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MEMORANDUM**ATTENTION** Senate**DATE** June 22, 2017**FROM** Jeff Derksen,
Acting Chair of Senate Graduate
Studies Committee (SGSC)**RE:** New Course Proposals

A handwritten signature in blue ink, appearing to be 'JD', with a long horizontal flourish extending to the right.

For information:

Acting under delegated authority and at its meeting of June 5, 2017 SGSC approved the following new course proposals effective **Spring 2018:**

Faculty of Education

- 1) EDUC 740 Issues in Pre-Service Teacher Education

Faculty of Environment

- 2) ECO 630 Applied Research Project I
- 3) ECO 640 Applied Research Project II

Faculty of Science

- 4) BPK 895 MSc Proposal
- 5) BPK 896 PhD Comprehensive Exam
- 6) BPK 897 PhD Seminar

MEMO

ATTENTION: Senate Graduate Studies Committee

Graduate Studies

FROM: Shawn Bullock, Associate Dean, Graduate Studies in Education

8888 University Drive
Burnaby BC V5A 1S6
Canada

RE: New Graduate Course Proposal – EDUC 740

T: 778.782.3297

DATE: 2017 April 19

www.sfu.ca/education/gs

The following new course was approved by the Faculty of Education and is forwarded to the Senate Graduate Studies Committee for approval. This curriculum item should be effective for the Spring 2018 term. Please include on the next SGSC agenda.

New Course: EDUC 740, Issues in Pre-Service Teacher Education



Shawn M. Bullock, Ph.D., P. Phys.
Associate Dean
Graduate Studies in Education

New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) EDUC 740	Number (eg. 810)	Units (eg. 4) 5
Course title (max 100 characters including spaces and punctuation) Issues in Pre-Service Teacher Education		
Short title (for enrollment/transcript - max 30 characters) Issues in Teacher Education		
Course description for SFU Calendar * See attached document.		
Rationale for introduction of this course See attached document.		
Term of initial offering Spring 2018	Course delivery (eg 3 hrs/week for 13 weeks) 4 hrs/week for 13 weeks	
Frequency of offerings/year once per year	Estimated enrollment/offering 15/offering	
Equivalent courses (These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.) N/A		
Prerequisite and/or Corequisite ** none.		
Educational Goals (optional) See attached document		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory or Unsatisfactory <input type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Pooja Dharamshi, Shawn Bullock, Allan MacKinnon
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Department / School / Program Faculty of Education	Contact name Pooja Dharamshi	Contact email pooja_dharamshi@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature	Date
Department Chair	Signature	Date

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.


OVERLAP CHECK

Overlap check done? YES

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) Dr. S. Bullock	Signature 	Date 20/04/17
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Jeff Derksen	Signature 	Date 15 June 2017
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____
 Course Attribute Value: _____
 Instruction Mode: _____
 Attendance Type: _____

If different from regular units:
 Academic Progress Units: _____
 Financial Aid Progress Units: _____

New Graduate Course Proposal Long Responses

Course Title Issues in Pre-Service Teacher Education

Course Description for SFU Calendar

Several local and international issues related to teacher education are examined, including longstanding criticisms and more recent concerns. Specific topics will be explored beginning with a brief history of teacher education and its “place” in the university, better understanding varying models for teacher education programs, exploring teacher education as a site for social justice and democracy, and looking at the work of teacher educators, those who teach teachers. Finally, the course will consider the types of research being done which inform teacher education curriculum, policy, and perception.

