

## AGRONOMY 278: Fundamentals of Soil Science - Spring 2018

**Instructor:** Dr. Joel Gruver

**Phone:** (309) 298-1215

**Office:** Knoblauch Hall 302

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**Office Hours:** MW 9-10, 11-noon

**Class meeting times and places:**

Lectures 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 micro- and macromorphology, soil air and water, clay, organic matter, soil ecology, soil management & conservation 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 important functions of soil in managed and natural ecosystems
- describe major properties of soil and how they impact soil functions
- describe how soils form, change and are classified
- describe important soil management & conservation strategies
- describe career opportunities related to soil science

**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	=	30 %	A	93 - 100	C	73-76
Final exam	=	20 %	A-	90 – 92	C-	70-72
HW&lab activities	=	20 %	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 %	C+	77-79	F <	60

**Attendance and deadlines:**

Attendance will be monitored. If you miss LESS than 6 class sessions, you will receive a 100% for your attendance grade. Each additional lecture or lab missed (beyond 5) will result in a reduction of your attendance grade by 20%. If you miss 10 or more classes, your attendance grade will be 0%. Assignments submitted after designated due dates will only receive partial

credit unless an extension was granted by the instructor. All make-up quizzes and exams will be customized specifically for individual students. There will be 4-5 quizzes and 1 exam.

**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.**

**Lecture and lab schedule:**

Week #	Lecture	Lab	Lecture	Lecture	Topic
1	---	1/16	1/17	1/19	History of soil science
2	1/22	1/23	1/24	1/26	What does soil do for you?
3	1/29	1/30	1/31	2/2	Factors of soil formation
4	2/5	2/6	2/7	2/9	Soil macromorphology
5	---	2/13	2/14	2/16	Soil classification systems
6	2/19	2/20	2/21	2/23	Soil micromorphology
7	2/26	2/27	2/28	3/2	Properties of soil water
8	3/5	3/6	3/7	3/9	Soil air and water dynamics
9	---	---	---	---	<b>Spring Break</b>
10	3/19	3/20	3/21	3/23	Clay minerals
11	3/26	3/27	3/28	3/30	Soil acidity, alkalinity and salinity
12	4/2	4/3	4/4	4/6	Plant:soil:nutrient relationships
13	4/9	4/10	4/11	4/13	Soil organic matter
14	4/16	4/17	4/18	4/20	Soil ecology
15	4/23	4/24	4/25	4/27	Soil management/conservation
16	4/30	5/1	5/2	5/4	Review for final
17	<b>Monday 5/7 @ 8 am</b>				<b>Final exam</b>

**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.**

**Attention Education Majors:**

The changes within the Illinois State Teaching License requirements, students are required to receive a grade of a "C-" or better in this course in order to meet state requirements. With the university's +/- grading system, receiving a grade below a "C-" will require you to retake this course or find a substitute course to meet School of Agriculture graduation requirements.