, 2010; Ceres, 2010; 2012). The debate is rapidly moving beyond *whether* to conduct business in ways that closely couple social and environmental issues to *how* this should be done. To achieve this, organizations will need employees that understand how natural and social systems function and interact, but also understand how businesses are managed and how to undertake successful organizational change and spur necessary innovation.

In the fall 2011 SFU Undergraduate Student Survey students were asked about their interest in a 10 possible new bachelor degree programs. Of the over 5000 students who responded to the survey 32.3% were very/somewhat interested (9.6% very interested) in a BEnv in Sustainability and Innovation. This was the highest level of interest of all 10 majors put forward.

In fall 2011, the FENV Faculty Advisory Committee, met and provided guidance on development of the BEnv and its majors, stressing the importance of interdisciplinarity, experiential learning, and communication of technical information to non-specialist audiences. Committee members were Frank Brown (Director, Land and Marine Stewardship, Coastal First Nations) Hon. David Anderson (former Minister of Fisheries and Oceans), Mr. Bob Elton (former Pres./CEO B.C. Hydro), Dr. C.S. Holling (one of the conceptual founders of ecological economics), Dr. Leslie King (Director Centre for Environmental Education, Royal Roads), Mr. Bruce Morgan (Director, Change Management and Special Projects at Canadian Environmental Assessment Agency), Nancy Olewiler (Director, SFU School of Public Policy) and Dr. Barry Smit (Chair in Global Environmental Change, Univ. of Guelph).

Two surveys, targeted at environmental professionals, were implemented to gather input on the BEnv credential (December 2011 – March 2012) and its proposed majors (June – August 2013). Seventy-three responses were received. The average years of experience of respondents were approximately 15. Approximately 67% of respondent strongly agreed or agreed with the statement “A Bachelor of Environment will be well perceived by potential employer”. Respondents also provided input on job demand for graduates in each of the proposed majors in the next 5 -15 years. On a scale of 5 to 1 (5-very high, 4-high, 3-medium, 2-low, 1-very low) results were as follows:

Major	Mean	Very High=5	High=4	Medium=3	Low=2	Very Low=1	N
<b>Sustainable Business</b>	<b>4.0</b>	4	17	4	0	0	25

## **Summary of Resources Required and Available to Implement the Program**

Almost all required and elective courses are already in place, but the joint major incorporates four new courses. Enrolment numbers provided above assume that students can be accommodated within existing courses. Providing course options reduces bottlenecks for students and impact on courses. Additional faculty resources will be needed to mount the capstone courses when the first cohorts of ERM (and other BEnv) majors reach the culmination of their programs.

## **Related programs at SFU or other British Columbia post-secondary institutions**

There is presently a Beedie/Geography joint major. The main proposed differences are that this joint major 1) requires a broad core focused on sustainability, and 2) enables students to use coursework from BUS, DEVS, GEOG, REM and SCD to satisfy the upper division program requirements. Furthermore, an interdisciplinary joint major in Sustainable Business will attract different students and potential employers than a joint major in Geography and Business that focuses on resource industries, industrial and retail location, urban and regional planning, and the spatial dynamics of firms and business sectors.

Within British Columbia, UBC, UVic and UNBC do not have undergraduate degree programs specifically in business, environment and sustainability. UBC has a cluster of sustainability courses in the Commerce program. UVic students can pursue a double major in Commerce and Environmental Studies but there is no specific environment/business major. UNBC's majors are more narrowly defined, concentrating on natural resource management and planning. BCIT has a certificate in Sustainable Business Leadership.

The joint BBA/BEnv major in Sustainable Business is expected to be particularly attractive to international students. We are developing recruiting efforts to link colleges with high numbers of international students, including Fraser International College.

## **List of faculty members who will be teaching**

Courses as part of this joint major will be taught by existing faculty in both Beedie and FENV, as well as faculty from other Faculties.

### **Proposed Program Contact Person:**

Andrew Gemino, Associate Dean, Beedie, 778.782.3653, [gemino@sfu.ca](mailto:gemino@sfu.ca)  
Maureen Fizzell, Faculty, Beedie, 778.782.8899, [fizzell@sfu.ca](mailto:fizzell@sfu.ca)

Alex Clapp, Associate Dean, FENV, 778-782-8827, [aclapp@sfu.ca](mailto:aclapp@sfu.ca)  
Dan Burns, Manager, Curriculum and Planning, FENV, 778-782-9225, [dburns@sfu.ca](mailto:dburns@sfu.ca)

**Documentation used for internal approval; alternatively, provide a link to a website where this information is available. Normally, the Senate materials describing the FPP may be used for this purpose and will be provided by the office of the AVPA to the DQAB.**

In the September 17, 2013 Beedie UCC meeting, the members from the Beedie, passed a motion of approving the FPP for the BBA/BEnv Joint Major In Sustainable Business. Minutes of the meeting are securely located on the Beedie website.

In the October 23, 2013 FENV UCC meeting, the members from the FENV approved the FPP for the BBA/BEnv Joint Major In Sustainable Business. Minutes of the meeting are securely stored within the FENV.

### **References**

Accenture. 2010. A new era of sustainability: UN Global Compact-Accenture CEO study 2010.

Ceres. 2010. The 21st century corporation: The Ceres Roadmap for sustainability, from <http://www.ceres.org/Page.aspx?pid=1227>

Ceres. 2012. The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability, from [www.ceres.org/roadto2020](http://www.ceres.org/roadto2020)

**Calendar Change, Undergraduate Department, Beedie School of Business**

**Effective:** Fall 2014 Calendar

**Summary of Changes:**

- Addition of new joint major program between the Beedie School of Business and the Faculty of Environment

**Rationale:**

Please see the attached FPP for the rationale of the creation of this program and its inclusion within the SFU Calendar.

