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MEMORANDUM

ATTENTION	Senate	DATE	March 2, 2012
FROM	Bill Krane, Chair Senate Committee on Undergraduate Studies	PAGES	1/2
RE:	Faculty of Environment (SCUS 12-16)		

For information:

Acting under delegated authority at its meeting of March 1, 2012, SCUS approved the following curriculum revisions effective Fall 2012:

1. Department of Archaeology (SCUS 12-16a)

(i) Changes to Group II – Environmental Archaeology Courses in Major, Minor, Honours, Extended Minor, Joint Major programs.

2. Faculty of Environment (SCUS 12-16b)

(i) Prerequisite change to ENV 321

(ii) New Course Proposal: ENV 319-3, Environmental Law (Spring 2013)

3. Department of Geography (SCUS 12-16c)

(i) Title and/or description and or prerequisite changes to GEOG 214, 253, 324, 351, 353, 412, 412W and 453W

(ii) Course deletions of GEOG 250, 263, 391, 429, 444

(iii) New Course Proposal: GEOG 268-3, Urban Food Systems

4. Environmental Science Program (SCUS 12-16d)

(i) Changes to the Upper and Lower Division requirements for the four Concentrations.

5. School of Resource & Environmental Management (SCUS 12-16e)

(i) Prerequisite change to REM 311, 321, and 412

6. WQB Designations (SCUS 12-16f)

(i) W Designation for ARCH 272, Archaeology of the Old World

Senators wishing to consult a more detailed report of curriculum revisions may do so by going to Docushare: <https://docushare.sfu.ca/dsweb/View/Collection-12682>
If you are unable to access the information, please call [778-782-3168](tel:778-782-3168) or email shelley_gair@sfu.ca.

MEMO

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ATTENTION Bill Krane, Chair, SCUS

FROM Duncan Knowler, Chair, FENV Curriculum Committee

RE Faculty of Environment Course and Program Changes for SCUS

DATE February 21, 2012

The following were approved by the Faculty of Environment Undergraduate Curriculum Committee at its meeting of February 9, 2012 and are being forwarded to SCUS for approval and recommendation to Senate.

- a. Department of Archaeology
 - i. Calendar Changes to include ARCH 375-3
- b. Faculty of Environment (a)
 - i. Suspension of Admissions and Termination of the Geography and Economics Environmental Specialty BA Joint Major Program
- c. Faculty of Environment (b)
 - i. ENV 321-3 - Course Change
 - ii. ENV 319-3 - New Course Proposal
- d. Department of Geography
 - i. GEOG 214 - Course change
 - ii. GEOG 253 - Course Change
 - iii. GEOG 324 - Course Change
 - iv. GEOG 351 - Course Change
 - v. GEOG 353 - Course Change
 - vi. GEOG 412 - Course Change
 - vii. GEOG 412W - Course Change
 - viii. GEOG 453W - Course Change
 - ix. GEOG 250 - Course Deletion
 - x. GEOG 263 - Course Deletion
 - xi. GEOG 391 - Course Deletion
 - xii. GEOG 429 - Course Deletion
 - xiii. GEOG 444 - Course Deletion
 - xiv. GEOG 268 - New Course Proposal

- e. Environmental Science Program [Revised submission, Feb 11, 2012]
 - i. Program and Calendar Changes to Major
[Note: these changes are to the Major only and not Honours]
- f. School of Resource & Environmental Management
 - i. REM 311-3 - Course Change
 - ii. REM 321-3 - Course Change
 - iii. REM 412-3 - Course Change
- g. WQB Submissions
 - i. ARCH 272-3 - Designation as 'W' course

Could you add these to the agenda for the next SCUS meeting.

Thanks kindly,



Duncan Knowler
Associate Dean, FENV

SFU

DEPARTMENT OF ARCHAEOLOGY
MEMORANDUM

To: Duncan Knowler, Chair, Faculty of Environment Curriculum Committee

From: Bob Muir, Undergraduate Curriculum Committee Chair, Archaeology

Re: Calendar Changes for New *From Soup to Nuts: The Archaeology of Food* (ARCH 375-3) Course

Date: January 25, 2012

In November and December of 2011 the Department of Archaeology faculty, the Faculty of Environment Curriculum Committee, and the Senate Committee on Undergraduate Studies approved the addition of a new course—*From Soup to Nuts: The Archaeology of Food* (ARCH 375-3)—to the Archaeology curriculum.

The following calendar changes are submitted to the chair of the Faculty of Environment Curriculum Committee for consideration, as needed, by the committee at its meeting on February 5, 2012. Pending approval, the following calendar changes will be effective fall term 2012.

DEPARTMENT OF ARCHAEOLOGY
PROPOSED PROGRAM CALENDAR CHANGES

We proceed from the existing program and calendar description to the proposed program and calendar description. In the latter, we reference the addition of ARCH 375-3 to the “Group II” courses.

FROM (Current Program)

1) Archaeology Major Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Course Groupings

Upper division archaeology courses are divided into the following groups.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Program Requirements

Students complete 120 units, as specified below.

Lower Division Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology

- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

and two of

- BISC 102-4 General Biology
- FNST 101-3 The Cultures, Languages and Origins of Canada's First Peoples
- GEOG 111-3 Earth Systems
- GEOG 255-3 Geographical Information Science I
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology (A)

Upper Division Requirements

Students complete a total of at least 32 upper division archaeology units, which must include

- both Group I courses (ARCH 372, 471 W)
- at least one group II course
- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

Recommended Courses

The following courses are recommended.

- ARCH 376 (required for honors, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)
- GEOG 111 (recommended for majors and honours where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

2) Archaeology Honours Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Admission Requirements

Archaeology majors who wish honours program admission must have a minimum 3.0 cumulative grade point average (CGPA) and department permission.

Grade Requirement

To remain in the program, students must maintain a minimum 3.0 cumulative grade point average (CGPA) and successfully complete 132 units with 50 of those in upper division archaeology. Honors students must complete all course requirements for the major program, as stipulated below, and also complete three additional specified courses (see below).