Rationale for introduction of this course

The place of work for teacher educators, schools of education and teacher education programs, have increasingly been scrutinized by policy-makers, legislators (Anders et al., 2000; Cochran-Smith & Zeichner, 2005; Zeichner, 2006), and increasingly, by the public. The scrutiny for teacher education programs has included aspects such as program quality, diversity, accountability, and teacher characteristics (Grisham, 2006). As reform efforts in education continue at a rapid rate teacher education programs must respond by reconciling a growing number of initiatives. Further, our classrooms are becoming increasingly culturally and linguistically diverse. On preparing student teacher for diverse classrooms, Darling-Hammond (2006) reminds us, “Schools of education must design programs that help prospective teachers to understand deeply a wide array of things about learning, social and cultural contexts”(p. 302). Given the rapid shifts in internal and external factors of schooling, such as educational reforms, shifting communication patterns, and globalizing societies, we must consider: **What must teacher education programs do to prepare student teachers to learn and to know to become effective teachers in contemporary classrooms?**

This course will be guided by central questions, which will help us explore current issues in teacher education: **What is the purpose of teacher education? How does teacher education make a difference? How are teacher educators responding to the needs of 21st century classrooms?**

This course will be of interest to a wide-range of students pursuing graduate studies, particularly those with interests in teaching teachers and/or framing their thesis work within teacher education research. It will be available as an elective offering across graduate studies.

Educational Goals

Students will be introduced to a broad survey of scholarship in the field of teacher education and will investigate their own experiences with teacher education, as learners and educators. Educational goals for the course are as follows:

- Students will be able to demonstrate firm understanding of theories presented in class
- Students will be able to evaluate theories and critique research within the field of study
- Students will be able to demonstrate an ability to identify, evaluate and interrogate key questions surrounding teacher education, including:
 - What is the purpose of teacher education?
 - What should teachers know?
 - Where should teacher be taught?
 - Who teaches? Who teaches teachers?

Course Outline

Course Number: EDUC 740-5

Course Title: Issues in Pre-Service Teacher Education

Instructor(s): Pooja Dharamshi

**Calendar
Description:**

Several local and international issues related to teacher education are examined, including longstanding criticisms and more recent concerns. Specific topics will be explored beginning with a brief history of teacher education and its “place” in the university, better understanding varying models for teacher education programs, exploring teacher education as a site for social justice and democracy, and looking at the work of teacher educators, those who teach teachers. Finally, the course will consider the types of research being done which inform teacher education curriculum, policy, and perception.

Course Details

This course will be guided by central questions, which will help us explore current issues in teacher education: **What is the purpose of teacher education? How does teacher education make a difference? How are teacher educators responding to the needs of 21st century classrooms?**

Educational Goals:

Students will be introduced to a broad survey of scholarship in the field of teacher education and will investigate their own experiences with teacher education, as learners and educators. Educational goals for the course are as follows:

- Students will be able to demonstrate firm understanding of theories presented in class
- Students will be able to evaluate theories and critique research within the field of study
- Students will be able to demonstrate an ability to identify, evaluate and interrogate key questions surrounding teacher education, including:
 - What is the purpose of teacher education?
 - What should teachers know?
 - Where should teacher be taught?
 - Who teaches? Who teaches teachers?

Grading: Reflection Paper- 25%
Presentation- 25%
Essay- 40%
Participation-10%

Grading Notes: There will be no final examination in this course.

Required Texts: Students are not required to purchase any texts for this course. All assigned readings, videos, and other resources will be available online or through the SFU library.

Recommended Texts: Cochran-Smith, M., Feiman-Nemser, S., McIntyre, J.D., & Demers, K.E. (2008). *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed). New York, NY: Routledge.



To: Dr. Wade Parkhouse, Dean of Graduate Studies /Chair of SGSC

From: Dr. Dongya Yang, Associate Dean /Chair, Faculty of Environment Graduate Studies Committee

cc: Dr. Leah Bendell, SFU Chair of the SFU-BCIT MSc in Ecological Restoration

Date: April 20, 2017

Re: New Courses for the SFU-BCIT MSc in Ecological Restoration

The Faculty of Environment Graduate Studies Committee has approved the request from the SFU-BCIT MSc in Ecological Restoration to create ~~three~~ new courses ~~ECO 600~~, ECO 630 and ECO 640, and to revise the calendar entry for the program.