**The following program will be affected by these changes:**

- Bachelor of Business Administration

<b>From:</b>	<b>To:</b>  <b>Business and Environment Joint Major Program</b>  <i>Beedie School of Business   Faculty of Environment Simon Fraser University Calendar 2014 Fall</i>  Bachelor of Business Administration or Bachelor of Environment  Students must qualify for, receive admission, and remain qualified for continuance in the Beedie School of Business, in addition to being accepted as a joint major in the Faculty of Environment.  Students may opt for either a bachelor of environment degree from the Faculty of Environment, or a bachelor of business administration from the Beedie School of Business. The faculty from which the student chooses to complete a degree will govern faculty requirements.  <b>Grade Requirements</b>  In addition to normal university grade point average requirements, the Beedie School of Business requires a minimum 2.40 cumulative grade point average (CGPA) for entry into all 300 and 400 division business courses.  Regarding business requirements, for a course to be accepted as fulfilling a prerequisite, or for a lower division requirement,
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or for a core course to be accepted in a student's program in business, a student must have obtained a minimum grade of C- (C minus).

**Course Limit**

For those pursuing the BBA credential, students with fewer than 60 units may enrol in a maximum of 16 units per term. Those with 60 or more may enrol in a maximum of 18 units.

**Letters of Permission**

The Beedie School of Business does not normally approve letters of permission for students already enrolled at Simon Fraser University.

**Admission**

**Admission Requirements - Beedie School of Business**

***Criteria***

For admission to the Beedie School of Business, students will be selected competitively from one of the following two streams. To be considered for admission to the faculty, students in categories 3 and 4 must have completed each lower division required course with a minimum C- grade.

***Category 3 – all courses at Simon Fraser University***

A portion of the annual admission will be selected from students who have completed all of their courses at Simon Fraser University including the lower division requirement courses (except BUS 254 which may be completed after faculty admission). Students will be selected competitively based on the grades achieved in the lower division required courses,\*\* with a maximum of two repeated courses on those eight lower division courses. Note that a minimum Simon Fraser University cumulative grade point average (CGPA) of 2.40 is required.

***Category 4 – some Simon Fraser University and other post-secondary courses***

A portion of the annual admission will be selected from students who have completed some courses at Simon Fraser University and some at other post-secondary institutions including the lower division requirement courses (except BUS

254 which may be completed after faculty admission). Students will be selected competitively based on the grades achieved in the lower division required courses earned at Simon Fraser University and other institutions,\*\* with a maximum of two repeated courses on those eight lower division courses. Note that a minimum Simon Fraser University cumulative grade point average (CGPA) of 2.40 is required.

\*\*eight lower division courses are as follows:

- BUS 251-3 Financial Accounting I
- BUS 272-3 Behaviour in Organizations
- ECON 103-4 Principles of Microeconomics
- ECON 105-4 Principles of Macroeconomics

and one of

- BUEC 232-4 Data and Decisions I
- STAT 270-3 Introduction to Probability and Statistics
- GEOG 251-3 Quantitative Geography

and one of

- BUS 237-3 Business Technology Management
- GEOG 255-3 Geographic Information Science I

and one of

- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- MATH 154-3 Calculus I for Biological Sciences
- MATH 157-3 Calculus for the Social Sciences I

and one of

- ENGL 101W-3 Introduction to Fiction
- ENGL 102W-3 Introduction to Poetry
- ENGL 103W-3 Introduction to Drama
- ENGL 104W-3 Introduction to Prose Genres
- ENGL 105W-3 Introduction to Issues in Literature and Culture
- ENGL 199W-3 Introduction to University Writing
- PHIL 100W-3 Knowledge and Reality
- PHIL 120W-3 Introduction to Moral Philosophy
- WL 101W-3 Writing About Literature
- WL 103W-3 Pre-Modern World Literature

- WL 104W-3 Modern World Literature

### **Application Procedures**

Category 3 or 4 applicants should apply to the faculty after completing 30 units. Students should apply during the term in which the lower division requirements (except BUS 254) are completed. Students not accepted upon initial application may reapply. Unsuccessful applicants may appeal through the faculty admissions appeals committee.

### **Application Deadlines**

Visit <http://beedie.sfu.ca/bba/apply> for application deadlines.

### **Admission Requirements – Environment**

#### **Criteria**

To be accepted into the joint major requires approval by the Faculty of Environment and admission to the Beedie School of Business. For further details, see above under *Admission Requirements - Beedie School of Business*.

For approval by the Faculty of Environment, students must complete at least 12 units from the list of courses required for the Environment portion of the joint major.

#### **Program Requirements**

Students complete a minimum of 120 units, as specified below.

### **LOWER DIVISION REQUIREMENTS**

#### **Business Lower Division Requirements**

Students must complete all lower division required courses with a minimum C- grade.

