

EESB05H – PRINCIPLES OF SOIL SCIENCE
DEPARTMENT OF PHYSICAL AND ENVIRONMENTAL SCIENCES
UNIVERSITY OF TORONTO SCARBOROUGH
Fall 2019

Instructor: Prof. Marney Isaac
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TA's: Serra Buchanan, Zachary Diloreto
Office hours: Wednesday 10-11am

LECTURES: Fridays: 10am-12pm in room IC230
PRACTICALS: Tues: 12-3pm or 3-6pm in EV224 starting October 1st

COURSE DESCRIPTION

A study of the chemical, physical and biological properties of soils, soil formation and development, the classification of soils and the application of soil science to environmental issues and their response to environmental change.

PREREQUISITES

EESA01H - Introduction to Environmental Science **or**
EESA06H - Introduction to Planet Earth

REQUIRED READING (available at the UTSC bookstore):

“**Elements of the Nature and Properties of Soils**” by N.C. Brady and R.R. Weil, 2002, Pearson Publishers. This text is available from the UT Scarborough bookstore and from various sources on the internet. It is also on course reserve.

COURSE LAYOUT

Lecture	Date	Lecture topic	Readings
1	Sept. 6	Introduction	Chapter 1
2	Sept. 13	Origin of soils/taxonomy	Chapter 2 & Chapter 3
3	Sept. 20	Soil physical properties	Chapter 4
4	Sept. 27	Soil water	Chapter 5
5	Oct. 4	Soil porosity	Chapter 7
6	Oct. 11	Midterm	

	Oct. 18	Reading week	
7	Oct. 25	Soil chemical properties	Chapter 8
8	Nov. 1	Soil acidity	Chapter 9
9	Nov. 8	Soil biology & organic matter	Chapter 10 & 11
10	Nov. 15	Soil-plant relationship	Chapter 12 & 13
11	Nov. 22	Tropical soils & soil management	
12	Nov. 29	Review	

PRACTICALS

Practical	Date	Practical topic
1	Oct 1 st or Oct 8 th	Soil physical properties –

Practicals

