UNIVERSITY OF THE FRASER VALLEY

ORIGINAL COURSE IMPLEMENTATION DATE: Winter 2009
REVISED COURSE IMPLEMENTATION DATE: September 2017
COURSE TO BE REVIEWED: (six years after UEC approval) January 2022
Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: GEOG 315	**Number of Credits:** 4 Course credit policy (105)
Course Full Title: Soilscapes **Course Short Title (if title exceeds 30 characters):**	
Faculty: Faculty of Social Sciences	**Department (or program if no department):** Geography and the Environment

Calendar Description:

Soils result from the interface of bedrock and biota regulated by climate. In this course students will learn how soils vary along environmental gradients across the landscape according to physical, chemical, and ecological processes that define key soil horizons.

Note: Field trips outside of class time will be required. Please refer to the department website for field trip scheduling information.

Prerequisites (or NONE):	One of the following: AGRI 204, AGRI 220, BIO 201, BIO 202, BIO 203, BIO 210, BIO 220, CHEM 213, CHEM 214, CHEM 221, CHEM 241, GEOG 201, GEOG 202, GEOG 211, GEOG 219/BIO 219, GEOG 252, GEOG 253 or GEOG 257/CMNS 257.
Corequisites (if applicable, or NONE):	None
Pre/corequisites (if applicable, or NONE):	

Equivalent Courses (cannot be taken for additional credit)

Former course code/number: **N/A**

Cross-listed with: **N/A**

Equivalent course(s):

Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.

Transfer Credit

Transfer credit already exists: ☐ Yes ☒ No

Transfer credit requested (OReg to submit to BCCAT):
☐ Yes ☒ No (if yes, fill in transfer credit form)

Resubmit revised outline for articulation: ☐ Yes ☒ No

To find out how this course transfers, see **bctransferguide.ca**.

Total Hours: 90

Typical structure of instructional hours:

Lecture hours	26
Seminars/tutorials/workshops	12
Laboratory hours	20
Field experience hours	20
Experiential (practicum, internship, etc.)	
Online learning activities	12
Other contact hours:	
Total	**90**

Special Topics

Will the course be offered with different topics?
☐ Yes ☒ No

If yes, different lettered courses may be taken for credit:
☐ No ☐ Yes, repeat(s) ☐ Yes, no limit

Note: The specific topic will be recorded when offered.

Maximum enrolment (for information only): 25

Expected frequency of course offerings (every semester, annually, every other year, etc.): Every other year

Department / Program Head or Director: Steven Marsh	**Date approved:**	December 2016
Faculty Council approval	**Date approved:**	January 2017
Campus-Wide Consultation (CWC)	**Date of posting:**	March 17, 2017
Dean/Associate VP: Lucy Lee	**Date approved:**	January 2017
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	March 24, 2017

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Show familiarity with soil classification at regional and global scales;
2. Assess soil-mediated nutrient cycles and how they support primary productivity and biodiversity;
3. Interpret and properly log soil profiles;
4. Use relevant data analysis and presentation software;
5. Write an advanced laboratory/field report;
6. Appreciate the value of soil from different perspectives including indigenous cultures.

Prior Learning Assessment and Recognition (PLAR)

☒ Yes ☐ No, PLAR cannot be awarded for this course because

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Course format will include lectures, discussions, laboratory sessions, field trips, and the use of Blackboard Learn.

Grading system: Letter Grades: ☒ Credit/No Credit: ☐ Labs to be scheduled independent of lecture hours: Yes ☐ No ☒

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.	Brady, N.C. & Weil, R.	Elements of the Nature and Properties of Soils (3rd Edition)	☒	Pearson	2010
2.			☐		
3.			☐		
4.			☐		
5.			☐		

Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)

Laboratory and field notebook

Typical Evaluation Methods and Weighting

Final exam:	20%	Assignments:	%	Midterm exam:	20%	Practicum:	%
Quizzes/tests:	%	Lab assignments:	20%	Field experience:	%	Shop work:	%
Research Report:	20%	Research notebook:	10%	Participation	10%	Total:	100%

Details (if necessary):

Typical Course Content and Topics

Tentative lecture schedule

Week	Topic
1	Introduction to soil
2	Soil formation
3	Soil classification
4	Physical properties of soil
5	Field descriptions of soil profiles r
6	Soil water
7	The hydrologic cycle
8	Soil air and temperature
9	Soil colloids
10	Soil acidity, alkalinity, and salinity
11	Ecology of soil
12	Soil organic matter
13	Soil nutrient cycles

Each course offering includes a minimum of eight laboratory/field activities. Examples of such activities include a field assessment of wetland sediments as archives of past environmental change, and opportunities to process field-collected samples to identify microfossils (e.g., pollen, diatoms, and testate amoebae). Computer-assisted exercises provide practice with quantitative methods. Blackboard Learn is used to organize course material, discuss course topics, complete fossil-identification exercises, and write exams.