Students must complete all of

- BUS 251-3 Financial Accounting I
- BUS 254-3 Managerial Accounting\*
- BUS 272-3 Behaviour in Organizations
- ECON 103-4 Principles of Microeconomics
- ECON 105-4 Principles of Macroeconomics

and one of\*\*

- BUEC 232-4 Data and Decisions I
- STAT 270-3 Introduction to Probability and Statistics
- GEOG 251-3 Quantitative Geography

and one of

- BUS 237-3 Business Technology Management
- GEOG 255-3 Geographic Information Science I

and one of

- And MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- MATH 154-3 Calculus I for Biological Sciences
- MATH 157-3 Calculus for the Social Sciences I

and one of

- ENGL 101W-3 Introduction to Fiction
- ENGL 102W-3 Introduction to Poetry
- ENGL 103W-3 Introduction to Drama
- ENGL 104W-3 Introduction to Prose Genres
- ENGL 105W-3 Introduction to Issues in Literature and Culture
- ENGL 199W-3 Introduction to University Writing
- PHIL 100W-3 Knowledge and Reality
- PHIL 120W-3 Introduction to Moral Philosophy
- WL 101W-3 Writing About Literature
- WL 103W-3 Pre-Modern World Literature
- WL 104W-3 Modern World Literature

\*May be completed following admission to the faculty

\*\* Students wishing to take BUS 336-4 must take BUEC 232-4 or STAT 270-3. GEOG 251-3 does not satisfy the prerequisite requirements of BUS 336-4

#### **Environment Lower Division Requirements**

Students complete a minimum of 21 units including

one of\*\*

- BUEC 232-4 Data and Decisions I
- STAT 270-3 Introduction to Probability and Statistics

- GEOG 251-3 Quantitative Geography

and one of

- BUS 237-3 Business Technology Management
- GEOG 255-3 Geographic Information Science I

and one of

- BISC 101-4 General Biology
- BISC 102-4 General Biology
- EVSC 100-3 Introduction to Environmental Science
- GEOG 215-3 Biogeography

and one of

- EASC 101-3 Physical Geology
- GEOG 111-3 Earth Systems

and one of

- ARCH 100-3 Ancient People and Places
- GEOG 100-3 Human Geography

and one of

- ENV 221-3 Systems Thinking
- ENV 222-3 Environmental Controversy
- GEOG 241-3 Social Geography
- GEOG 261-3 Introduction to Urban Geography
- REM/SCD 201-3 Introduction to Sustainable Community Development

and one of

- ARCH 286-3 Cultural Heritage Stewardship in Global Context
- DEVS 201-3 Introduction to Development and Sustainability
- GEOG 221-3 Economic Geography
- REM 100-3 Global Change
- REM 200-3 Introduction to Resource and Environmental Management

REM 200-3 Introduction to Resource and Environmental Management

\*\* Students wishing to take BUS 336-4 must take BUEC 232-4 or STAT 270-3. GEOG 251-3 does not satisfy the prerequisite requirements of BUS 336-4

**UPPER DIVISION REQUIREMENTS**

## **Business Upper Division Requirements**

### **Core Courses**

The Beedie School of Business core courses must be completed, except as specifically modified below. Students must complete all core courses with a minimum C- grade.

Students complete all of:

- BUS 312-4 Introduction to Finance
- BUS 343-3 Introduction to Marketing
- BUS 360W-4 Business Communications\*\*\*

and one of

- BUS 374-3 Organization Theory
- BUS 381-3 Introduction to Human Resource Management

and one of

- BUS 336-4 Data and Decisions II\*\*
- REM 412-3 Environmental Modeling
- GEOG 352-4 Spatial Analysis

and one of

- BUS 303-3 Business, Society, and Ethics
- ENV 320W-3 Ethics and the Environment
- PHIL 328-3 Environmental Ethics

and one of

- BUS 393-3 Commercial Law
- ENV 319-3 Environmental Law

### **Additional Upper Division Business Requirements**

Student must complete the following

- BUS 361-3 Project Management
- BUS 475-3 Sustainable Operations

and one of

- BUS 489-3 Management Practices for Sustainability
- BUS 453-3 Sustainable Innovation

\*\* Students wishing to take BUS 336-4 must take BUEC 232-4

or STAT 270-3. GEOG 251-3 does not satisfy the prerequisite requirements of BUS 336-4

\*\*\*to be completed before the student's 75th unit and at Simon Fraser University in accordance with the WQB requirements.

### **Environment Upper Division Requirements**

Students must complete

one of

- BUS 336-4 Data and Decisions II\*\*
- REM 412-3 Environmental Modeling
- GEOG 352-4 Spatial Analysis
- GEOG 451-4 Spatial Modeling

and one of

- BUS 303-3 Business, Society, and Ethics
- ENV 320W-3 Ethics and the Environment
- PHIL 328-3 Environmental Ethics

and one of

- BUS 393-3 Commercial Law
- ENV 319-3 Environmental Law

And successful completion of the following upper division courses

- ENV 321-3 Ecological Economics

and five of

- ARCH 363-3 Landscape Archaeology
- ARCH 365-3 Archaeological Perspectives on Human Ecology
- ARCH 386-3 Archaeological Resource Management
- DEVS 401-4 Issues, Concepts and Cases in Development and Sustainability
- GEOG 321-4 Geographies of Global Capitalism
- GEOG 322-4 World Resources
- GEOG 323-4 Industrial Location
- GEOG 324-4 Geography of Transportation
- GEOG 325-4 Geographies of Consumption
- GEOG 327-4 Geography of Tourism
- GEOG 385-4 Agriculture and the Environment
- REM 370-3 Global Resource Issues in Oceanography
- REM 350-3 Sustainable Energy and Materials Management

- REM 356-3 Institutional Arrangements for Sustainable Environmental Mgmt.
- REM 445-3 Environmental Risk Assessment
- REM 471-3 Forest Ecosystem Management
- SCD/REM 301-4 Sustainable Community Development Theory and Practice
- SCD/REM 401-4 Social Enterprise for Sustainable Community Development
- SCD/REM 403-4 Leadership in Sustainable Community Development

and one of

- ENV 495-4 Environmental Capstone
- ENV 491-4 Directed Study in Environment (if approved as a capstone)
- GEOG 426-4 Industrial Change and Local Development
- SCD 404-4 Project in Sustainable Community Development

