



**Course Outline**

**ENVIRONMENTAL TECHNOLOGY**

**ENVT 261**  
Environmental Soil Science  
**Fall 2012**

**3 CREDITS**  
**2 hours lecture, 2 hours laboratory**

**INSTRUCTOR: David Smith**

**INSTRUCTOR:** David Smith  
**PHONE NUMBER:** (780) 791-4997  
**E-MAIL:** David.Smith@keyano.ca  
**OFFICE NUMBER:** S209B

**OFFICE HOURS:**

Monday – Friday (except Tuesday)	12:00 PM – 12:50 PM
Tuesday	10:00 AM – 11:00 AM

**HOURS OF INSTRUCTION:**

Tuesday	11:00 AM – 12:50 PM	Room S114
Wednesday	8:00 AM – 9:50 AM	Room 224

**COURSE DESCRIPTION:**

The course provides a basic understanding of soil science, with an emphasis on soils in our environment, their physical and chemical characteristics.. The topics covered in the first half of the course are introductory with the aim of giving a good background to soil formation and development. Identification of these characteristics and their use in soil classification will be discussed. The application of these in sustainable soil resource management will also be dealt with.

**PRE-REQUISITE(S):**

ENVT 151

**COURSE OUTCOMES:**

The student will be able to:

1. Recognize physical properties and functions of soils in relation to other components of the environment.
2. Learn the factors of soil formation and processes of soil development that lead to differences in soils in our environment.
3. Use techniques of soil sampling, identification and measurement of soil properties
4. Learn and use the Canadian System of Soil Classification and apply it in classifying soils.
5. Apply the knowledge gained in sustainable soil management.

## REQUIRED RESOURCES:

1. Neil C. Brady and Ray R. Weil. 2008. The Nature and Properties of Soils. Nyle C. 14<sup>th</sup> Edition revised. Prentice Hall, New Jersey.
2. Thien, S.J. and J.G. Graveel. 2003. Soil Science. Agricultural and Environmental Principles. Kendall/Hunt Publishing. Dubuque, Iowa.

## TOPICS TO BE COVERED:

### **Please Note:**

This course outline may be modified to facilitate unforeseen time constraints. Date and time allotted to each topic is subject to change.

### LECTURES AND LABORATORIES, ENVT 252, FALL 2012

Week of Sep 3	Introduction, Chapter 1	NO LAB
Week of Sep 10	Soil formation, Chapter 2	NO LAB
Week of Sep 17	Soil classification, Chapter 3	Introduction – LAB 1 Soil as a natural resource
Week of Sep 24	Soil classification, Chapter 3	Field Lab
Week of Oct 1	Soil classification, Chapter 3	Field Lab
Week of Oct 8	Soil architecture, Chapter 4	Field Lab
Week of Oct 15	Soil water, Chapter 5	LAB 5 Soil water content
Week of Oct 22	Soil aeration and temperature, Chapter 7	LAB 5 Soil water content
Week of Oct 29	Soil colloids, Chapter 8	LAB 4 Bulk density and soil porosity
Week of Nov 5	Soil chemistry, Chapters 8-10	LAB 3 Particle size distribution
Week of Nov 12	Soil ecology, Chapter 11	LAB 2 Soil texture
Week of Nov 19	Organic matter and fertility, Chapters 12-16	LAB 15 Soil survey reports
Week of Nov 26	Erosion, Chapter 17	Oral presentations
Week of Dec 3	Pollution, Chapter 18	Oral presentations

## MOODLE

Go to <http://ilearn.keyano.ca>

This course is supported through Moodle. Assignments, readings and handouts will be posted on Moodle. Login information will be provided by your instructor. For further instructions please see the Moodle handout.

## EVALUATION:

Assignment	Percentage	Week of
Assignments	20%	Each week
Midterm	25%	October 15
Oral presentation	20%	November 26
Final Examination	35%	December 10-19

## GRADING SYSTEM:

Letter Grade	Description	Grade Points
A+		4
A	Excellent	4
A-		3.7
B+		3.3
B	Good	3
B-		2.7
C+		2.3
C	Satisfactory	2
C-		1.7
D+		1.3
D	Minimal Pass	1
F	Failure	0

Students intending to transfer to other institutions should strive for a 'C-' as a minimum. Transfer information on each course is available at the [Alberta Council on Admission and Transfers](#).