I am submitting the forms and supporting documents for approval from SGSC. The package includes

1. Memo from Dr. Leah Bendell, SFU Chair of the SFU-BCIT MSc program
2. ~~ECO 600 (0) Ecological Restoration I, New Course Form~~
3. ECO 630 (3) Applied Research Project I, New Course Form and the course outline
4. ECO 640 (3) Applied Research Project II, New Course Form and the course outline
5. Revised calendar entry for the program

Should you have any questions, please feel free to contact me directly.

Dongya Yang, Ph.D.
Associate Dean of Research and Graduate Studies
Professor of Bioarchaeology



Ecological Restoration Program

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MEMORANDUM

ATTENTION Dongya Yang, Associate Dean FEnv, Chair FENV CC DATE April 17th 2017
FROM Leah Bendell, Program Chair, MSc. Ecological PAGES 1/11
Restoration. FEnv
RE: New course request (ECO 630 and ECO 640) and proposed changes to the MSc in
Ecological Restoration calendar entry

We are asking FEnv CC to consider:

- 1) approval of the courses, ECO 630, ECO 640 and ~~ECO 600~~
 - 2) changes to the calendar entry as detailed in the attached FROM and TO documents.
- 1) A key feature of the joint BCIT-SFU MSc program in Ecological Restoration are the capstone Applied Projects I and II which students complete through the combined courses ECOR 9300 and ECOR 9400. Currently, these two courses are only listed and offered through BCIT. An important part of the joint program is the 50% (minimum 18 credits) residency requirement which must be met by students at both institutions. To facilitate the student in meeting these requirements, we propose listing the Applied Projects I and II as SFU and BCIT courses. This would allow the student to apply credits obtained through their capstone projects to meet their residency requirements, either at SFU or BCIT. The student can enroll in the two capstone courses either at BCIT or SFU but not both. ~~ECO 600 is a new non-credit course that allows ER students to remain enrolled in the program during the summer semesters.~~
- 2) The existing calendar entry is currently incorrect and out of date. Proposed changes (FROM to TO) are attached.



New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) ECO	Number (eg. 810) 630	Units (eg. 4) 3
Course title (max 100 characters including spaces and punctuation) Applied Research Project I		
Short title (for enrollment/transcript - max 30 characters) Applied Research Project I		
Course description for SFU Calendar * In ECO 630 (Applied Research Project I) students select a specific site and develop a professional relationship with their chosen client. Students will conduct reconnaissance surveys of their target ecosystem and appropriate reference ecosystems to identify the primary issues and stressors associated with their target ecosystem. They will then develop a proposal detailing the general approach to developing a restoration plan, all the while interacting with their client to ensure the approach and deliverables meet the client's needs. If students are enrolled in ECOR 9300 at BCIT they cannot enroll in this course for further credit.		
Rationale for introduction of this course Equivalent course in this program exists at BCIT. Creating an equivalent course at SFU would allow students to register at the same institution as their project supervisor.		
Term of initial offering Spring 2018	Course delivery (eg 3 hrs/week for 13 weeks) n/a	
Frequency of offerings/year every fall	Estimated enrollment/offering 15	
Equivalent courses [These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.]		
Prerequisite and/or Corequisite ** ECO 611, ECO 621		
Educational Goals (optional)		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory or Unsatisfactory <input type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total repeats allowed? 2	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Leah Bendell
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Department / School / Program Ecological Restoration	Contact name Leah Bendell	Contact email bendell@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature	Date
Department Chair LEAH BENDELL	Signature <i>[Signature]</i>	Date 2017/05/17

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

OVERLAP CHECK

Overlap check done? YES

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) Dongya Yang	Signature <i>[Signature]</i>	Date April 20, 2017
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Jeff Dikson	Signature <i>[Signature]</i>	Date 15 June 2017
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____
 Course Attribute Value: _____
 Instruction Mode: _____
 Attendance Type: _____

If different from regular units:
 Academic Progress Units: _____
 Financial Aid Progress Units: _____

**ECO 630
Applied Research Project I (3)
Course Outline**

General:

In ECO 630 (Applied Research Project I) students develop research collaborations in the applied science of ecological restoration with either an academic, private or industrial partner. In collaboration with the research partner, the student will develop an applied research project that will address a specific ecosystem restoration objective of the partner. Students will conduct reconnaissance surveys of their research site to identify the primary issues and stressors associated with their site. They will then develop a proposal which provides their scientific approach to addressing the restoration needs of their site. The proposal will include a background and rationale, proposed methods and expected outcomes and can follow the general guidelines of a NSERC discovery grant proposal. In ECO 640 (Applied Research Project II (3)), the students will implement their proposed research project developed in ECO 630.