\*\* Students wishing to take BUS 336-4 must take BUEC 232-4 or STAT 270-3. GEOG 251-3 does not satisfy the prerequisite requirements of BUS 336-4

#### **Faculty of Environment Program Requirements**

For all bachelor of environment (BEnv) programs (except the honours program), students complete 120 units, which includes

- at least 45 upper division units, of which at least 30 upper division units must be completed at Simon Fraser University
- satisfaction of the writing, quantitative, and breadth requirements
- an overall cumulative grade point average (CGPA) and upper division CGPA of at least 2.0, and a program CGPA and upper division CGPA of at least 2.0

#### **Writing, Quantitative, and Breadth Requirements**

Students admitted to Simon Fraser University beginning in the fall 2006 term must meet writing, quantitative and breadth requirements as part of any degree program they may undertake. See [Writing, Quantitative, and Breadth Requirements](#) for university-wide information.

#### **Business Career Passport Requirements**

Students who are admitted to the Beedie School of Business beginning in the fall 2012 term will complete the Business Career Passport.

During the BBA program, students register in and complete six



mandatory Business Career Passport workshops. The workshops may be completed in any order. However, it is recommended that students complete the self-assessment workshop sometime within their first 60 units of study. Enrolment and participation in workshops must be recorded with the Career Management Centre. For more information about the workshops, or to register, visit [Community link](#) on the [Career Management Centre website](#).

**Residency Requirements and Transfer Credit**

The University's residency requirement stipulates that, in most cases, total transfer and course challenge credit may not exceed 60 units, and may not include more than 15 units as upper division work.

Also refer to [International Exchange Programs](#).

[Return to business index page](#). [Return to environment index page](#).

**Notice of Intent**  
**Bachelor of Business Administration/Bachelor of Environment**  
**Joint Major in Sustainable Business**  
**Beedie School of Business/Faculty of Environment**  
**July 2013**

**Executive Summary**

This document contains a proposal for a new joint major in Sustainable Business under the following two credentials: a Bachelor of Business Administration (BBA) and possible new credential, a Bachelor of Environment (BEnv). A separate NOI for the BEnv credential was approved by SCUP in March 2013. This program would be one of only a few Bachelor degree programs in Canada focusing on business, sustainability and the environment. The program is proposed to begin September 2014. The content of this NOI is the result of three years of consultation with faculty (FENV and non-FENV), staff, students, alumni and prospective employers, as well as joint work between Beedie and FENV.

This Beedie/FENV joint major would provide students with skills and knowledge in both business and environment. The joint major is targeted to those students who wish to seek careers in the private, non-profit and public sectors in areas such as “green” entrepreneurship and innovation, supply chain management, accounting related to environment/sustainability, environmental impact assessment and mitigation, energy and materials management and management within resource and environmental companies. Because of the distinctive nature of the joint major program, some recruitment is anticipated from other Canadian provinces, the U.S. and from other nations.

This joint major would take full advantage of the expertise existing across FENV and Beedie. It includes a core of lower and upper division courses in both the socio-economic and biophysical aspects of the environment; business disciplines including accounting, economics, finance, and organizational theory; and quantitative methodologies used in decision-making. Upper division required courses will integrate business and sustainability. Flexibility in selecting additional upper division courses will allow students to gain depth in areas at the intersection of business and environment. Finally, a project management and capstone course will provide students with the opportunity to practice application of their skills and knowledge.

Recruitment will focus on four potential sources of students: students in both faculties, undecided students at SFU, transfer students, and international students. In order to gain admission into the joint major program, students will need to first be admitted to either the Beedie School of Business or FENV. Next, they must apply to the counterpart Faculty for admission into the joint program. We hope to admit 15 students in the first year, building to 30 students after 5 years. This would translate to a steady enrolment of approximately 90 students in the joint major once it has matured. Mounting the joint major can be carried out at a relatively low cost by using primarily existing FENV and non-FENV courses, increasing class sizes where appropriate and taking advantage of existing administrative capacity in Beedie and the FENV Dean’s Office. One new course would need to be developed and taught, and additional sections of existing courses may ultimately be required.

**Credential to be awarded**

Joint Major Bachelor of Business Administration (BBA) or Bachelor of Environment (BEnv).

**Location of Program**

Burnaby Campus, with some courses being offered at Harbour Centre and Surrey.

**Faculty Offering New Degree Program**

Beedie School of Business and Faculty of Environment.

**Anticipated New Program Start Date**

September 2014 (See enrollment plan for development timeline)

**Description of the proposed program****Aims, Goals and Objectives**

The Beedie/FENV joint major will provide students with skills and knowledge in both business and environment. A comprehensive core of lower and upper division courses provides students with content on both the social and biophysical aspects of environment as well as business disciplines including accounting, economics, finance, and organizational theory. Flexibility in selection of additional upper division courses will allow students to gain some depth in areas at the intersection of business and environment.