Course Groupings

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471 W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany

- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Lower Division Requirements

Students complete all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

and two of

- BISC 102-4 General Biology
- FNST 101-3 The Cultures, Languages and Origins of Canada's First Peoples
- GEOG 111-3 Earth Systems
- GEOG 255-3 Geographical Information Science I
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology (A)

Upper Division Requirements

Students complete at least 50 upper division archaeology units, which must include

- both Group I courses (ARCH 372, 471 W)
- at least one group II course
- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

and all of

- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 498-5 Honors Reading
- ARCH 499-5 Honors Thesis

Recommended Courses

The following courses are recommended.

- ARCH 376 (required for honors, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)

- GEOG 111 (recommended for majors and honours where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

3) Archaeology Minor Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Program Requirements

Lower Division Requirements

Students complete a total of nine units, including both of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology

and one of

- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Requirements

Students complete a total of at least 16 units of archaeology, which must include one course from each of groups I, II, III and IV listed below.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections

- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Special topics and/or directed studies courses may substitute for group II, III or IV courses, provided the content suggests a suitable substitution, and written department consent is obtained prior to enrollment.

4) Archaeology Extended Minor Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

This program consists of the lower division requirements for an archaeology major and the upper division requirements for an archaeology minor (see below). Programs must be approved by the department advisor.

Program Requirements

Lower Division Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Requirements

Students complete a total of at least 16 units of archaeology, which must include one course from each of groups I, II, III and IV listed below.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Special topics and/or directed studies courses may substitute for group II, III or IV courses, provided the content suggests a suitable substitution, and written department consent is obtained prior to enrolment.

5) Archaeology and Anthropology Joint Major Program

Department of Sociology and Anthropology | Faculty of Arts and Social Sciences

Department of Archaeology | Faculty of Environment

Simon Fraser University Calendar 2012 Spring

Program Requirements

Students complete 120 units, as specified below.

Lower Division Anthropology Requirements

Students complete a total of 16 units, including all of

- SA 101-4 Introduction to Anthropology (A)
- SA 201W-4 Anthropology and Contemporary Life (A)
- SA 255-4 Introduction to Social Research (S or A)

and one additional 200 division course chosen in anthropology and/or sociology/anthropology.

Lower Division Archaeology Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Anthropology Requirements

Students complete a total of at least 20 units of anthropology, including all of

- SA 301-4 Contemporary Ethnography (A)
- SA 356W-4 Ethnography and Qualitative Methods (S or A)
- SA 402-4 The Practice of Anthropology (A)

and eight additional upper division units chosen from the Calendar list of anthropology (A) courses. SA 486 is highly recommended.

Upper Division Archaeology Requirements

Students complete at least 24 archeology units, including

- both Group I courses (ARCH 372, 471W)
- at least one Group II course

- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

Archaeology Course Groups

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Courses Recommended by the Department of Archaeology

The following courses are recommended by the Department of Archaeology.

- ARCH 376 (required for honours, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)
- GEOG 111 (recommended for majors and honors where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

Faculty of Arts and Social Sciences Program Requirements

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

- at least 60 units that must be completed at Simon Fraser University

- at least 45 upper division units, of which at least 30 upper division units must be completed at Simon Fraser University
- at least 65 units (including 21 upper division units) in Faculty of Arts and Social Sciences courses
- 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 (major, joint major, extended minor, minor) CGPA and upper division CGPA of at least 2.0

TO (Proposed Program)

1) Archaeology Major Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Course Groupings

Upper division archaeology courses are divided into the following groups.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 375-3 Archaeology of Food
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Program Requirements

Students complete 120 units, as specified below.

Lower Division Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins

- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

and two of

- BISC 102-4 General Biology
- FNST 101-3 The Cultures, Languages and Origins of Canada's First Peoples
- GEOG 111-3 Earth Systems
- GEOG 255-3 Geographical Information Science I
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology (A)

Upper Division Requirements

Students complete a total of at least 32 upper division archaeology units, which must include

- both Group I courses (ARCH 372, 471W)
- at least one group II course
- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

Recommended Courses

The following courses are recommended.

- ARCH 376 (required for honors, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)
- GEOG 111 (recommended for majors and honours where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

2) Archaeology Honours Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Admission Requirements

Archaeology majors who wish honours program admission must have a minimum 3.0 cumulative grade point average (CGPA) and department permission.

Grade Requirement

To remain in the program, students must maintain a minimum 3.0 cumulative grade point average (CGPA) and successfully complete 132 units with 50 of those in upper division archaeology. Honors students must complete all course requirements for the major program, as stipulated below, and also complete three additional specified courses (see below).

Course Groupings

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 375-3 Archaeology of Food

- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Lower Division Requirements

Students complete all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

and two of

- BISC 102-4 General Biology
- FNST 101-3 The Cultures, Languages and Origins of Canada's First Peoples
- GEOG 111-3 Earth Systems
- GEOG 255-3 Geographical Information Science I
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology (A)

Upper Division Requirements

Students complete at least 50 upper division archaeology units, which must include

- both Group I courses (ARCH 372, 471W)
- at least one group II course
- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

and all of

- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 498-5 Honors Reading
- ARCH 499-5 Honors Thesis

Recommended Courses

The following courses are recommended.

- ARCH 376 (required for honors, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)
- GEOG 111 (recommended for majors and honours where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

3) Archaeology Minor Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

Program Requirements

Lower Division Requirements

Students complete a total of nine units, including both of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology

and one of

- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Requirements

Students complete a total of at least 16 units of archaeology, which must include one course from each of groups I, II, III and IV listed below.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 375-3 Archaeology of Food
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II

- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Special topics and/or directed studies courses may substitute for group II, III or IV courses, provided the content suggests a suitable substitution, and written department consent is obtained prior to enrolment.

4) Archaeology Extended Minor Program

*Department of Archaeology | Faculty of Environment
Simon Fraser University Calendar 2012 Spring*

This program consists of the lower division requirements for an archaeology major and the upper division requirements for an archaeology minor (see below). Programs must be approved by the department advisor.

