AGRONOMY 278: Fundamentals of Soil Science - Spring 2017

Instructor: Dr. Joel Gruver **Phone:** (309) 298-1215
Office: Knoblauch Hall 302 **E-mail:** J-Gruver@wiu.edu
Office Hours: MW 9-10, 11-noon

Class meeting times and places:
Lecture will take place in Knoblauch 152 – Monday, Wednesday & Friday 8-8:50 AM
Labs will start in Knoblauch Hall 305 and then normally move to the teaching lab (KH 301)
Lab sections 1, 2 and 3 will meet from 8-9:50, 10-11:50, and 1-2:50 respectively

Text: No text – readings from multiple sources will be assigned

Course description:
This course introduces the major principles and applications of soil science. The course will begin with a brief investigation of the historical development of soil science as a distinct discipline. Subsequent topics will include soil formation and taxonomy, soil chemical, physical and biological properties, soil functions and careers in soil science.

Course objectives:
At the end of the course, students should be able to:
- describe the historical development of soil science
- describe the important functions of soil in managed and natural ecosystems
- describe the major properties of soil and how they impact soil functions
- describe why soil properties vary over time and space and how this variation is classified
- apply soil science principles to agricultural and natural resource management problems

Lecture and lab schedule:

Week	dates	Topic
1	---, 1/17lab, 1/18, ---	History of soil science
2	1/23, 1/24lab, 1/25, ---	What does soil do for you?
3	1/30, 1/31lab, 2/1, 2/3	Factors of soil formation
4	2/6, 2/7lab, 2/8, 2/10	Soil macro-morphology
5	---, 2/14lab, 2/15, 2/17	Soil classification systems
6	2/20, 2/21lab, 2/22, 2/24	Soil micro-morphology
7	2/27, 2/281ab,3/1, 3/3	Properties of soil water
8	3/6, 3/7lab, 3/8, 3/10	Soil air and water dynamics
9	SPRING BREAK	
10	3/20, 3/21lab, 3/22, 3/24	Clay minerals
11	3/27, 3/28lab, 3/29, 3/31	Soil acidity, alkalinity and salinity
12	4/3, 4/4lab, 4/5, 4/7	Plant:soil:nutrient relationships
13	4/10, 4/11lab, 4/12, 4/14	Soil is habitat
14	4/17, 4/18lab, 4/19, 4/21	Soil organic matter
15	4/24, 4/25lab, 4/26, 4/28	Careers in Soil Science
17	5/1, 5/2lab, 5/3, 5/4	Review
18	Monday 5/8 8 AM	FINAL EXAM

Lab overview:
Lab activities will include discussion, quantitative problem solving, videos, demonstrations, hands-on experimentation, field trips and quizzes.

How your grade for the course will be calculated:

Quizzes	=	40 %	A	93 - 100	C	73-76
Final Exam	=	20 %	A-	90 – 92	C-	70-72
Lab activities	=	10 %	B+	87-89	D+	67-69
Interview archive	=	10 %	B	83-86	D	63-66
Interview Project	=	10 %	B-	80-82	D-	60-62
Attendance	=	10 %				

Attendance and deadlines:
If you miss 4 or fewer lectures , you will receive a 100% for your attendance grade. Each additional lecture/lab missed (beyond 4) will result in a reduction of your attendance grade by 10%. Atendance will be monitored.

Assignments will be accepted for 1 week after designated due-dates with a late penalty. All make-up quizzes and exams will be customized specifically for individual students.

Academic honesty:
The WIU academic integrity policy will be strictly followed in this class.
http://www.wiu.edu/policies/acintegrity.shtml

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

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

It is your responsibility to be familiar with the posted information.

Special Accommodations:
In accordance with University policy and the Americans with Disabilities Act (ADA), special accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor's attention, as he/she is not legally permitted to inquire about the needs of specific students. Students who may require special assistance in emergency evacuations (i.e. fire, tornado, etc.) should contact the instructor as to the most appropriate procedures to follow in such an emergency. **Contact Disability Support Services at 298-2512 for additional services.**