**Anticipated Contribution to the Mandate and Strategic Plan of the Faculty of Environment and the Beedie School of Business**

The role of FENV is to co-ordinate environmental programming at SFU, which was mandated in the formation of the Faculty in 2009. Promoting integration and interdisciplinarity in teaching are key objectives. One of the five areas of focus in the Faculty of Environment Academic Plan 2013-2018 is to “Continue with the development and consolidation of new undergraduate and graduate programming that ensures exposure to interdisciplinary and experiential learning opportunities, and differentiates SFU from other Environment Faculties/Schools.” This plan highlights the priority on development of inter-departmental and inter-Faculty degree programs and specifically mentions the Beedie/FENV joint major. This proposed joint major between the Beedie School of Business and the Faculty of Environment would be the first new undergraduate joint major in the Faculty of Environment since its inception. This joint major, as part of the broader Bachelor of Environment initiative, is intended to be one of FENV’s flagship undergraduate programs. Finally, this proposal, together with the inclusion of the BUS courses in the Certificate in Environmental Literacy and the modification of the Corporate Environmental

and Social Responsibility Certificate, represent strategic steps in building a relationship between Beedie and FENV in the promotion of sustainability.

The commitment to sustainability is specifically stated in Beedie’s mission: “By creating and communicating powerful ideas, we educate and inspire the founders, leaders and managers of organizations that are internationally competitive, locally responsive, and sustainable.” Beedie’s strategic focus is built upon four themes, one of which is “Society, Environment and Governance.” This joint major is well aligned with the mission, strategic direction and focus of the school, with its intent of educating future leaders at the intersection of business, environment and sustainability.

### **Target Audience**

This joint major is targeted to those students who wish seek careers in the private, non-profit and public sectors in areas such as “green” entrepreneurship and innovation, supply chain management, accounting related to environment and sustainability, environmental impact assessment and mitigation, energy and materials management, and management within resource and environmental companies. Because of the distinctive nature of the joint program, some recruitment is anticipated from other Canadian provinces, the U.S. and from other nations.

### **Content and Summary of Requirements for Graduation**

The structure of the joint major would be comprised of 1) lower and upper division Business core requirements 2) lower and upper division Environment core requirements and 3) focus courses and a capstone course.

Joint Major Summary:	Units
Lower Division	47-49
Upper Division	54-58
Non-Concentration courses	35-38
Concentration	16
Capstone/Field course	3-4
<b>TOTAL</b>	<b>101-107*</b>

\* The design will work to reduce the total number of units required

## **Program Requirements: Lower Division**

Students complete all of:

- BUS 251-3 Financial Accounting I
- BUS 254-3 Managerial Accounting I<sup>1</sup>
- BUS 272-3 Behavior in Organizations
- ECON 103-4 Principles of Microeconomics
- ECON 105-4 Principles of Macroeconomics

and one of:

- BUEC 232-4 Data and Decisions I \*\*
- STAT 270-3 Introduction to Probability and Statistics \*\*
- GEOG 251-3 Quantitative Geography \*\*

and one of:

- BUS 237-3 Information Systems in Business
- GEOG 255-3 Geographic Information Science I

and one of:

- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- MATH 154-3 Calculus I for Biological Sciences
- MATH 157-3 Calculus I for Social Sciences

and one of:

- ENGL 101W Introduction to Fiction (3)
- ENGL 102W Introduction to Poetry (3)
- ENGL 103W Introduction to Drama (3)
- ENGL 104W Introduction to Prose Genres (3)
- ENGL 105W Introduction to Issues in Literature and Culture (3)
- ENGL 199W Introduction to University Writing (3)
- PHIL XX1 Critical Thinking (3)
- PHIL 100W Knowledge and Reality (3)
- PHIL 120W Introduction to Moral Philosophy (3)
- WL 101W Writing About Literature (3)
- WL 103W Pre-Modern World Literature (3)
- WL 104W Modern World Literature (3)

and

- One lower division Writing course

and two of:

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<sup>1</sup> May be completed following admission to the faculty.

- Natural Sciences (see appendix for a list of course options by area):

and one course from each area (see appendix for a list of course options by area):

- Human Role in Nature
- Social and Built Environments
- Global Scale

### **Program Requirements: Upper Division**

Students complete all of:

- BUS 312-4 Introduction to Finance
- BUS 343-3 Introduction to Marketing
- BUS 361-3 Project Management
- BUS 360W-4 Business Communications
- ENV 321-3 Ecological Economics

and one of:

- BUS 374-3 Organizational Theory
- BUS 381-3 Introduction to Human Resource Management

and two of:

- ARCH 386-3 Archaeological Resource Management
- GEOG 321-4 Geographies of Global Capitalism
- GEOG 322-4 World Resources
- GEOG 323-4 Industrial Location
- GEOG 325-4 Geographies of Consumption
- REM 350-3 Sustainable Energy and Materials Management
- REM 356-3 Institutional Arrangements for Sustainable Environmental Management
- SCD 301-4 Sustainable Community Development Theory and Practice

and one of:

- BUS 336-4 Data and Decisions II<sup>2\*\*</sup>
- REM 412-3 Environmental Modeling
- GEOG 352-4 Spatial Analysis
- GEOG 451-4 Spatial Modeling

and one of:

- BUS 303-3 Business, Society, and Ethics

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<sup>2</sup> Students wishing to take BUS 336 must take BUEC 232 or STAT 270. GEOG 251 does not satisfy the prerequisite requirements of BUS 336.

