

NRM 380 - SOILS AND THE ENVIRONMENT SYLLABUS

Fall - 2022

Course outline: The course offers fundamental knowledge in soil sciences, which include soil taxonomy, soil physics, soil chemistry, and soil biology and biochemistry both in theory and in applications. Briefly, five areas are covered in the lecture and labs, 1) soil physics and soil formation, 2) soil chemistry, 3) soil biology, 4) soil and plant nutrients and their management; and 5) soil contamination and erosion control. Lectures and laboratory work compromise each other so that what students learned in the lecture can be applied in the laboratory experiments. It is a step stone for students who are pursuing degrees in plant, animal and soil sciences, forestry science, biology, ecology, geography, natural resource management, and environmental sciences.

Lecture methods: Face to face or distance delivery through zoom. Online laboratory video is available in Blackboard.

Objective: NRM 380 introduces the fundamentals of soil science. Most exa

Students are expected to read, understand, and adhere to the academic honor code detailed in the [UAF Catalog](#). The University of Alaska is committed to providing equal access for students with disabilities. If you have a disability requiring special accommodations, please notify me during the first two weeks of class.

In order to save copying costs, these handouts and all lecture materials will be available through the UAF Blackboard site at <http://classes.uaf.edu>. If you cannot access these notes, please let me know.

Student outcome:

Upon completion of the class, students should:

Have a deep understanding the complexity of soil as a natural resource for food production and as an important component in natural ecosystem.

Understand soil physical properties, and laboratory methods to measure those properties.

Understand soil chemical properties and laboratory methods to measure those properties.

Understand soil biological properties and laboratory methods to measure those properties.

Have knowledge to differentiate a good soil management plan from improper ones.

Be able to use soil web survey to collect soil information and use learned soil knowledge to develop soil management plans for different land uses.

Be able to write a integrated soil technical report for a given area in US.

NRM-380 SOILS GRADING POLICY

This is a "writing-intensive" course, meaning that a majority of the 768 total points available is

87	89.9%		B+
82	86.9%		B
80	81.9%		B-
77	79.9%		C+

Lecture, exam, and homework schedule

Date	Lecture	Topic	Brady & Weil Chapter	Problems
29-Aug		1 Introduction to course and soils	1	The Soils Around Us
31-Aug		2		