Program Requirements

Lower Division Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Requirements

Students complete a total of at least 16 units of archaeology, which must include one course from each of groups I, II, III and IV listed below.

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 375-3 Archaeology of Food
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology

- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
- ARCH 348-5 Archaeological Conservation
- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Special topics and/or directed studies courses may substitute for group II, III or IV courses, provided the content suggests a suitable substitution, and written department consent is obtained prior to enrolment.-

5) Archaeology and Anthropology Joint Major Program

Department of Sociology and Anthropology | Faculty of Arts and Social Sciences

Department of Archaeology | Faculty of Environment

Simon Fraser University Calendar 2012 Spring

Program Requirements

Students complete 120 units, as specified below.

Lower Division Anthropology Requirements

Students complete a total of 16 units, including all of

- SA 101-4 Introduction to Anthropology (A)
- SA 201W-4 Anthropology and Contemporary Life (A)
- SA 255-4 Introduction to Social Research (S or A)

and one additional 200 division course chosen in anthropology and/or sociology/anthropology.

Lower Division Archaeology Requirements

Students complete a total of 12 units, including all of

- ARCH 131-3 Human Origins
- ARCH 201-3 Introduction to Archaeology
- ARCH 272-3 Archaeology of the Old World
- ARCH 273-3 Archaeology of the New World

Upper Division Anthropology Requirements

Students complete a total of at least 20 units of anthropology, including all of

- SA 301-4 Contemporary Ethnography (A)
- SA 356W-4 Ethnography and Qualitative Methods (S or A)
- SA 402-4 The Practice of Anthropology (A)

and eight additional upper division units chosen from the Calendar list of anthropology (A) courses. SA 486 is highly recommended.

Upper Division Archaeology Requirements

Students complete at least 24 archeology units, including

- both Group I courses (ARCH 372, 471W)
- at least one Group II course
- at least one group III course
- at least two group IV courses, of which one must be ARCH 321 or 331 or 378

Archaeology Course Groups

Group I – Core Courses

- ARCH 372-5 Material Culture Analysis
- ARCH 471W-5 Archaeological Theory

Group II – Environmental Archaeology Courses

- ARCH 329-3 Special Topics in Environmental Archaeology
- ARCH 340-5 Zooarchaeology
- ARCH 365-3 Ecological Archaeology
- ARCH 375-3 Archaeology of Food
- ARCH 383-3 Molecular Bioarchaeology
- ARCH 386-3 Archaeological Resource Management
- ARCH 390-5 Archaeobotany
- ARCH 438-5 Geoarchaeology

Group III – Biological Anthropology Courses

- ARCH 322-3 Special Topics in Biological Anthropology
- ARCH 344-3 Primate Behaviour
- ARCH 373-3 Human Osteology
- ARCH 385-5 Paleoanthropology
- ARCH 432-5 Advanced Physical Anthropology
- ARCH 442-5 Forensic Anthropology
- ARCH 452-5 Introduction to Paleopathology

Group IV – Topical Courses

- ARCH 301-3 Ancient Visual Art
- ARCH 321-3 Select Regions in World Archaeology I
- ARCH 331-3 Select Regions in World Archaeology II
- ARCH 332-3 Special Topics in Archaeology I
- ARCH 333-3 Special Topics in Archaeology II
- ARCH 335-5 Special Laboratory Topics in Archaeology
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- ARCH 349-5 Management of Archaeological Collections
- ARCH 376-5 Quantitative Methods in Archaeology
- ARCH 377-5 Historical Archaeology
- ARCH 378-3 Pacific Northwest North America
- ARCH 434-3 Archaeological Field Methods
- ARCH 485-5 Lithic Technology

Courses Recommended by the Department of Archaeology

The following courses are recommended by the Department of Archaeology.

- ARCH 376 (required for honours, recommended for majors and students intending to go on to post-graduate work in archaeology)
- BISC 102 (recommended for majors and honors where a focus will be in biological anthropology courses)
- GEOG 111 (recommended for majors and honors where a focus will be in environmental archaeology courses)
- SA 101 (recommended for majors, honours and students intending to go on to post-graduate work in archaeology)
- STAT 101, 201 or 203

Faculty of Arts and Social Sciences Program Requirements

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

- at least 60 units that must be completed at Simon Fraser University
- at least 45 upper division units, of which at least 30 upper division units must be completed at Simon Fraser University
- at least 65 units (including 21 upper division units) in Faculty of Arts and Social Sciences courses
- 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 (major, joint major, extended minor, minor) CGPA and upper division CGPA of at least 2.0



FACULTY OF ENVIRONMENT

Dan Burns

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February 1, 2011

Duncan Knowler
Associate Dean
Faculty of Environment
Simon Fraser University

Dear Duncan,

Please find enclosed two items for consideration by the FENV Curriculum Committee:

- course change stating that students can not receive credit for ENV 321 and ECON 260
- new course proposal for ENV 319-3 Environmental Law which is being piloted Spring 2012 as ENV 399-3 Special Topics in Environmental Law

Please include these proposals in the agenda for the upcoming Faculty of Environment Curriculum Committee meeting scheduled for February 9, 2012

Thank you,

Dan



COURSE SUBJECT/NUMBER ENV 319-3

COURSE TITLE

LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation

Environmental Law

AND

SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation

Environmental Law

COURSE DESCRIPTION (FOR CALENDAR). 50-60 WORDS MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL.

Provides a practical introduction to the legal system governing the use and protection of the environment in Canada. A central theme is the difference between the law on paper and the law in practice.

LIBRARY RESOURCES

NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.

Campus where course will be taught: Burnaby Surrey Vancouver Great Northern Way Off campus

Library report status

RATIONALE FOR INTRODUCTION OF THIS COURSE

Provide details on how existing instructional resources will be redistributed to accommodate this new course. For example, will another course be eliminated or will the frequency of offering of other courses be reduced; are there changes in pedagogical style or class sizes that allow for this additional course offering?

This course will be one of three ENV courses (Ecological Economics, Ethics and the Environment, and Environmental Law) that will be central to the redesigned EVSC major program as well as serving the needs of other FENV programs and SFU students in general. No environmental law course exists at SFU at present.