Prerequisites:

Enrollment in the SFU/BCIT joint program in Ecological Restoration. ECO 630 is a prerequisite for ECO 640 Applied Research Project II (3).

If students are enrolled in ECOR 9300 at BCIT they cannot enroll in this course for further credit.

Course Objectives:

The purpose of the Applied Research Project courses ECO 630 and ECO 640 is to allow students to pursue a research project relevant to ecological restoration. Specific objectives include:

1. To conceptualize and formulate a research question/hypothesis
2. Develop a research plan to address the proposed research question/hypothesis
3. Implement the research plan which includes data collection and analyses
4. Provide a final project report which provides the research findings and conclusions.
5. To be able to orally defend research outcomes.

In ECO 630 (Applied Research Project I), the student identifies their research client and in collaboration with their client develops a proposal detailing the general approach to developing an applied research question of relevance to their client. ECO 640 (Applied Research Project II), implements the applied research project.

Learning Outcomes:

Students will improve their abilities in specific skills such as pre- and post-restoration monitoring, interacting with and communicating complex approaches to clients and project partners, proposal writing, and designing restoration plans, decision analysis, statistics, risk assessment, conflict resolution, strategic planning, and others.

Course Grading:

- | | |
|---------------------|-----|
| 1. Progress reports | 45% |
| 2. Project proposal | 30% |
| 3. Presentation | 25% |

Textbook: none required

Recommended Reading: Project/student dependent

Registrar Notes:

SFU's Academic Integrity web site <http://students.sfu.ca/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

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New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) ECO	Number (eg. 810) 640	Units (eg. 4) 3
Course title (max 100 characters including spaces and punctuation) Applied Research Project II		
Short title (for enrollment/transcript - max 30 characters) Applied Research Project II		
Course description for SFU Calendar * ECO 640 is a continuation of ECO 630 (Applied Research Project I). Students will develop their proposal from ECO 630 into a detailed restoration plan (or similar deliverable) specific to the client's needs. Students will design a restoration plan that is scientifically defensible by drawing on the best current knowledge available to alleviate the stressors and restore the degraded ecosystem. They will identify the uncertainties present with the specific site, and include an approach to minimize the risk associated with these uncertainties. When possible, students will detail a research design that will reduce these uncertainties, should the restoration plan be implemented. Students will orally defend their restoration plan. If students are enrolled in ECOR 9400 at BCIT they cannot enroll in this course for further credit.		
Rationale for introduction of this course Equivalent course in this program exists at BCIT. Creating an equivalent course at SFU would allow students to register at the same institution as their project supervisor.		
Term of initial offering Spring 2018	Course delivery (eg 3 hrs/week for 13 weeks) n/a	
Frequency of offerings/year every spring	Estimated enrollment/offering 15	
Equivalent courses (These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.)		
Prerequisite and/or Corequisite ** ECO 611, ECO 621,		
Educational Goals (optional)		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory or Unsatisfactory <input type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total repeats allowed? 2	Capstone course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Leah Bendell
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Department / School / Program Ecological Restoration	Contact name Leah Bendell	Contact email bendell@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature	Date
Department Chair <i>Leah Bendell</i>	Signature <i>Leah Bendell</i>	Date <i>2017/05/17</i>

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

OVERLAP CHECK

Overlap check done? YES

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) <i>Dongyan Yang</i>	Signature <i>[Signature]</i>	Date <i>April 20, 2017</i>
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) <i>Jeff Desksen</i>	Signature <i>[Signature]</i>	Date <i>15 June 2017</i>
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____
 Course Attribute Value: _____
 Instruction Mode: _____
 Attendance Type: _____

