

University of Montana

## ScholarWorks at University of Montana

---

Syllabi

Course Syllabi

---

Fall 9-1-2001

### FOR 210.01: Introductory Soils

Thomas H. DeLuca

*University of Montana, Missoula*

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi>

**Let us know how access to this document benefits you.**

---

#### Recommended Citation

DeLuca, Thomas H., "FOR 210.01: Introductory Soils" (2001). *Syllabi*. 6313.

<https://scholarworks.umt.edu/syllabi/6313>

This Syllabus is brought to you for free and open access by the Course Syllabi at ScholarWorks at University of Montana. It has been accepted for inclusion in Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact [scholarworks@mso.umt.edu](mailto:scholarworks@mso.umt.edu).

**Forestry 210, Introductory Soils**  
**Fall 2001 Syllabus**  
**Dr. Tom DeLuca**

<b>Tentative Schedule</b>			<b>Required Reading</b>
<u>Date</u>	<u>Class</u>	<u>Topic</u>	<u>Chapter (Opt. Text)</u>
9/05	1	Orientation/ Soils and History	
9/10	2	Soils as a Complex System	1 (1)
9/12	3	Geology and Parent Material	2.1-2.12
9/17	4	Soil Genesis: Climate and Biology	2.13-2.14 (7)
9/15	5	Soil Genesis: Topography and Time	2.15-2.17 (7)
9/19	6	Soil Morphology	2.18, 3.1-3.2 (8)
9/24	7	Soil Classification I	3.3-3.8 (9)
9/26	8	Soil Classification II	3.9-3.18 (9)
<b>10/01</b>	<b>9</b>	<b>Exam 1 Soil Genesis, Morphology and Classification</b>	
10/03	10	Soil Physical Properties	4.1-4.7 (2)
10/08	11	Soil Porosity and Moisture	4.9-4.10, 5.1-5.3 (2)
10/10	12	Soil Water I	5.4-5.11 (2)
10/13	13	Soil Water II	5.13-5.14, 7.1-7.4 (2)
10/15	14	Soils and Hydrology	6.1-6.7
10/17	15	Soil Colloids	8.1-8.3 (4)
10/22	16	Clay Mineralogy	8.4-8.10 (4)
10/24	17	Cation Exchange	8.11-8.15 (4)
10/29	18	Soil Acidity and Alkalinity	9.1-9.11 (4)
<b>10/31</b>	<b>19</b>	<b>Exam 2 Soil Physical and Chemical Properties</b>	
11/05	20	Soil Biology	11.1-11.11 (6)
11/07	21	Soil Microbial Ecology	11.12-11.15 12.5
11/12		<b>Veterans Day Holiday</b>	
11/14	22	Soil Organic Matter and Humus Formation	12.1-12.4 12.6-12.10
11/19	23	Soil Biochemistry: Nitrogen & Sulfur	13.1-13.13.19-13.21
11/21		<b>Thanksgiving Holiday</b>	
11/26	24	Soil Nutrients: Phosphorus & Potassium	14.1-14.3, 14.13 (5)
11/28	25	Fertilizers and Saline Soils	10.1-10.6 16.11 (12)
12/03	26	Fire Effects on Soils and Nutrients	7.9, 16.4
12/05	27	Soil Erosion	17.1-.5 17.9-12 (11)
12/10	28	Soil Quality	20.1-20.7
12/12	29	Waste/Resource Management	16.5-16.10 18.11
<b>12/17 (8:00)</b>	<b>28</b>	<b>Final Exam, Cumulative</b>	

**Text:** Brady, N.C. and R.R. Weil. 1999. The nature and properties of soils. 12th ed., MacMillian, NY. 881 pp.

**Opt. Text:** Kohnke, H. and D.P. Franzemeier. 1995. Soil Science Simplified. 4th ed. Waveland Press, Prospect Heights, IL. 162 pp.

**Introductory Soils  
Fall 2001  
Laboratory Schedule**

<u>Week Starting</u>	<u>Lab Assignment</u>	<u>Location</u>	<u>Lab Book</u>
September 10	Rocks, Minerals, and Soil	SC 403	Lab 1 <b>r</b>
September 17	Profile Description (Morphology)	Field	Lab 2 <b>r</b>
September 24	Dry Grassland and Riparian Soils	Field	Lab 3 <b>r</b>
October 1	Moist Grassland and Tertiary Sediments	Field	Lab 4 <b>q</b>
October 8	Dry Forest and Fire Effects	Field	Lab 5 <b>r</b>
October 13 (8AM)	Lubrecht Field Study (Set 1)	Field	Lab 6 <b>R</b>
October 15	Soil Classification and Mapping	SC 403	Lab 7 <b>q</b>
October 20 (8AM)	Lubrecht Field Study (Set 2)	Field	Lab 6 <b>R</b>
October 22	Soil Water and Physical Properties	SC 403	Lab 8 <b>r</b>
October 29	Soil Chemistry	SC 403	Lab 9 <b>q</b>
November 4	NO LABS		
November 12	NO LABS		
November 19	NO LABS		
November 26	Soil Biology	SC 403	Lab 10 <b>q</b>
December 3	Waste/Resource Management	Field	Lab 11 <b>q</b>
December 10	Review Session	SC 403	

**Lab Book:** DeLuca, T.H and M.P. O'Herron. 1999. Introductory Soils Lab Manual. 91pp.

**\* The letters q = quiz, r = written lab report, R = BIG written lab report**

Field labs meet at the loading dock behind Science Complex. **Written lab reports should be typed unless otherwise noted** and are due at the beginning of the next weeks lab session unless otherwise noted. Quizzes will be given at the beginning of the five labs noted above and will be based on the subject matter of both the previous and current laboratory. Note, **Lab 6 is an all day field trip** to be held on October 13<sup>th</sup> or 19<sup>th</sup> leaving Science Complex at 8:00 am and returning at about 4:00 pm.

**Introductory Soils**  
**Fall 2001**  
**Important Notes**

1. Instructor: Dr. Tom DeLuca, 402 SC, 243-4425, thd@forestry.umt.edu
2. Teaching Assistants:
  - Derek MacKenzie, SC 444, 243-5326, dmack@selway.umt.edu
  - Cynthia Snyder, SC 460, 243-6422, bugchick@msn.com
3. Lecture location -Journalism 304, Time - 8:10 - 9:00 MW  
Lab location - Science Complex 403, Time - 2:10 - 5:00 M, T, W, R, or F
4. Grades will be computed from the following four components:
  - Average of 5 lab reports and 5 lab quizzes (25%)
  - First hour exam (25%)
  - Second hour exam (25%)
  - Final exam (25%)Exams will be graded on a curve
5. Office hours
  - DeLuca: 9:00 -11:00 am MW, 1:00 - 2:00 T
  - TAs: To be announced in lab
6. Labs will meet the first week in SC 403. The following five labs will meet at the loading dock behind Science Complex (south side of SC) where we will board vehicles for transportation to field sites. **WE DEPART PROMPTLY AT 2:10 P.M.** Saturday labs depart from the same location at 8 am.
7. Lab reports are due at the beginning of the next weeks lab. **Your grade will be reduced one letter grade for each day late.**
8. You are advised to take field specimens (plant, soil, rock) on field trips.
9. Check weather forecasts and dress accordingly, **LABS ARE NEVER CANCELED.** The weekend labs in October are often performed under snowy conditions.
10. Lab is heavily concentrated toward the first half of the semester, so plan accordingly!