- ENV 320W-3 Ethics and the Environment
- PHIL 328-3 Environmental Ethics

and one of:

- BUS 393-3 Commercial Law
- ENV 319-3 Environmental Law

### **Sustainability Focus**

Students complete:

- BUS 475-3 Sustainable Operations

and one of:

- BUS 489-3 Management Practices for Sustainability
- BUS 453-3 Sustainable Innovation

and 10 units from:

- DEVS, ENV, GEOG, REM and/or SCD course electives (see elective list in appendix)

### **Capstone**

Students complete:

- SCD 404-4 Project in Sustainable Community Development

### **Overlap**

Where there is overlap between the two Faculties, students may complete one of:

- BUS 237-3 Information Systems in Business
- GEOG 255-3 Geographic Information Science I

and one of:

- BUS 303-3 Business, Society, and Ethics
- ENV 320W-3 Ethics and the Environment
- PHIL 328-3 Environmental Ethics

and one of:

- BUS 393-3 Commercial Law
- ENV 319-3 Environmental Law

and either both of:

- BUEC 232-4 Data and Decisions I
- BUS 336-4 Data and Decisions II

or

- GEOG 251-3 Quantitative Geography

and one of the following:

- GEOG 352-4 Spatial Analysis
- GEOG 451-4 Spatial Modeling
- REM 412-3 Environmental Modeling

### **Business Career Passport Requirements**

Students who are admitted to the Beedie School of Business beginning in the fall 2012 term will complete the Business Career Passport. During the BBA program, students register in and complete six mandatory Business Career Passport workshops. The workshops may be completed in any order. However, it is recommended that students complete the self-assessment workshop sometime within their first 60 units of study. Enrolment and participation in workshops must be recorded with the Career Management Centre. For more information about the workshops, or to register, visit the Beedie Community link on the Career Management Centre website.

### **Residency Requirements and Transfer Credit**

The University's residency requirement stipulates that, in most cases, total transfer and course challenge credit may not exceed 60 units, and may not include more than 15 units as upper division work.

### **Delivery Methods**

Core and elective courses will be offered primarily as face-to-face courses on the Burnaby, Harbour Centre and Surrey campuses.

### **Linkages between the learning outcomes and the curriculum**

The past year's Faculty of Environment consultation on new undergraduate programming with faculty, staff, students, and potential employers has resulted in draft program learning outcomes and graduation competencies for new programming, including the joint major between FENV and Beedie. Beedie has also developed a set of learning outcomes for the BBA that will also guide the development of program level learning outcomes for the joint major. A draft list of program-level learning outcomes is provided in the appendices. A work experience or work place term is not a mandatory requirement of this degree. However, students interested in participating in Co-Operative Education should join the program (Business or Environment) in which they are pursuing their degree (BBA or BEnv).

### **Distinctive characteristics**

This joint major is founded on the combined capacities of Beedie and FENV, and would include the distinctive characteristics of the proposed BEnv (see BEnv Credential NOI). Its design would allow for inclusion of some courses from the newly revised Certificate in Environmental and Social Sustainability, as well as the Certificate in Sustainable Community Development and the Minor in Development and Sustainability. In terms of Canadian universities, only Waterloo and Dalhousie have a major that specifically focuses on environment, sustainability and business, the former not partnering with a business school.

### **Anticipated Completion Time in Semesters**



The joint major can be completed in 8 terms.

### **Enrolment plan for the length of the program**

If this NOI is approved by SCUP, we hope to submit FPPs for this joint major in September 2013, with the target of getting Senate and BOG approval by December 2013. Allowing for the Ministry approval process, we hope that prospective students will be able to apply for admission to the joint major as early as May 2014. If approved, we expect to admit 15 students in 2014, building to 30 students within 5 years. This would translate to a steady enrolment of approximately 90 students in the joint major once it has matured.

Prospective students would first need to be admitted into either Beedie or FENV. Admission into the joint major would require students to make application to the “non-home” Faculty after completing the required courses and any other associated admission requirements as set out by that Faculty. Beedie presently has requirements and procedures for admission into its major that extend to all of its joint majors. FENV presently is developing its admission requirements and procedures alongside the development of its BEnv credential. Beedie and FENV will work together to ensure that each Faculty’s admission requirements and procedures into the BBA/BEnv joint major are aligned. These will be articulated in the FPP.

As with the development of other BEnv majors, a design committee will be formed of representatives from both Beedie and FENV to finalize the FPP. We anticipate that, if approved, the content of this joint major will be reviewed and modified by such a joint committee. As with other joint majors, Beedie and FENV will coordinate on advising and scheduling.

### **Student Evaluation**

Student evaluation will be conducted as per the general regulations of the University, the Beedie School of Business and the Faculty of Environment.

### **Program Assessment**

All academic units are subject to external review every seven years. The joint major will be governed and managed by Beedie and FENV in conformity with Faculty and University regulations. A committee of the Beedie and FENV representatives will meet once each year to discuss curriculum-related matters and administration of the joint major.

### **Level of Support and Recognition from other Post-Secondary Institutions**

As per SFU’s transfer credit procedures, students may transfer from BC and non-BC colleges or universities to SFU, at which point students may apply for admission into this program.

### **Evidence of Student Interest and Labour Market Demand**

The Globe Foundation estimates that by 2020 the number of direct “green” jobs in BC could grow to more than 200,000, an increase of almost 75 percent over the 2008 estimate (Careers for a Sustainable Future: a reference guide for green jobs in B.C., Globe Foundation, 2012).

Several recent surveys emphasize the growing importance that corporate executives place on environmental and social sustainability, yet also highlight the gap that remains in implementing the sustainability agenda (Accenture, 2010; Ceres, 2010; 2012). The debate is rapidly moving beyond *whether* to conduct business in way that closely couples social and environmental issues to *how* this should be done. To achieve this, organizations will need employees that understand how natural and social systems function and interact, but also understand how businesses are managed and how to undertake successful organizational change and spur necessary innovation.

In the fall 2011 SFU Undergraduate Student Survey students were asked about their interest in a 10 possible new bachelor degree programs. Of the over 5000 students who responded to the survey 32.3% were very/somewhat interested (9.6% very interested) in a Bachelor of Environment in Sustainability and Innovation. This was the highest level of interest of all 10 majors put forward.

