

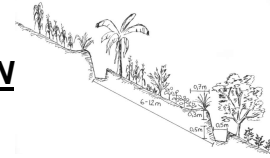
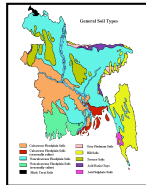
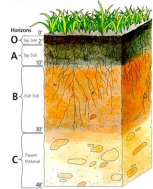
SOIL MANAGEMENT AND CONSERVATION

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1. Introduction.

Soil resources are the foundation of civilizations and of crucial importance to primary productivity and life systems. Key environmental, social and economical issues are linked to the health of soils. Proper management and conservation of soil resources ensure the attainment of ecological sustainability and require reliable information about the characteristics and qualities of the soil mantle and its interpretation for practical purposes. The interrelations between soil quality and function and other contemporary global environmental problems, such as land degradation, climate change, environmental contamination, etc., make the thorough understanding of soils, their variability, processes and functions, imperative. This is precisely the aim of this course.

2. Course Objectives.

This course has the following objectives:

- Introduce students to the fundamental aspects of soil resources observation, characterization, inventory and interpretation for practical purposes.
- Provide exposure to different approaches and procedures for the interpretation of soil information, approaches to the assessment of its condition and potential and for the design of appropriate and sustainable soil management and conservation strategies.
- Introduce contemporary fields of inquiry related to soil processes, e.g. soil and land degradation at multiple scales, the role of soil resources in climate change, the multi-functional character of soils and computer modelling and simulation of such processes.

3. Course requirements, assignments, grading and deadlines.

Course instruction:

The course will be instructed in one two-hour lecture weekly. A three-hour lab bi-weekly will complement the lectures.

Course delivery through MyLearningSystem: This course relies heavily on information and educational content delivered through MyLearningSystem. It is important that students in the course become familiar with the latest MyLearningSystem software interface.

Labs/Workshops: The lab session will consist of either, a fieldwork session or a data analysis workshop (see course outline) and its discussion. Students should expect assignments based on fieldwork, which may demand some physical exertion. Numerical calculations and map making abilities may be necessary for the completion of the data analysis workshops and assignments.

Integrated Soil Management Plan: The design of an integrated soil management plan of a finite

geographical location near the University Campus will be part of the course assignments. The soil management plan is seen as an opportunity to integrate all knowledge and experience acquired during the course.

Local Field Trip: A field trip to a location near the university campus for the completion of a given lab/workshop exercise may be part of the course (To be confirmed, depending on availability of transportation)

Important Notice: For some lab and workshop assignments there may be a demand for time in excess of that scheduled in the timetable and syllabus, depending on individual ability and availability of resources.

Deadlines:

The deadline for submission of lab reports is automatically the following lab session (without exemptions), unless otherwise stated and agreed between instructor and the class.

Grading:

Course work will be graded according to the following scheme:

Lab assignment reports.....	50%
Soil management plan:	25%
Final Examination (examination period).....	25%

Course policies on late submission of work and attendance in class/labs:

Late submissions of work are to be penalized with 5% of the mark per day of lateness. Attendance to lectures and lab/workshop sessions is compulsory (exceptions due to illness and extraordinary circumstances will require a written valid justification). Attendance and participation in class are strongly encouraged.

Required and/or Recommended Texts:

There are **no required texts** for this course. **Recommended texts** are listed below:

1. Miller, R. W. and D. T. Gardiner (2001) *Soils in our Environment*. 10th Edition. Prentice Hall, New Jersey. ISBN: 0130200360
2. Singer, Michael J. and Donald N. Munns (1999) *Soils: an introduction*. Prentice Hall, N.J.
3. Brady, N. C. and R. R. Weil (2002) *Elements of the nature and properties of soils*. 13th Edition. Prentice Hall. N.J. ISBN 0130167630

Academic Dishonesty: Academic dishonesty, which includes plagiarism and cheating, is an extremely serious academic offense and carries penalties varying from failure in an assignment to suspension from the University. Definitions, penalties, and procedures for dealing with plagiarism and cheating are set out in Trent University's Academic Dishonesty Policy, which is printed in the University Calendar and on the university web site at: http://www.trentu.ca/deansoffice/policies_dishonesty.php. Although plagiarism most commonly refers to academic writing (reports, essays and theses) in the arts and social sciences, *lab courses are not exempt*. *Cooperation among students is encouraged in the laboratory sessions to strengthen their learning experience. However, this should not be misconstrued to include copying or sharing answers to the questions in the assignments.*

Grammar and Style: It is expected that written assignments in Geography courses will conform to high standards of grammar and style. Although the penalty may vary from course to course, and from one kind of written assignment to another, bad grammar and style will be penalized in all grading of written work submitted in Geography courses.

Access to Instruction : It is Trent University's intent to create an inclusive learning environment. If a student has a disability and/or health consideration and feels that he/she may need accommodations to succeed in this course, the student should contact the Disability Services Office (BL Suite 109, 748-1281; disabilityservices@trentu.ca) as soon as possible. Complete text can be found under Access to Instruction in the Academic Calendar.