

AGRN473: Nutrient Management - Spring 2018

Instructor: Dr. Joel Gruver

Phone: (309) 298 - 1215

Office: Knoblauch Hall 302

E-mail: J-Gruver@wiu.edu

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 fertilizer math followed by an overview of the IL Nutrient Loss Reduction Strategy. The rest of the course will explore the types of professionals engaged in improving nutrient management and the core knowledge needed to improve nutrient management: 4R strategies (right source, rate, placement & timing) for fertilizers, manures and biosolids, conservation cropping systems, edge-of-field practices for water quality and on-farm research to improve nutrient management.

Course Objectives:

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

- Perform standard nutrient management calculations
- Explain the origin and major goals of the INLRS
- Understand roles of diverse stakeholders in improving nutrient management
- Apply 4R concepts to fertilizer and organic nutrient sources
- Recognize nutrient management opportunities and challenges in conservation cropping systems
- Describe the types and functions of edge-of-field practices
- Design on-farm research to improve nutrient management

Grade Determination:

Homework	30 %	A	93 - 100	C	73-76
Interview projects	20%	A-	90 – 92	C-	70-72
Take-home mid-term	15%	B+	87-89	D+	67-69
Take-home final	15 %	B	83-86	D	63-66
Top Hat answers	10%	B-	80-82	D-	60-62
Attendance	10 %	C+	77-79	F <	60

Reading questions and/or quantitative problems will be assigned most weeks. Answers should be submitted electronically using Western On-line unless otherwise specified.

All steps used to solve quantitative problems must be clearly shown. Students will interview 2 different types of nutrient management stakeholders (1 nutrient management planner and 1 other type of stakeholder) and submit interview transcripts and commentaries for *each* interview. Students will also share 1 oral presentation based on an interview with the class.

Lecture schedule:

Week #	Mon	Wed	Fri	Topic
1	---	1/17	1/19	Review of fertilizer math
2	1/22	1/24	1/26	IL Nutrient Loss Reduction Strategy
3	1/29	1/31	2/2	Who are the stakeholders?
4	2/5	2/7	2/9	Who are the stakeholders?
5	---	2/14	2/16	4R N management
6	2/19	2/21	2/23	4R N management
7	2/26	2/28	3/2	4R P and K management
8	3/5	3/7	3/9	4R management of other nutrients
9	---	---	---	Spring Break
10	3/19	3/21	3/23	4R management of manure
11	3/26	3/28	3/30	4R management of biosolids
12	4/2	4/4	4/6	Conservation Cropping Systems
13	4/9	4/11	4/13	Conservation Cropping Systems
14	4/16	4/18	4/20	Edge of field-practices
15	4/23	4/25	4/27	On-farm research
16	4/30	5/2	5/4	Stakeholder profile presentations
17	Monday 5/7 @ 10 am			FINAL EXAM

Attendance and deadlines:

Students who miss LESS than 6 class sessions, will receive an attendance grade of 100%. Each additional absence 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.

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.

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.