Also in fall 2011, the FENV Faculty Advisory Board, composed of highly experienced representatives from academia, business, First Nations and government, met and provided guidance on development of the BEnv and its majors.

#### Summary of Resources Required and Available to Implement the Program

Almost all required and electives courses are already in place. A small number (possibly up to 3) of new courses may need to be developed and taught. Enrolment numbers provided above assume that students can be accommodated within existing courses. Providing course options will reduce bottlenecks for students and impact on courses.

#### Related programs at SFU or other British Columbia post-secondary institutions

There is presently a Beedie/Geography joint major that has graduated 67 students between 2004 and 2012. The main proposed differences are 1) requirement of a broad core focused on the environment, and 2) ability of students to use coursework from BUS, DEVS, GEOG, REM and SCD to satisfy their 16-unit focus requirement. Furthermore, branding as a Sustainable Business joint major, as well as the Bachelor of Environment (if approved), may be more attractive to students and potential employers. As part of the Full Program Proposal we will include information on whether Geography will retain or eliminate the Beedie/Geography joint major and the rationale behind this decision.

Within British Columbia, UBC, UVic and UNBC do not have undergraduate degree programs specifically in business, environment and sustainability. UBC has a cluster of sustainability courses in the Commerce program. UVic’s students interested in business and environment can pursue a double major in Commerce and Environmental Studies but there is no specific environment/business major. UNBC’s majors are more narrowly defined, concentrating on

natural resource management and planning. BCIT has a certificate in Sustainable Business Leadership.

We feel that the joint BBA/BEnv major will be particularly attractive to international students. Should this NOI and FPP be approved, we will develop a recruiting effort to link colleges with high numbers of international students, including Fraser International College.

List of faculty members who will be teaching

Stephanie Bertels, Carolyn Egri, David Hannah, Elicia Maine, Pek-Hooi Soh (Faculty of Business)

John Brohman (Geography), Alex Clapp (Geography), Roger Hayter (Geography), Mark Jaccard (REM), Ross Jamieson (Archaeology), Duncan Knowler (REM), Ken Lertzman (REM), Geoff Mann (Geography), Sean Markey (REM), Janet Moore (FENV), Evelyn Pinkerton (REM), Mark Roseland (REM)

**Proposed Program Contact Person:**

Andrew Gemino, Associate Dean, Beedie School of Business, 778.782.3653, [gemino@sfu.ca](mailto:gemino@sfu.ca)  
Maureen Fizzell, Faculty, Beedie School of Business, 778.782.8899, [fizzell@sfu.ca](mailto:fizzell@sfu.ca)

Alex Clapp, Associate Dean, FENV, 778-782-8827, [aclapp@sfu.ca](mailto:aclapp@sfu.ca)  
Dan Burns, Manager, Curriculum and Planning, FENV, 778-782-9225, [dburns@sfu.ca](mailto:dburns@sfu.ca)

**Documentation used for internal approval; alternatively, provide a link to a website where this information is available. Normally, the Senate materials describing the FPP may be used for this purpose and will be provided by the office of the AVPA to the DQAB.**

In the January 22<sup>nd</sup>, 2013 UCC meeting, the UCC committee members from the Beedie School of Business, passed a motion of creating the Bachelor of Business Administration/Bachelor of Environment Joint Major In Sustainable Business. Minutes of the meeting are securely located on the Beedie School of Business website.

In the department UCC meetings, the UCC committee members from the Faculty of Environment passed the motion of creating the Bachelor of Business Administration/Bachelor of Environment Joint Major In Sustainable Business. Minutes of the meeting are securely stored within the Faculty of Environment.

References:

Accenture. 2010. A new era of sustainability: UN Global Compact-Accenture CEO study 2010.

Ceres. 2010. The 21st century corporation: The Ceres Roadmap for sustainability, from <http://www.ceres.org/Page.aspx?pid=1227>

Ceres. 2012. The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability, from [www.ceres.org/roadto2020](http://www.ceres.org/roadto2020)

## **Appendices**

- A. **Draft BEnv Core Requirements for BBA/BEnv Joint Major: Course Options**
- B. **Draft Upper Division Environment Electives**
- C. **Draft Program Level Sustainable Business Learning Outcomes**

### **Draft BEnv Core Requirements for BBA/BEnv Joint Major: Course Options**

#### **Natural sciences (choose 2 of:)**

ARCH 131-3 Human Origins  
BISC 101-4 General Biology  
BISC 204-3 Introduction to Ecology  
CHEM 110-3 Introductory Chemistry  
EVSC 100-3 Introduction to Environmental Science  
EASC 101-3 Physical Geology  
GEOG 111-3 Earth Systems  
GEOG 213-3 Introduction to Geomorphology  
GEOG 214-3 Weather and Climate  
GEOG 215-3 Biogeography

#### **Human Role in Nature (choose 1 of:)**

ARCH 100-3 Ancient People and Places  
ARCH 272W-3 Archaeology of the Old World  
ARCH 273-3 Archaeology of the New World  
FNST 212-3 Indigenous Perceptions of Landscape (alternative prerequisites?)  
GEOG 100-3 Human Geography

#### **Social and Built Environments (choose 1 of:)**

GEOG 241-3 Social Geography  
GEOG 261-3 Introduction to Urban Geography  
REM/SCD 201-3 Introduction to Sustainable Community Development

#### **Global Scale (choose 1 of:)**

ENV 222-3 Environmental Controversy  
GEOG 102-3 World Problems in Geographic Perspective  
GEOG 104-3 Climate Change, Water, and Society  
REM 100-3 Global Change

