

AGRONOMY 478: Properties of Soil - Fall 2017

Instructor: Dr. Joel Gruver

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Office: Knoblauch Hall 302

Office hours: M, W 10-11, Th 10-12

Class meeting time and location: M, W 9-9:50 in Knoblauch Hall 305, Lab in 301, Th 8-9:50

Text: No text - Readings will be provided most weeks.

Course description:

This course is intended to review and expand upon the concepts presented in an Intro to Soil Science course. We will investigate the chemical, physical and biological properties of soil, how they impact soil function and how they are impacted by soil management practices. In addition, we will investigate 4 special topics related to student interests.

Course objectives:

At the end of the course students should be able to:

- explain how chemical, physical and biological soil properties affect soil function
- explain how soil chemical, physical and biological properties are affected by soil management practices
- apply soil science principles to solving agricultural and resource management problems
- navigate the wide range of career opportunities related to soil science

Lecture schedule:

Week	Class meetings	Topic
1	8/21, 8/26, 8/27L	What do you know about soil?
2	8/28, 8/30, 8/31L	Soil physical properties
3	---, 9/6, 9/7L	Soil physical properties
4	9/11, 9/13, 9/14L	Soil physical properties
5	9/18, 9/20, 9/21L	Special Topic 1
6	9/25, 9/27, 9/28L	Soil chemical properties
7	10/2, 10/4, 10/5L	Soil chemical properties
8	10/9, 10/11, 10/12L	Soil chemical properties
9	10/16, 10/18, 10/19L	Special Topic 2
10	10/23, 10/25, 10/26L	Soil biological properties
11	10/30, 11/1, 11/2L	Soil biological properties
12	11/6, 11/8, 11/9L	Soil biological properties
13	11/13, 11/15, 11/16L	Special Topic 3
14	-----	Thanksgiving Break!!
15	11/27, 11/29, 11/30L	Special Topic 4
16	12/4, 12/6, 12/7L	Wrap up
17	Wednesday 12/13	Take home FINAL EXAM is due @ 8 am!

Lab overview:

Lab activities will include discussion, quantitative problem solving, demonstrations, hands-on experimentation and quizzes. The main focus during the second half of the semester be comparing the physical, chemical and biological properties of paired soils from your family's farm or some other location of special interest to you. Paired soils will consist of soil from a farm field and soil from an adjacent fencerow or other area with long term sod (> 20 years without cropping). *Paired soils should be mapped as the same soil type.*

How will your grade for the course be calculated ?**Grading scale:**

Quizzes	20%	A	> 93	C+	77-80
Reading questions/problem sets	20 %	A-	90-93	C	73-77
Interview Archive	15 %	B+	87-90	C-	70-73
Lab activities	15 %	B	83-87	D	60-70
Special topic presentation	10 %	B-	80-83	F	< 60
Attendance	10 %				
Take home final exam	10 %				

Education majors must receive a C or better!**EXPECTATIONS OF STUDENTS**

Participation and timeliness: You are expected to attend class regularly, actively participate in class discussions and submit assignments on time. **ATTENDANCE WILL BE MONITORED.**

Academic integrity: NO CHEATING, PLAGIARISM, OR OTHER VIOLATIONS OF THE WIU ACADEMIC INTEGRITY POLICY WILL BE TOLERATED.

Please talk to me if you have any questions about the WIU academic integrity policy.

All suspected violations of the WIU academic integrity policy will be addressed promptly and individually.

Student rights and responsibilities: Detailed information regarding student rights and responsibilities can be found at <http://www.wiu.edu/provost/student/>.

You are responsible for being familiar with your rights and responsibilities.

Special accommodations: If you have special needs, please let me know and/or contact Disability Support Services at 298-2512.