If different from regular units:
 Academic Progress Units: _____
 Financial Aid Progress Units: _____

**ECO 640
Applied Research Project II (3)
Course Outline**

General:

ECO 640 is the continuation of ECO 630. In ECO 630 (Applied Research Project I) students developed research collaborations in the applied science of ecological restoration with either an academic, private or industrial partner. In collaboration with the research partner, the student developed an applied research proposal that addressed a specific ecosystem restoration objective of the partner. ECO 640 is the implementation of their research project developed in ECO 630.

Prerequisites:

Enrollment in the SFU/BCIT joint program in Ecological Restoration. ECO 630 is a prerequisite for ECO 640 Applied Research Project II (3).

If students are enrolled in ECOR 9300 at BCIT they cannot enroll in this course for further credit.

Course Objectives:

The purpose of the Applied Research Project courses ECO 630 and ECO 640 is to allow students to pursue a research project relevant to ecological restoration. Specific objectives include:

1. To conceptualize and formulate a research question/hypothesis
2. Develop a research plan to address the proposed research question/hypothesis
3. Implement the research plan which includes data collection and analyses
4. Provide a final project report which provides the research findings and conclusions.
5. To be able to orally defend research outcomes.

In ECO 630 (Applied Research Project I), the student identifies their research client and in collaboration with their client develops a proposal detailing the general approach to developing an applied research question of relevance to their client. ECO 640 (Applied Research Project II), implements the applied research project. Course deliverables include a final written report and an oral defence.

Learning Outcomes:

1. Development of critical thinking skills through the application of the students research proposal developed in ECO 630
2. Research design and application
3. Data analysis and interpretation
4. Development of software skills (e.g., statistical software packages) through data analysis and interpretation
5. Report writing skills
6. Oral presentation skills
7. Networking and mediating skills developed through establishing collaborative restoration projects with academic, private or industrial partners.

Course Grading:

- | | |
|---------------------|-----|
| 1. Progress reports | 45% |
| 2. Project proposal | 30% |
| 3. Presentation | 25% |

Textbook: none required

Recommended Reading: Project/student dependent

Registrar Notes:

SFU's Academic Integrity web site <http://students.sfu.ca/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS



New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) BPK	Number (eg. 810) 895	Units (eg. 4) 0
Course title (max 100 characters including spaces and punctuation) MSc Proposal		
Short title (for enrollment/transcript - max 30 characters) MSc Proposal		
Course description for SFU Calendar * A formal Thesis Proposal is written and defended to the supervisory committee. The Proposal is circulated to faculty and resident graduate students, and presented for an open forum discussion. The Graduate Program Committee Chair or designate will chair the presentation of the proposal. The Thesis Proposal is intended to establish the objectives, methodology and scope of the thesis project at an early stage of the degree and provides an opportunity for the Supervisory Committee to influence the direction of the research at an early stage and to offer feedback to aid the growth and development of the research trainee. The Supervisory Committee will also explore the student's knowledge in any area that is relevant to the proposed research.		
Rationale for introduction of this course As part of Degree Audit Project. The MSc Proposal is currently a degree requirement. Offering this requirement as a course allows efficient tracking via the APR and for the degree requirement to appear on the student's transcript.		
Term of initial offering 2018 Spring	Course delivery (ea 3 hrs/week for 13 weeks) 13 weeks	
Frequency of offerings/year 3 per year	Estimated enrollment/offering 3	
Equivalent courses (These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.) None.		
Prerequisite and/or Corequisite ** None.		
Educational Goals (optional)		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input checked="" type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input checked="" type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online IND		
Grading Basis <input type="checkbox"/> Letter grades <input checked="" type="checkbox"/> Satisfactory or Unsatisfactory <input type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total repeats allowed? 2	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Senior supervisor and supervisory committee of the individual student
Additional faculty members, space, and/or specialized equipment required in order to offer this course Not applicable