SCHEDULING AND ENROLLMENT INFORMATION

Indicate effective term and year course would first be offered and planned frequency of offering thereafter:

Spring 2013

Will this be a required or elective course in the curriculum? Required Elective

What is the probable enrollment when offered? Estimate: 35 to 50

CREDITS

Indicate number of credits for: Lecture 3 Seminar Tutorial Lab



FACULTY Which of your present CFL faculty have the expertise to offer this course?

David Boyd, Adjunct Professor in REM (instructor for current pilot of this course)
Murray Rutherford, Associate Professor, REM

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE

Does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses.? If so, this should be **noted in the prerequisite.**

Students must have earned at least 45 units. Students who have taken ENV 399-3 "Special Topics in Environmental Law" in 2012 may not enroll in this course for further credit.

COREQUISITE

STUDENT LEARNING OUTCOMES

Upon satisfactory completion of the course students will be able to:

Students will learn about the creation and evolution of environmental law as well as the major divisions of law that relate to environmental issues (e.g., constitutional law, criminal law, international law, municipal law, Aboriginal rights and title). Students will also become familiar with the substantive law in Canada dealing with specific environmental issues such as pollution, toxic substances, water management, fisheries, forestry, climate change, environmental assessment, and protecting biological diversity.

FEES

Are there any proposed student fees associated with this course other than tuition fees? YES NO
(If yes, attach mandatory supplementary fee approval form.)

RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

None

Articulation agreement reviewed? YES NO Not applicable

OTHER IMPLICATIONS

None

Exam required: YES NO
Criminal Record Check required: YES NO



APPROVALS

1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

_____ Date _____
 Chair, Department/School *[Signature]* Jan 10, 2012.
 _____ Date _____
 Chair, Faculty Curriculum Committee

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

_____ Date _____
[Signature] Feb. 21, 2012.
 _____ Date _____
 Dean or designate

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

Other Faculties approval indicated that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

_____ Date _____
 _____ Date _____

3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):
 _____ Date _____

APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.

COURSE OUTLINE
ENV 319-3: ENVIRONMENTAL LAW

Instructor: Dr. David R. Boyd
Contact: drboyd@sfu.ca
Office: HC 2150

This course provides a practical and lively introduction to the legal system governing the use and protection of the environment in Canada. Students will learn about the creation and evolution of environmental law as well as the major divisions of law that relate to environmental issues (e.g., constitutional law, criminal law, international law, municipal law, Aboriginal rights and title). The course will also examine and critique the substantive law in Canada dealing with specific environmental issues such as pollution, toxic substances, water management, fisheries, forestry, climate change, environmental assessment, and protecting biological diversity. A central theme will be the difference between law on paper and law in practice. Readings from the textbook will be supplemented by material assigned by the instructor. Students will be expected to read the required materials and participate in class discussions.

Throughout the course, we will be using Enbridge's proposed Northern Gateway pipeline as a case study in various aspects of environmental law and policy. On May 27, 2010, Enbridge filed an application with the National Energy Board for approval to build:

- an oil export pipeline (525,000 barrels per day);
- a condensate import pipeline; and
- a tank terminal and marine terminal near Kitimat, British Columbia

The 1170 km pipelines will be built in a common right-of-way between an initiating pump station near Bruderheim, Alberta and the Kitimat Terminal near Kitimat, British Columbia. The marine terminal will accommodate transfer of oil into, and condensate out of, tankers.

Many First Nations and environmental groups oppose the proposed pipeline. The federal Minister of the Environment and the National Energy Board established a Joint Review Panel to conduct an environmental assessment of the Northern Gateway proposal.

Information on the project (from different perspectives) is available online:
National Energy Board: <http://gatewaypanel.review-examen.gc.ca/clf-nsi/index.html>
Proponent: www.northerngateway.ca
Opponents: www.pipeupagainstenbridge.ca

All students should skim Volume 1 of the Enbridge application, available here:
<http://www.northerngateway.ca/public-review/application>

Course requirements and grading:

1. Assignments (30%).
2. Paper (30%).
3. Final examination (40%).

Required Textbook:

Muldoon, P., A. Lucas, R. Gibson, P. Pickfield and M. Carter-Whitney. 2009. *An introduction to environmental law and policy in Canada*. Toronto: Emond Montgomery.

Recommended Supplemental Book (not mandatory, but useful)

Boyd, David R. 2003. *Unnatural Law: Rethinking Canadian Environmental Law and Policy*. Vancouver: UBC Press.



DEPARTMENT OF GEOGRAPHY

MEMORANDUM

Department of Geography
Simon Fraser University

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TO:	Dr. Duncan Knowler Associate Dean FE / Chair FE Curriculum Committee
FROM:	Dr. Ivor Winton, Chair USCC, Geography
SUBJECT:	UNDERGRADUATE CURRICULUM CHANGES FALL 2012 CALENDAR
DATE:	January 27, 2012

Enclosed please find the proposed changes for Geography in the Fall 2012 Calendar, approved by the Department at it's general meeting of January 26, 2012. Please bring the proposed changes to the Faculty of Environment Curriculum Committee for approval.

Course Changes:

- GEOG 214 Title and Description
- GEOG 253 Title and Description
- GEOG 324 Prerequisite
- GEOG 351 Title
- GEOG 353 Title and Description
- GEOG 412 Prerequisite
- GEOG 412W Prerequisite
- GEOG 453W Title and Description

Course Deletions:

- GEOG 250-3 Cartography I
- GEOG 263-3 Selected Regions
- GEOG 391-4 Qualitative Research Methods
- GEOG 429-4 Environment and Inequality
- GEOG 444 regional Development and Planning II

New Courses:

- GEOG 268-3 Urban Food Systems



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture 2 Seminar _____ Tutorial _____ Lab 2

FROM TO
Course Subject/Number GEOG 214 _____
Credits 3 _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: Climate and Environment TO: Weather and Climate

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: Climate and Environment TO: Weather and Climate

DESCRIPTION

FROM:
A review of the basic principles and processes involved in physical and dynamic climatology, with particular emphasis on global distributions and change. Prerequisite: GEOG 111. Quantitative.

