ORIGINAL COURSE IMPLEMENTATION DATE: September 2009
REVISED COURSE IMPLEMENTATION DATE: January 2024
COURSE TO BE REVIEWED (six years after UEC approval)**:** April 2029
Course outline form version: 09/08/2021

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

Course Code and Number: AGRI 204	**Number of Credits:** 3 Course credit policy (105)
Course Full Title: Introduction to Soils and Soil Fertility **Course Short Title:** Soils & Soil Fertility	
Faculty: Faculty of Science	**Department (or program if no department):** Agriculture Technology

Calendar Description:

An introductory soils course that highlights the physical, chemical, and biological properties of soils. All aspects of soil science including genesis and functions are explored. Emphasis is on healthy soils as production media for crop (fruit, vegetable, ornamental, and forage) production.

Note: Field trips outside of class time will be required. Please check with the department for details.

Prerequisites (or NONE):	None.
Corequisites (if applicable, or NONE):	None.
Pre/corequisites (if applicable, or NONE):	None.

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number: **AGRI 153**

Cross-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar	39
Supervised laboratory hours (science lab)	6
Total hours	**45**

Scheduled Laboratory Hours

Labs to be scheduled independent of lecture hours: ☒ No ☐ Yes

Course Details

Special Topics course: **No**
(If yes, the course will be offered under different letter designations representing different topics.)

Directed Study course: **No**
(See policy 207 for more information.)

Grading System: **Letter grades**

Delivery Mode: **Face-to-face only**

Expected frequency: **Annually**

Maximum enrolment (for information only)**: 25**

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Transfer Credit *(See **bctransferguide.ca**.)*

Transfer credit already exists: **Yes**

Submit outline for (re)articulation: **Yes**
(If yes, fill in transfer credit form.)

Department approval	**Date of meeting:**	November 2022
Faculty Council approval	**Date of meeting:**	December 2, 2022
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	April 21, 2022

Learning Outcomes *(These should contribute to students' ability to meet program outcomes and thus Institutional Learning Outcomes.)*

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

1. Apply the basic terminology associated with soils.
2. Describe the principles of soil formation.
3. Quantify basic soil components and properties using standard lab techniques.
4. Characterise the main soil processes and soil-plant relationship.
5. Interpret key soil properties and indicators.
6. Conduct and interpret a basic soil test analysis and measure basic soil properties.
7. Demonstrate the skills required to make field observations.
8. Summarise the importance of soil ecosystem functions and diversity in a cultural context and for Indigenous communities.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Quizzes/tests:	50%	Assignments:	50%		%
			%		%

Details:

Assignments:
Laboratory-based soil analysis project: 40%
Greenhouse assignment: 10%

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

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. Open Educational Resources (OER) should be included whenever possible. If more space is required, use the Supplemental Texts and Resource Materials form.)*

	Type	Author or description	Title and publication/access details	Year
1.	Textbook		Digging into Canadian Soils (https://openpress.usask.ca/soilscience/)	2008
2.				
3.				
4.				
5.				

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

Simple calculator; transportation to field trips; lab coat

Course Content and Topics

- Origin and morphology of soils
- Soil ecosystem functions and cultural importance
- Soil horizons
- Clay minerals
- Soil physical properties
- Soil water
- Soil laboratory methods
- Soil chemical properties
- Soil biology
- Soil organic matter and composting