

## SOIL/AECL 2010

### Introduction to Soil Science

Spring, 2011

Instructor: Larry Munn, Professor of Soil Science  
1008 Agriculture C  
766-3414  
[lcmunn@uwyo.edu](mailto:lcmunn@uwyo.edu) (best contact method)

Lecture: Monday, Wednesday and Friday. 9:00 to 9:50 am.

Laboratory: Wednesday 2:10 – 5:00 pm, Thursday 9:35 am – 12:15 pm or Thursday 1:20-4:00 pm. Everyone signed up for AECL 2010 or SOIL 2010 needs to be registered for one of the lab sections.

- TEXT: Soils, an Introduction **ISBN-10:** 0131190199
- by Michael J. Singer and Donald N. Munns

The current edition is the sixth edition which is available at the bookstore in paperback form (to keep costs down a bit) or from Internet booksellers, but older editions of the book will work.

Lab Materials: I am revising the labs and will pass them out to you each week in advance of the lab. You will be working in groups in the lab.

This is a basic course in Soil Science to introduce to you fundamental concepts of soil physical, chemical and biological properties, the ecological processes and systems they support, and background behind common soil management practices. Soils are an important component of terrestrial ecosystems. Much emphasis is placed on soil-plant interactions and on the role the soil plays in supplying water to plants and in nutrient cycling in a variety of agro- and other ecosystems. Scales range across a gradient from a flower pot to lawns and gardens, commercial farms and ranches, extensive forest and rangelands and large watersheds. There are few undertakings in agriculture, natural resource management or civil engineering which do not depend for success to some extent upon an understanding of soil properties.

#### **Earth Science (SE)**

This course fulfills the Earth Science (SE) component of the 2003 University Studies Program. SE courses include basic and applied study of fundamental principles addressing the earth-sun relationship, astronomy, distribution of physical/geological features, map interpretation, weather/climate/oceanography, soils and vegetation. They introduce the scientific approach, its scope and limitations. They provide a term-long laboratory experience (or equivalent substantial experimental work integrated with the lecture).

## Timing/Dates/Testing

We will be covering about a chapter of material per week and I encourage you to keep current with the reading and to attend the lectures on a regular basis to develop a complete set of notes. The course material is organized in blocks and we will have an exam after each block of material. I am happy to provide my lecture notes for you to read over (and copy if you wish) if you miss class for any reason. I encourage you to ask questions in class or lab if you have them. I will announce, in class, the timing of tests a full week in advance (including a weekend). If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, room 109 Knight Hall.

The first laboratory experience will be January 19 and 20 during the **second** week of class. For the most part, you should be able to do the labs, answer a few questions about the data and turn in the lab by the end of the period. A few labs will require carry over from one week to the next. The hands on experience you will acquire during the lab is very important for the learning process and I do take attendance in lab. Everyone can miss one lab without penalty and there will be an opportunity to make up missed lab(s) at the end of the semester. Weather permitting, we will be going on several field trips for labs; I will discuss this ahead of time so that you are dressed well for these excursions.

University offices are closed and classes excused on January 17 for the observance of Martin Luther King's birthday. Spring Break is March 14 to 18. Easter Break is April 22. Final Exam Week is May 2 to 6. Groundhog Day is February 2, but this is not celebrated as much as it used to be.

## Grading

There will be three hour exams during the semester and a non-comprehensive final. These exams constitute 80% of the course grade. The labs together constitute 20%. I have traditionally used 60-70-80-90% break points for the letter grades, with potentially slight adjustment (downward but not upward) to find a good break in the continuum of student grades for the semester. The tests have a multiple choice, true-false, short answer type format. I have taught this course quite a few years now and I am quite aware that there are old copies of exams out there- to make it fair for everyone, I place copies of the exams from the past few years on reserve in the Library so you can see ahead of time how I ask questions and what I have concentrated on in the past.

## LAB SAFETY

I wish to emphasize the need to observe safe laboratory procedure at all times. We will discuss lab safety ahead of each experiment. The labs are designed with safety in mind, but we will at times use potentially harmful chemicals and there is always an issue if glassware is broken, etc. University safety regulations require that everyone in labs wear safety glasses and also prohibit eating and drinking in the lab.