DESCRIPTION

TO:
An examination of the basic principles and processes governing the Earth's weather and climate. Topics include: radiation, greenhouse effect, clouds, precipitation, atmospheric circulation, mid-latitude cyclones, tropical storms, climate change. Prerequisite: GEOG 111. Quantitative.

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite.

PREREQUISITE

TO:

LEARNING OUTCOMES

RATIONALE

To better indicate current course content. The department's sequence of climatology courses is undergoing adjustments in light of the arrival of a new faculty member.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture 2 Seminar _____ Tutorial _____ Lab 2

FROM TO
Course Subject/Number GEOG 351 Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: Cartography and Visualization TO: Multimedia Cartography

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: Cartography and Visualization TO: Multimedia Cartography

DESCRIPTION

FROM: DESCRIPTION TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite.

FROM: PREREQUISITE TO:

LEARNING OUTCOMES

RATIONALE

New title more accurately reflects the materials currently covered in the course.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 412 Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION

FROM:

DESCRIPTION

TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite.

FROM:

GEOG 313; EASC 201 recommended

PREREQUISITE

TO:

60 units, including GEOG 213; GEOG 313 and EASC 201 recommended

LEARNING OUTCOMES

RATIONALE

Proposed new prerequisite is sufficient preparation.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 412W Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:
Glacial Processes and Environments

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION DESCRIPTION
FROM: TO:

PREREQUISITE **PREREQUISITE**
Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses?
If so, this should be **noted in the prerequisite.**

FROM: TO:
GEOG 313; EASC 201 recommended 60 units, including GEOG 213; GEOG 313 and EASC 201 recommended

LEARNING OUTCOMES

RATIONALE

Proposed new prerequisite is sufficient preparation.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 250 Course Subject/Number _____
Credits 3 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Cartography I

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION
FROM:

DESCRIPTION
TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses?
If so, this should be **noted in the prerequisite.**

FROM: TO:

LEARNING OUTCOMES

RATIONALE

Course rarely taught.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 263 Course Subject/Number _____
Credits 3 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Selected Regions

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION
FROM:

DESCRIPTION
TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses?
If so, this should be noted in the prerequisite.

FROM: TO:

LEARNING OUTCOMES

RATIONALE

Course rarely taught.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 391 Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Qualitative Research Methods

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION

FROM:

DESCRIPTION

TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite.**

FROM: TO:

PREREQUISITE

LEARNING OUTCOMES

RATIONALE

Course rarely taught.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 429 Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Environment and Inequality

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION **DESCRIPTION**
FROM: **TO:**

PREREQUISITE **PREREQUISITE**
Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses?
If so, this should be noted in the prerequisite.
FROM: **TO:**

LEARNING OUTCOMES

RATIONALE

Course rarely taught.

Effective term and year Fall 2012



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number GEOG 444 Course Subject/Number _____
Credits 4 Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Regional Development and Planning II

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION

FROM:

DESCRIPTION

TO:

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite.

FROM: TO:

PREREQUISITE

LEARNING OUTCOMES

RATIONALE

Course rarely taught.

Effective term and year Fall 2012



COURSE SUBJECT/NUMBER GEOG 268-3

COURSE TITLE

LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation

Urban Food Systems

AND

SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation

Urban Food Systems

CAMPUS where course will be taught: Burnaby Surrey Vancouver Great Northern Way Off campus

COURSE DESCRIPTION (FOR CALENDAR). 50-60 WORDS MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL.

An exploration of urban food systems and the policy and planning circumstances that shape them. Attention given to the links between local and global food systems.

LIBRARY RESOURCES

NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.

Library report status **Approved, but under an erroneous course number, GEOG 274**

RATIONALE FOR INTRODUCTION OF THIS COURSE

To be offered as part of an expanded departmental repertoire of on-line and distance courses. No reallocation of Geography's teaching resources will be necessary.

SCHEDULING AND ENROLLMENT INFORMATION

Indicate effective **term and year** course would first be offered and planned **frequency** of offering thereafter:

Fall 2012; annually thereafter

Will this be a required or elective course in the curriculum? Required Elective

What is the probable enrollment when offered? Estimate: **30-40**

CREDITS

Indicate number of credits (units): **3**

Indicate number of hours for: Lecture Seminar Tutorial Lab Other



FACULTY Which of your present CFL faculty have the expertise to offer this course?

Holden: McCann

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE

Does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite.

GEOG 100

COREQUISITE

None

STUDENT LEARNING OUTCOMES

Upon satisfactory completion of the course students will be able to:

demonstrate an understanding of:

- ~ the key components of a food system;
- ~ the relationships between global and local food systems;
- ~ the governance and institutional frameworks that shape local food policy and affect planning decisions;
- ~ the ways in which cities plan for food.

FEES

Are there any proposed student fees associated with this course other than tuition fees? YES NO

RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

OTHER IMPLICATIONS

Articulation agreement reviewed? YES NO Not applicable

Exam required: YES NO

Criminal Record Check required: YES NO



APPROVALS

- 1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

 Chair, Department/School Date

 Chair, Faculty Curriculum Committee Date

- 2 Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/School/Department commits to providing the required Library funds.

 Dean or designate Feb 21, 2012.
Date

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

Other Faculties approval indicated that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

 Date _____

 Date _____

- 3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):

 Date _____

APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.

GEOG 268-3
Urban Food Systems

An urban renaissance is underway around the food we eat, where it comes from, who has access to it, and whether it should form a more vital role in the planning of our cities. Food connects us all, yet as cities have urbanized and become more globally interconnected, the food system – how we get food from field to plate - has grown increasingly distant and complex. There are signs, however, that this is starting to change.

This course will explore urban food systems and the policy and planning environments that shape it. Students will gain an understanding of and through a lens of appreciative inquiry explore:

- the key components of a food system
- the relationships between global and local food systems
- the governance and institutional frameworks that shape local food policy and impact planning decisions
- issues of social inclusion and food justice movements
- planning for food
- toward a more localized food system?