#### **Draft Upper Division Environment Electives (choose a minimum of 10 courses:)**

ARCH 365-3 Ecological Archaeology

ARCH 376-5 Quantitative Methods in Archaeology  
 DEVS 401-4 Issues, Concepts and Cases in Development and Sustainability  
 ENV 319-3 Environmental Law  
 ENV 320W-3 Ethics and the Environment  
 GEOG 321-3 Geographies of Global Capitalism  
 GEOG 323-4 Industrial Location  
 GEOG 324-4 Geography of Transportation  
 GEOG 325-4 Geographies of Consumption  
 GEOG 327-4 Geography of Tourism  
 GEOG 351-4 Multimedia Cartography  
 GEOG 356-4 3D Geovisualization  
 GEOG 385-4 Agriculture and the Environment  
 GEOG 391-4 Qualitative Research Methods  
 GEOG 352-4 Spatial Analysis  
 GEOG 426-4 Industrial Change and Local Development  
 GEOG 451-4 Spatial Modeling  
 REM 311-3 Applied Ecology and Sustainable Environments  
 REM 350-3 Sustainable Energy and Materials Management  
 REM 356-3 Institutional Arrangements for Sustainable Environmental Mgmt.  
 REM 412-3 Environmental Modeling  
 REM 445-3 Environmental Risk Assessment  
 REM 471-3 Forest Ecosystem Management  
 SCD/REM 301-4 Sustainable Community Development Theory and Practice  
 SCD/REM 401-4 Social Enterprise for Sustainable Community Development  
 SCD/REM 403-4 Leadership in Sustainable Community Development  
 SCD/REM 404-4 Project in Sustainable Community Development  
 ??? 4XX Modeling in Complex Social Systems (possible new course)

### **Draft Program Level Sustainable Business Learning Outcomes**

### **Draft Program Level Environment and Sustainability Learning Outcomes**

- Natural science – Understanding of fundamental concepts and nomenclature in chemistry, earth systems, biology and ecology and its relationships with social and biophysical environmental systems.
- Human role in nature – Understanding the interaction of humans, natural resources and the biophysical environment in the past and the present. Basic understanding of human cultural development, landscapes and livelihoods.
- The social and built environments – Understanding the development of human settlements from the first human dwellings to the modern city. Understanding socio-spatial organization, urban structure, and their interaction with the built environment.
- Stewardship and governance – Understanding of normative ethical theories and their application to the values of the natural environment and the individual and collective obligations humans bear with respect to it. Students will understand ecosystem services,

externalities, and the relationship between policy, science and values in environmental issues; they will understand environmental policy making processes, including levels of government, First Nations, local constituencies, the courts and other major political actors.

- **The global scale – Understanding global environmental change and its causes, including population growth, the human ecological footprint, and social organization and technology as they affect land, ecosystems, food supply and the economic system.**
- **Quantitative, geospatial and qualitative analysis – Students will have foundational knowledge of and abilities in quantitative data collection, statistics, probability, geospatial analysis and modeling, and the use of these techniques in business and environmental problem solving.**
- **Students will have specific knowledge and skills in research methods, and skills in communicating the results of those applications to both professional and general audiences. Students will have the ability to communicate environmental change on multiple temporal, spatial and comparative scales.**
- **Complexity and controversy – Ability to understand and map the complexity of business and environmental issues with its potential social, ecological and biophysical impacts on various temporal and spatial scales. Understand the nature of controversy including communication, debate, and resolution of these issues.**
- **Decision making – Students will have a basic understanding of a range of decision making methodologies and challenges using quantitative and qualitative analysis techniques in resolving simple to complex problems. Student will have experience in using concepts and techniques such risk assessment, cost-benefit analysis, triple bottom line accounting, geospatial analysis and modeling in environmental decision-making.**
- **Systems and organizational function and change – Students will have an understanding of the theories of systems and organizations including how their structure and function is linked to other internal and external systems. Students will understand the role of strategy and technology in organizational function and change.**
- **Sustainability concepts and strategies – Student will have knowledge of the various concepts of sustainability and sustainable futures. Students will be familiar with sustainability strategies at multiple spatial and temporal scales.**
- **Students will have experience applying the above knowledge and skills in a project-based capstone course, field course, coop experience or a course with experiential learning and collaborative work.**

#### Draft Program Level Business Outcomes

- **Recognize the need to adapt business practices to the opportunities and challenges of an evolving global environment – This joint major will pay particular attention to this in terms of sustainability.**

- Demonstrate ability to apply ethical reasoning to address issues in corporate governance, corporate responsibility and sustainability in a business context.
- Identify, evaluate, analyze, interpret and apply information to address problems and make reasoned decisions in a business context (using both qualitative and quantitative methodologies).
- Communicate in a business context in clear, concise and coherent and professional manner (both oral and written).
- Apply business discipline knowledge in an integrative manner to business problems.
- Demonstrate the understanding and ability to apply professional standards, theory and research to address business problems at the intersection of business, sustainability and environment.

**Possible additional focused business learning outcomes:**

- Basic knowledge in economics, finance and accounting
- Working knowledge of information and information systems as it applies to business, environment and sustainability
- Understanding of law as it applies to business, environment and sustainability
- Understanding of ethics and corporate responsibility as it applies to business, environment and sustainability
- Understanding of business organization function and change and its relation to strategy

Learning outcomes in critical thinking, problem solving, community and stakeholder engagement, facilitation, conflict resolution, leadership and team building, rather than being addressed by specific courses, could be integrated within courses and other activities (e.g. Coop).