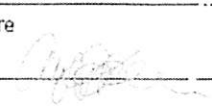
CONTACT PERSON

Department / School / Program BPK	Contact name Tom Claydon	Contact email twc5@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature 	2017.02.28 15:51:15 -08'00'	Date
Department Chair Angela Brooks-Wilson	Signature 	Digitally signed by Angela Brooks-Wilson DN: cn=Angela Brooks-Wilson, o=Simon Fraser University, ou=School of Physical Sciences, email=awb@sfu.ca, c=CA Date: 2017.02.28 17:03:19 -08'00'	Date Feb. 28, 2017

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

OVERLAP CHECK

Overlap check done? YES

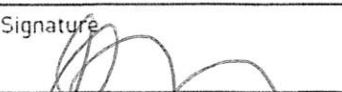
The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) Peter Ruben	Signature Peter Ruben <small>Digitally signed by Peter Ruben DN: cn=Peter Ruben, o=sf, email=pruben@sfu.ca, c=CA Date: 2017.05.26 10:40:27 -07'00'</small>	Date 26 May 2017
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Jeff Derksen	Signature 	Date 15 June 2017
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____
 Course Attribute Value: _____
 Instruction Mode: _____
 Attendance Type: _____

If different from regular units:
 Academic Progress Units: 6
 Financial Aid Progress Units: 6



New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) BPK	Number (eg. 810) 896	Units (eg. 4) 0
Course title (max 100 characters including spaces and punctuation) PhD Comprehensive Examination		
Short title (for enrollment/transcript - max 30 characters) PhD Comprehensive Examination		
Course description for SFU Calendar * The PhD comprehensive exam consists of a written research proposal, and a related oral exam conducted by the Supervisory Committee and one additional member external to the committee. The written research proposal will be written in the format of an Operating Grant application, with an eleven page limit exclusive of references, appendices, figures and tables. The proposal is to be written independently by the candidate, and should be written in enough detail to determine that the research is feasible and sufficient for PhD level work. The oral examination is designed to assess the candidate's ability to understand the underlying science and their ability to undertake the proposed research. The examining committee will explore the student's knowledge in any area that is relevant to the proposed research. The Graduate Program Committee Chair or designate will chair the examination.		
Rationale for introduction of this course As part of Degree Audit Project. The PhD Comprehensive Examination is currently a degree requirement. Offering this requirement as a course allows efficient tracking via the APR and for the degree requirement to appear on the student's transcript.		
Term of initial offering 2018 Spring	Course delivery (en 3 hrs/week for 13 weeks) 13 weeks	
Frequency of offerings/year 3 per year	Estimated enrollment/offering 2	
Equivalent courses (These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.) None.		
Prerequisite and/or Corequisite ** None.		
Educational Goals (optional)		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input checked="" type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online <input checked="" type="checkbox"/> IND		
Grading Basis <input type="checkbox"/> Letter grades <input checked="" type="checkbox"/> Satisfactory or Unsatisfactory <input type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total repeats allowed? 1	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Senior supervisor and supervisory committee of the individual student
Additional faculty members, space, and/or specialized equipment required in order to offer this course An examiner who is external to the Supervisory committee will be required. This examiner may be an SFU Faculty member, or a Faculty member of another Institution.

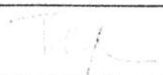
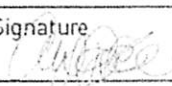
CONTACT PERSON

Department / School / Program BPK	Contact name Tom Claydon	Contact email twc5@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature 	2017.02.28 15:50:00 -08'00'	Date
Department Chair Angela Brooks-Wilson	Signature 	<small>Digitally signed by Angela Brooks-Wilson DN: cn=Angela Brooks-Wilson, o=Simon Fraser University, ou=Biomed Phys and Exp, email=awb@sfu.ca, c=CA Date: 2017.01.28 17:02:21 -0800</small>	Date Feb. 28, 2017