Students will explore these topics through dialogue, case studies, guest speakers, media, and via field excursions.

Readings:

A courseware pack of required readings will be available at the Bookstore.

Grading:

Participation – 20%

Short assignments – 50%

Final exam – 30%



ENVIRONMENTAL SCIENCE PROGRAM

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MEMORANDUM

ATTENTION	FEnv Curriculum Committee	DATE	February 11 th 2012
FROM	Leah Bendell, Director Environmental Science Program		
RE:	Environmental Science (EVSC) Calendar Changes		

Colleagues;

Attached are several proposed changes to the EVSC program as now listed in the academic calendar and include;

- 1) Addition of an upper division elective W course in the four areas of concentration, ENV 320W-3 Ethics and the Environment
- 2) Addition of an upper division elective in the four areas of concentration, ENV319-3 Environmental Law
- 3) ENV321-3 and REM321-3 to show as cross listed ENV321-3/REM321-3
- 4) Addition of an upper division elective to Applied Biology, STAT305-3 Introduction to Biostatistical Methods for Health Sciences
- ~~5) Correction of "Science Breadth" to EVSC100-3 calendar description~~
- ~~6) Changes in GEOG course titles to current GEOG course titles recently approved by SCUS and the FEnv CE~~

Items 1 and 2.

ENV320W-3, with ENV321-3/REM321-3 Ecological Economics and ENV319-3 Environmental Law comprise a set of three courses whose development for the EVSC program was a recommendation of the 2009 Environmental Science Redevelopment Committee chaired by Dean J. Pierce. These courses have now been developed and are now ready to be incorporated into the redeveloped program. Inclusion of these three courses into the Environmental Science program defines our program as unique compared to other Environmental Science programs

within Canada and adds to the interdisciplinary training that our Environmental Science students are receiving.

Item 3.

ENV321-3 and REM321-3 are currently listed as separate courses in the EVSC calendar entry. They are identical courses and are now cross listed in the revisions as ENV321-3/REM321-3

Item 4.

The Department of Statistics and Actuarial Science has developed STAT305-3 to meet the needs of Health and Environmental science students. The course content is equivalent to STAT302-3. Thus, either STAT305-3 or STAT302-3 can be taken to meet the statistical requirements in the Applied Biology area of concentration.

~~Item 5.~~

~~Correction of an oversight re EVSC100 course description.~~

~~Item 6:~~

~~Changes in GEOG course titles to current GEOG course titles recently approved by SCUS and the FEnv CC.~~

Please forward any comments/concerns with respect to the above listed changes to the Director of the Environmental Science Program at bendell@sfu.ca

Kind Regards

Leah Bendell, Director EVSC

FROM

APPLIED BIOLOGY

Lower Division Requirements

Students complete all of

**BISC 101-4 General Biology
BISC 102-4 General Biology
BISC 202-3 Genetics
BISC 204-3 Introduction to Ecology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
REM 100-3 Global Change**

and one of

**MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences**

and one of

**MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences**

and one of

**PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics**

and one of

**PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism**

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

Upper Division Requirements

Students complete all of

BISC 316-4 Vertebrate Biology
BISC 337-4 Plant Biology
EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
GEOG 316-4 Global Biogeochemical and Water Cycles
REM 311-3 Applied Ecology and Sustainable Environments
REM 445-3 Environmental Risk Assessment
~~STAT 302-3 Analysis of Experimental and Observational Data~~

and one of

~~ENV 321-3 Ecological Economics~~
~~REM 321-3 Ecological Economics~~

and one of

CMNS 347-4 Communication in Conflict and Intervention
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfil this requirement; check the EVSC website for information.

and three from the following (or any upper division course selected by the student with permission from the Director)

BISC 300-3 Evolution
BISC 306-4 Invertebrate Biology
BISC 309-3 Conservation Biology
BISC 326-3 Biology of Algae and Fungi
BISC 366-3 Plant Physiology
BISC 403-3 Current Topics in Cell Biology
BISC 404-3 Plant Ecology
BISC 407-3 Population Dynamics
BISC 414-3 Limnology
PHYS 346-3 Energy and the Environment
REM 412-3 Environmental Modeling
REM 471-3 Forest Ecosystem Management
STAT 403-3 Intermediate Sampling and Experimental Design

ENVIRONMENTAL EARTH SYSTEMS

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EASC 101-3 Physical Geology
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems

and one of

GEOG 100-3 Society, Space, Environment: Introducing Human Geography
REM 100-3 Global Change

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

and two of

GEOG 213-3 Introduction to Geomorphology
~~GEOG 214-3 Climate and Environment~~
GEOG 215-3 Biogeography

and one of

~~GEOG 253-3 Aerial Photographic Interpretation~~
GEOG 255-3 Geographical Information Science I

Upper Division Requirements

Students complete both of

EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II

and one of

ENV 321-3 Ecological Economics
~~REM 321-3 Ecological Economics~~

and one of

CMNS 347-4 Communication in Conflict and Intervention
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

and six of, with at least two from the 400 division

BISC 414-3 Limnology
EASC 303-3 Environmental Geoscience
EASC 304-3 Hydrogeology
EASC 314-3 Principles of Glaciology
GEOG 310-4 Physical Geography Field Course
GEOG 311-4 Hydrology
GEOG 313-4 River Geomorphology
~~GEOG 314-4 Weather and Climate~~
GEOG 315-4 World Ecosystems
GEOG 316-4 Global Biogeochemical and Water Cycles
GEOG 317-4 Soil Science
GEOG 411-4 Advanced Hydrology
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Advanced River Geomorphology
GEOG 414-4 Advanced Climatology
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Advanced Soil Science

and one of

BISC 309-3 Conservation Biology
BISC 404-3 Plant Ecology
BISC 434-3 Paleoecology and Palynology
REM 311-3 Applied Ecology and Sustainable Environments
REM 445-3 Environmental Risk Assessment
REM 471-3 Forest Ecosystem Management

and one of

EASC 305-3 Quantitative Methods for the Earth Sciences
~~GEOG 351-4 Cartography and Visualization~~
GEOG 352-4 Spatial Analysis
~~GEOG 353-4 Remote Sensing~~
GEOG 355-4 Geographical Information Science II
GEOG 356-4 3D Geovisualization
REM 412-3 Environmental Modeling
STAT 302-3 Analysis of Experimental and Observational Data