## NOTES:

Please dress appropriately for the weather on any field trips! Proper footwear is important. If the weather does not co-operate, the lab schedule will shift.

Individual components of the course will be given a numerical mark. The grading system will be applied using a combination of absolute achievement and relative standing in the class.

**MISSED TERM EXAM OR LABS:**

A student who cannot write a term examination or complete a lab assignment due to incapacitating illness, severe domestic affliction or other compelling reasons can apply to have the weight of the missed midterm transferred to the final. All attempts should be made to make up missed labs. Missed labs with no attempts to complete the work will be assigned a “0”. You must notify the instructor of a missed midterm or lab assignment within 48 hours. Deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Misrepresentation of Facts to gain a deferral is a serious breach of the Code of Student Behaviour.

**CELL PHONES:** Cell phones and other electronic devices are to be turned off during class times. If you need to use one, leave the room. If you have to text someone, leave the room.

**STUDENTS WITH DISABILITIES:** Students who require accommodation in this course due to a disability are advised to discuss their needs with counsellors in the Registrar’s office . Please ensure that the required forms for exams are submitted to the instructor **one week** before the date of midterms or **by the last lecture class** for the final exam.

**SKILL CENTRE:** Students who require additional help in developing strategies for better time management, study skills or examination skills should contact the Keyano College Skill Centre.

**Disclaimer:** Any typographical errors in this Course Outline are subject to change and will be announced in class. The date of the final examination is set by the Registrar.

**Note:** Recording is permitted only with the prior written consent of the instructor or if recording is part of an approved accommodation plan.

*Students should consult:*

<http://keyano.ca/sites/default/files/academic%20regulations.pdf>

**IMPORTANT DATES:**

September 18, 2012	Courses dropped after this date will be designated “W”. (A withdrawal (W) is not reflected in your GPA)
October 26, 2012	Courses dropped after this date will be designated “WF”. (A withdrawal failure (WF) counts as a 0 in your GPA)
December 7, 2012	Last day of classes
December 10-19, 2012	Final Exams

## COLLEGE POLICIES

### Equality, Equity and Respect

The Keyano College is committed to providing an environment of equality, equity and respect for all people within the College community. All members of this community are considered partners in developing teaching and learning contexts that are welcoming to all. Faculty, staff, and students are encouraged to use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and valued in relation to their gender, ethnic and cultural background, and sexual orientation.

*Students should consult:*

<http://keyano.ca/current-students/individual-rights/definitions-scope>

### Plagiarism and Cheating

Every student expects to be treated and evaluated fairly in a course. Plagiarism and cheating robs everyone of this right.

No student may submit words, ideas or data of another student or person as his or her own in any writing, project, assignment, quiz, electronic presentation, exam etc. Any work used that is not the student's own must be clearly cited as belonging to someone else. There are penalties for using other's work and not citing it. The Student's Rights & Responsibilities document clearly outlines these penalties and the appeal process.

- No learner can obtain information from another student during an exam.
- No learner can bring unauthorized information (paper or electronic) into an exam or quiz.
- No student can submit work done in another course for grading in this course without the written prior approval of the course instructor.
- No student can submit copyright protected or commercially produced materials as part or all of an assignment without proper citation & permission.

### Student Rights & Responsibilities

Students should consult the Keyano College Credit Calendar or online at:

<http://keyano.ca/sites/default/files/academic%20regulations.pdf>

### Specialized Supports and Duty to Accommodate

*Disability Support Services: Learner Assistance Program*

If you have a documented disability or you think that you would benefit from some assistance from a Disabilities Counsellor, please call or visit the Disability Supports Office 780-792-5608 to book an appointment (across from the library). Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at Keyano College.

*Specialized Supports and Duty to Accommodate*

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation, and defined by a number of Keyano College policies. Keyano College is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.



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**David Smith, Instructor**

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**Date**

**Reviewed and approved by:**

\_\_\_\_\_  
**Louis Dingley, Chairperson**

\_\_\_\_\_  
**Date**

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**Guy Harmer, Dean**

\_\_\_\_\_  
**Date**