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

OVERLAP CHECK

Overlap check done? YES

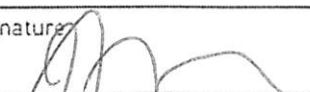
The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) Peter Ruben	Signature Peter Ruben <small>Digitally signed by Peter Ruben DN: cn=Peter Ruben, o=sf, email=pruben@sfu.ca, c=CA Date: 2017.05.26 10:38:18 -0700</small>	Date 26 May 2017
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Jeff Dorkson	Signature 	Date 15 June 2017
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____

Course Attribute Value: _____

Instruction Mode: _____

Attendance Type: _____

If different from regular units: _____

Academic Progress Units: 6

Financial Aid Progress Units: 6



New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) BPK	Number (eg. 810) 897	Units (eg. 4) 0
Course title (max 100 characters including spaces and punctuation) PhD Seminar		
Short title (for enrollment/transcript - max 30 characters) PhD Seminar		
Course description for SFU Calendar * The student will present two seminars on topics approved by the student's senior supervisor. One of the seminars will be presented as a Departmental seminar in the student's last term, and will summarize, integrate, and synthesize the thesis work for the whole department. The second seminar should be at a national or international conference, or an oral presentation at BPK Research Day, and must be approved by the Graduate Program Committee Chair. BPK 897 can be repeated once.		
Rationale for introduction of this course As part of Degree Audit Project. It is currently a degree requirement that PhD students give two seminars during their degree. Offering the requirement to give a seminar as a course (that can be repeated once) allows efficient tracking via the APR and for the degree requirement to appear on the student's transcript.		
Term of initial offering 2018. Spring	Course delivery (eg 3 hrs/week for 13 weeks) 13 weeks	
Frequency of offerings/year 3 per year	Estimated enrollment/offering 2	
Equivalent courses (These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.) None.		
Prerequisite and/or Corequisite ** None.		
Educational Goals (optional)		
Criminal record check required? <input type="checkbox"/> Yes ***	Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input checked="" type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input checked="" type="checkbox"/> Off campus		
Course Components <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online []		
Grading Basis <input type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory or Unsatisfactory <input checked="" type="checkbox"/> In Progress/Complete		
Repeat for credit? **** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total repeats allowed? <u>2</u>	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:		

* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

** If a course is only available to students in a particular program, that should be stated in the prerequisite.

*** If yes, then add this requirement as a prerequisite.

**** This applies to a Special Topics or Directed Readings course.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Senior supervisor and supervisory committee of the individual student
Additional faculty members, space, and/or specialized equipment required in order to offer this course Not applicable

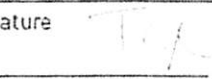

CONTACT PERSON

Department / School / Program BPK	Contact name Tom Claydon	Contact email twc5@sfu.ca
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DEPARTMENTAL APPROVAL

REMINDER: New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee	Signature 	2017.02.28 15:50:25 -08'00'	Date
Department Chair Angela Brooks-Wilson	Signature 	<small>Digitally signed by Angela Brooks-Wilson, DN: cn=Angela Brooks-Wilson, ou=Simon Fraser University, ou=School of Psychology, email=aw@sfu.ca, c=CA</small> Date: 2017.02.28 17:04:42 -0800	Date Feb. 28, 2017

LIBRARY REVIEW

Library review done? YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

OVERLAP CHECK

Overlap check done? YES

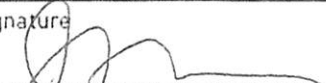
The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content.

FACULTY APPROVAL

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) Peter Ruben	Signature Peter Ruben <small>Digitally signed by Peter Ruben, DN: cn=Peter Ruben, o=ou, email=pruben@sfu.ca, c=CA</small> Date: 2017.05.29 10:41:52 -0700	Date 26 May 2017
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SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Jeff Daxson	Signature 	Date 15 June 2017
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ADMINISTRATIVE SECTION (for DGS office only)

Course Attribute: _____
 Course Attribute Value: _____
 Instruction Mode: _____
 Attendance Type: _____

If different from regular units:
 Academic Progress Units: 6
 Financial Aid Progress Units: 6