ENVIRONMETRICS

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
MATH 232-3 Applied Linear Algebra
MATH 251-3 Calculus III
REM 100-3 Global Change
STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

Upper Division Requirements

Students complete all of

EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
STAT 350-3 Linear Models in Applied Statistics
STAT 402-3 Generalized Linear and Nonlinear Modelling
STAT 410-3 Statistical Analysis of Sample Surveys
STAT 430-3 Statistical Design and Analysis of Experiments

and one of

ENV 321-3 Ecological Economics
~~REM 321-3 Ecological Economics~~

and one of

CMNS 347-4 Communication in Conflict and Intervention
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental
Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

plus 16 upper division science base units with approval from the Director.

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

WATER SCIENCE

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
EASC 101 -3 Physical Geology
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
GEOG 213-3 Introduction to Geomorphology
~~GEOG 214-3 Climate and Environment~~

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

and one of

BISC 204-3 Introduction to Ecology
GEOG 215-3 Biogeography

and one of

~~GEOG 253-3 Aerial Photographic Interpretation~~
GEOG 255-3 Geographical Information Science I

Upper Division Requirements

Students complete all of

BISC 414-3 Limnology
EASC 304-3 Hydrogeology
EASC 315-3 Geochemistry of Natural Waters
EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
GEOG 311-4 Hydrology
GEOG 313-4 River Geomorphology
GEOG 316-4 Global Biogeochemical and Water Cycles
~~REM 321-3 Ecological Economics or~~
~~ENV 321-3 Ecological Economics~~

and one of

CMNS 347-4 Communication in Conflict and Intervention
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-3 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental
Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

and four of, with at least two from the 400 division

EASC 314-3 Principles of Glaciology

EASC 405-3 Water Cycles and Resources: Environmental and Climate
Change Impacts
EASC 410-3 Groundwater Contamination and Transport
EASC 416-3 Field Techniques in Hydrogeology
GEOG 310-4 Physical Geography Field Course
~~GEOG 314-4 Weather and Climate~~
GEOG 317-4 Soil Science
GEOG 411-4 Advanced Hydrology
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Advanced River Geomorphology
GEOG 414-4 Advanced Climatology
GEOG 417-4 Advanced Soil Science
REM 412-3 Environmental Modeling
REM 445-3 Environmental Risk Assessment

TO:

APPLIED BIOLOGY

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
BISC 202-3 Genetics
BISC 204-3 Introduction to Ecology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
REM 100-3 Global Change

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

Upper Division Requirements

Students complete all of

BISC 316-4 Vertebrate Biology
BISC 337-4 Plant Biology
EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
GEOG 316-4 Global Biogeochemical and Water Cycles
REM 311-3 Applied Ecology and Sustainable Environments
REM 445-3 Environmental Risk Assessment

and one of

STAT 302-3 Analysis of Experimental and Observational Data
STAT 305-3 Introduction to Biostatistical Methods for Health Sciences

and two of

ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics

and one of

CMNS 347-4 Communication in Conflict and Intervention
ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental Management
SA 326-4 Ecology and Social Thought (S or A)

SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

and three from the following (or any upper division course selected by the student with permission from the Director)

BISC 300-3 Evolution

BISC 306-4 Invertebrate Biology

BISC 309-3 Conservation Biology

BISC 326-3 Biology of Algae and Fungi

BISC 366-3 Plant Physiology

BISC 403-3 Current Topics in Cell Biology

BISC 404-3 Plant Ecology

BISC 407-3 Population Dynamics

BISC 414-3 Limnology

PHYS 346-3 Energy and the Environment

REM 412-3 Environmental Modeling

REM 471-3 Forest Ecosystem Management

STAT 403-3 Intermediate Sampling and Experimental Design

ENVIRONMENTAL EARTH SYSTEMS

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EASC 101-3 Physical Geology
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems

and one of

GEOG 100-3 Society, Space, Environment: Introducing Human Geography
REM 100-3 Global Change

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

and two of

GEOG 213-3 Introduction to Geomorphology
GEOG 214-3 Weather and Climate
GEOG 215-3 Biogeography

and one of

GEOG 253-3 Introduction to Remote Sensing
GEOG 255-3 Geographical Information Science I

Upper Division Requirements

Students complete all of

EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II

and two of

ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics

and one of

CMNS 347-4 Communication in Conflict and Intervention
ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental
Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

and six of, with at least two from the 400 division

BISC 414-3 Limnology
EASC 303W-3 Environmental Geoscience

EASC 304-3 Hydrogeology
EASC 314-3 Principles of Glaciology
GEOG 310-4 Physical Geography Field Course
GEOG 311-4 Hydrology
GEOG 313-4 River Geomorphology
GEOG 314-4 The Climate System
GEOG 315-4 World Ecosystems
GEOG 316-4 Global Biogeochemical and Water Cycles
GEOG 317-4 Soil Science
GEOG 411-4 Advanced Hydrology
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Advanced River Geomorphology
GEOG 414-4 Advanced Climatology
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Advanced Soil Science

and one of

BISC 309-3 Conservation Biology
BISC 404-3 Plant Ecology
BISC 434-3 Paleoecology and Palynology
REM 311-3 Applied Ecology and Sustainable Environments
REM 445-3 Environmental Risk Assessment
REM 471-3 Forest Ecosystem Management

and one of

EASC 305-3 Quantitative Methods for the Earth Sciences
GEOG 351-4 Multimedia Cartography
GEOG 352-4 Spatial Analysis
GEOG 353-4 Advanced Remote Sensing
GEOG 355-4 Geographical Information Science II
GEOG 356-4 3D Geovisualization
REM 412-3 Environmental Modeling
STAT 302-3 Analysis of Experimental and Observational Data

ENVIRONMETRICS

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
MATH 232-3 Applied Linear Algebra
MATH 251-3 Calculus III
REM 100-3 Global Change
STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

Upper Division Requirements

Students complete all of

EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
STAT 350-3 Linear Models in Applied Statistics
STAT 402-3 Generalized Linear and Nonlinear Modelling
STAT 410-3 Statistical Analysis of Sample Surveys
STAT 430-3 Statistical Design and Analysis of Experiments

and two of

ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics

and one of

CMNS 347-4 Communication in Conflict and Intervention
ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-4 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental Management
SA 326-4 Ecology and Social Thought (S or A)
SA 371-4 The Environment and Society (S or A)

plus 16 upper division science base units with approval from the Director.

Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information.

WATER SCIENCE

Lower Division Requirements

Students complete all of

BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
EASC 101-3 Physical Geology
EVSC 100-3 Introduction to Environmental Science
EVSC 205-3 Methods in Environmental Science
GEOG 111-3 Earth Systems
GEOG 213-3 Introduction to Geomorphology
GEOG 214-3 Weather and Climate

and one of

PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

and one of

PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

and one of

MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of

MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences

and one of

STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

and one of

BISC 204-3 Introduction to Ecology
GEOG 215-3 Biogeography

and one of

GEOG 253-3 Introduction to Remote Sensing
GEOG 255-3 Geographical Information Science I

Upper Division Requirements

Students complete all of

BISC 414-3 Limnology
EASC 304-3 Hydrogeology
EASC 315-3 Geochemistry of Natural Waters
EVSC 399-1 Environmental Science Seminar I
EVSC 499-1 Environmental Science Seminar II
GEOG 311-4 Hydrology
GEOG 313-4 River Geomorphology
GEOG 316-4 Global Biogeochemical and Water Cycles

and two of

ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics

and one of

CMNS 347-4 Communication in Conflict and Intervention
ENV 319-3 Environmental Law
ENV 320W-3 Ethics and the Environment
ENV 321-3/REM 321-3 Ecological Economics
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 332-3 Ethnobotany of British Columbia First Nations
FNST 443-3 Aboriginal Peoples, History and the Law
GEOG 322-4 World Resources
GEOG 325-4 Geographies of Consumption
GEOG 363-4 Urban Planning and Policy
GEOG 381-4 Political Geography
GEOG 389W-4 Nature and Society
REM 356-3 Institutional Arrangements for Sustainable Environmental

Management

SA 328-4 Ecology and Social Thought (S or A)

SA 371-4 The Environment and Society (S or A)

Note: occasionally 300 or 400 division Special Topics courses may be offered that can full this requirement; check the EVSC website for information.

and four of, with at least two from the 400 division

EASC 314-3 Principles of Glaciology

EASC 405-3 Water Cycles and Resources: Environmental and Climate Change Impacts

EASC 410-3 Groundwater Contamination and Transport

EASC 416-3 Field Techniques in Hydrogeology

GEOG 310-4 Physical Geography Field Course

GEOG 314-4 The Climate System

GEOG 317-4 Soil Science

GEOG 411-4 Advanced Hydrology

GEOG 412-4 Glacial Processes and Environments

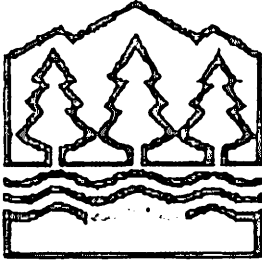
GEOG 413-4 Advanced River Geomorphology

GEOG 414-4 Advanced Climatology

GEOG 417-4 Advanced Soil Science

REM 412-3 Environmental Modeling

RIEM 445-3 Environmental Risk Assessment



**School Of Resource and
Environmental Management**

SIMON FRASER UNIVERSITY

Memorandum

**To: Dr. Duncan Knowler, Associate Dean
Faculty of Environment**

From: Dr. Sean Cox, Chair Undergraduate Committee

Date: January 27, 2012

Subject: REM's Course Changes for Fall 2012 Calendar

Dear Duncan,

Attached please find proposed changes to REM Undergraduate courses 311, 321, and 412, approved by our Undergraduate Studies Committee on Dec 14, 2011.

Please place these proposed changes on the agenda of the next meeting of the FENV Curriculum Committee. We would like the changes to be effective for Fall 2012.

Sincerely,

**Sean Cox
Chair, Undergraduate Committee REM**

**CC: J. Axsen
A. Salomon**



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion

Indicate number of hours for: Lecture 2 Seminar _____ Tutorial 1 Lab _____

FROM TO
Course Number REM 321 Course Number _____
Credits (Units) 3 Credits (Units) _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION DESCRIPTION
FROM: TO:

PREREQUISITE PREREQUISITE
FROM: minimum of 45 units. This course is identical to ENV 321 and students cannot complete both courses for credit.
TO: minimum of 45 units. Students who have taken ECON 260 cannot take this course for further credit. REM 321 is identical to ENV 321 and students cannot take both for credit.

RATIONALE

Students with ECON 260 will have already covered some of the core Economics topics in REM 321.

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite.**

Effective term and year Fall 2012



UNIVERSITY CURRICULUM & INSTITUTIONAL LIAISON
OFFICE OF THE VICE PRESIDENT ACADEMIC AND PROVOST

MEMO

ADDRESS
8888 UNIVERSITY DRIVE
BURNABY BC V5A 1S6
CANADA

ATTENTION Duncan Knowler	TEL
FROM SUSAN RHODES, Assistant Director, University Curriculum and Institutional Liaison	
RE W designation approval	
DATE February 20, 2012	
TIME 2:29 PM	

Please be advised that the University Curriculum Office has approved W designation, effective September 2012, for:

ARCH 272 Archaeology of the Old World

This course is currently designated B-Soc. Please note that FAL X99 will be built in as a prerequisite once the W designation is added in the system.

This memo can be forwarded to SCUS and then Senate.