

AGRN473: Nutrient Management - Spring 2017

Instructor: Dr. Joel Gruver

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Office Hours: MW 9-10 and 11-12

Class meeting location and time: Knoblauch Hall 306, MWF10-10:50 pm

Text: No text – readings from a wide variety of sources will be assigned

Course Description:

This course will begin with a review of foundational concepts including fertilizer math and then transition to exploring 5 key topics:

- 1) Fertilizer industry (current and long term issues)
- 2) 4R strategies & technologies (right source, rate, placement & timing)
- 3) Nutrient Management Policy (IL, IA, Lake Erie, Chesapeake Bay & Europe)
- 4) Nutrient management planning for manure and biosolids
- 5) Nutrient management in conservation cropping systems

Course Objectives:

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

- Apply scientific principles and quantitative skills to nutrient management
- Explain the roles played by diverse stakeholders in nutrient management including entry level opportunities
- Explain current nutrient management policies and likely short and long-term impacts on agriculture and the environment

Lecture schedule:

Week	Dates	Topic
1	----, 1/18, ----	Review of quantitative problem solving
2	1/23, ----, 1/27	Review of quantitative problem solving
3	1/30, 2/1, 2/3	IL Nutrient Loss Reduction Strategy
4	2/6, 2/8, 2/10	Nutrient policy in other places
5	----, 2/15, 2/17	Nutrient sources
6	2/20, 2/22, 2/24	Nutrient sources
7	2/27, 3/1, 3/3	Application methods
8	3/6, 3/8, 3/10	Application methods
9	SPRING BREAK	
10	3/20, 3/22, 3/24	Diagnostic methods
11	3/27, 3/29, 3/31	Diagnostic methods
12	4/3, 4/5, 4/7	Nutrient management planning
13	4/10, 4/12, 4/14	Nutrient management planning
14	4/17, 4/19, 4/21	Conservation Cropping Systems
15	4/24, 4/26, 4/28	Conservation Cropping Systems
16	5/1, 5/3, 5/5	On-farm-research
17	Monday 5/8 @ 10 am	FINAL EXAM

<u>Grade Determination:</u>		A	93 - 100	C	73-76
Homework	20 %	A-	90 – 92	C-	70-72
Interview projects	30 %	B+	87-89	D+	67-69
Quizzes	20%	B	83-86	D	63-66
Take home final exam	20 %	B-	80-82	D-	60-62
Attendance	10 %	C+	77-79	F <	60

A set of reading questions and/or quantitative problems will be assigned most Mondays. Answers will generally be due before the start of class on Friday and should be submitted electronically using Western On-line unless otherwise specified. *All* steps used to solve quantitative problems must be clearly shown. Over the course of the semester, students will interview 3 different types of nutrient management stakeholders (1 developer of nutrient management plans and 2 other student selected stakeholders) and submit interview transcripts and short commentaries for *each* interview. Students will share 1 oral presentation based on an interview with the class.

Attendance and deadlines:

Your attendance grade will be 100% if you miss 4 or fewer classes. You will lose 10% of your attendance grade for each additional class missed. You will have 1 week to submit late assignments for partial credit unless granted special permission.

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 my attention, as I am 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 let me know the most appropriate procedures to follow in such an emergency. Contact Disability Support Services at 298-2512 for additional services.