



EFFECTIVE: JANUARY 2009
CURRICULUM GUIDELINES

A. Division: **Science and Technology** Date: **January 2009**
 B. Department / Program Area: **Environmental Science** New Course Revision
 If Revision, Section(s) Revised: **H**
 Date Last Revised: **August 2008**

C: **SCIE 2307** D: **Field Research Project** E: **4**

Subject & Course No.	Descriptive Title	Semester Credits
F: Calendar Description: The focus of this course is a semester-long research project involving a field location associated with a particular environmental topic. The project will be analogous to a major project undertaken by an environmental consulting company. Students will engage in data collection and analysis relevant to the environmental issue associated with the field location. Technical report writing and working in teams are required components of this course.		
G: Allocation of Contact Hours to Type of Instruction / Learning Settings Primary Methods of Instructional Delivery and/or Learning Settings: Lecture / Laboratory / Field trip Number of Contact Hours: (per week / semester for each descriptor) 6 hours/week: 2 hours lecture / 4 hours lab/field trip Number of Weeks per Semester: 15	H: Course Prerequisites: SCIE 1107 and BIOL 1110 and BIOL 1210 and CHEM 1110	
	I: Course Corequisites: None	
	J: Course for which this Course is a Prerequisite	
	K: Maximum Class Size: 35	
L: PLEASE INDICATE: <input type="checkbox"/> Non-Credit <input type="checkbox"/> College Credit Non-Transfer <input checked="" type="checkbox"/> College Credit Transfer: Requested <input checked="" type="checkbox"/> Granted <input type="checkbox"/> SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bctransferguide.ca)		

M: Course Objectives / Learning Outcomes

Upon completion of SCIE 2307, the student will be able to:

1. Describe biological and geological features of a field site of environmental interest.
2. Design a sampling protocol and collect biological, geological and chemical samples from a field site.
3. Identify and catalogue biological and geological samples in the laboratory.
4. Use GPS equipment and GIS software to map a field site.
5. Conduct simple chemical analyses of field-collected samples (eg. water samples) in the laboratory.
6. Design and conduct simple field experiments to answer questions of environmental interest.
7. Operate and maintain field equipment used for collection of data.
8. Accurately record data from field collections and experiments and enter into an appropriate computer program (eg. Microsoft Excel).
9. Prepare data for presentation (eg. graphically) and conduct simple statistical analyses.
10. Organize field, laboratory and data analysis activities by collaboration with a team of students.
11. Research an environmental topic related to the data collection above, prepare a major report and present findings in a student conference.

N: Course Content:

The major topics in the course may include the following:

1. Population, community and ecosystem processes
2. Biological diversity and conservation biology
3. Geological topics including:
 - Bedrock & surficial geology
 - Landscapes & hillslopes
 - Streams & flooding
 - Earthquakes & hazards
 - Shorelines & coastal processes
 - Soils & groundwater
4. Toxic and hazardous wastes
5. Air & water pollution
6. Water quality sampling
7. Solid & liquid waste management
8. Habitat destruction and restoration
9. Biological invasions
10. Genetically-modified organisms

11. Geological, natural and environmental history of a local field site eg.:

- Fraser Estuary
- Coquitlam River
- Boundary Bay
- Burns Bog
- Byrne Creek

12. Application of environmental management strategies eg.:

- Adaptive management
- Impact assessment
- Stakeholders & partnerships
- Conflict resolution

O: Methods of Instruction

This course involves 2 hours per week of classroom instruction and 4 hours per week of laboratory and field work.

P: Textbooks and Materials to be Purchased by Students

Courseware manual

Q: Means of Assessment

<u>TYPE OF EVALUATION</u>	<u>POINTS</u>
Project proposal	10%
Quizzes	20%
Group participation	10%
Interim project report & presentation	20%
Final project report & presentation	40%
TOTAL	100%

Grades:	A+ 95-100,	A 90-94,	A- 85-89,	B+ 80-84,	B 75-79,	B- 70-74,
	C+ 65-69,	C 60-64,	C- 55-59,	P 50-54,	F 0-49.	

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

There is no provision for PLAR, other than that normally done by examining transcripts and comparing course outlines of Environmental Science courses taken within the last five years elsewhere to the SCIE 2307 course content.

Course Designer (Rob McGregor)

Education Council / Curriculum Committee Representative

Dean / Director

Registrar