

## **CONS 305: Introduction to Sustainable Agriculture - Fall 2017**

**Instructor:** Dr. Joel Gruver

**Office:** Knoblauch Hall 302

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

**Phone:** (309) 298 1215

**E-mail:** j-gruver@wiu.edu

### **Class meeting time and location:**

1-1:50 M,W&F in Knoblauch Hall 307

### **Course description:**

This course operates from the premise that ag literacy is the foundation of agricultural sustainability. We will start with an exploration of what it means to be ag literate from both the perspective of the ag community and the non-ag public. Next we will explore the drivers of change in agriculture, 3 major types of technological change (mechanical, chemical, genetic), and unintended consequences (e.g., weed/pest resistance, declining rural communities and negative effects on the environment).

The second half of the course will focus on specific opportunities to improve the sustainability of agriculture such as conservation tillage, cover crops, organic farming, management intensive grazing and local food systems.

We will conclude by analyzing several major challenges (feeding the world, socio-economic crises and inter-generational transitions) facing agriculture.

**Attendance:** ATTENDANCE IS A VERY IMPORTANT PART OF THIS CLASS !!!

**Interview archive:** The IA (<https://www.wiu.edu/citr/InterviewArchive>) is also a very important part of this class. IA submissions should be ORIGINAL and submitted on time!

### **Personal initiative activities:**

I will provide a regularly updated list of personal initiative options but you are also welcome to propose personal initiative activities. Field trips can be written up as personal initiative activities. I am expecting you to use the Interview Archive to submit documentation for 3 personal initiative activities during the first half of the semester (before the start of class on Monday 10/16) and 3 more during the second half of the semester (before the start of the last class on Friday 12/8).

### **Readings:**

Readings from a wide variety of sources will be assigned most weeks.

All readings will be accompanied by questions. Answers should be submitted using Western Online or the Interview Archive (as designated).

**Grading:**

Interview projects 30%  
Personal initiative activities 20%  
Attendance 20%  
Reading responses 10%  
Take home final exam 10%  
Pop quizzes 10%

**Grading scale:**

<b>A</b>	> 93	<b>C+</b>	77-80
<b>A-</b>	90-93	<b>C</b>	73-77
<b>B+</b>	87-90	<b>C-</b>	70-73
<b>B</b>	83-87	<b>D</b>	60-70
<b>B-</b>	80-83	<b>F</b>	< 60

Education majors must receive a C or better!

**Class schedule:****Ag Literacy – Understanding agriculture**

8/21 What is ag literacy?  
8/23 Who is telling the story of agriculture?  
8/25 Who else is telling the story of agriculture?

**Public perceptions of agriculture**

8/28 At Any Price  
8/30 At Any Price  
9/1 Discussion about AAP & ethics in agriculture

**The drivers of change in agriculture**

9/4 Labor Day holiday  
9/6 The pursuit of productivity and efficiency  
9/8 The pursuit of sustainability

**The Mechanical Revolution**

9/11 Historical development of ag mechanization, part I  
9/13 Historical development of ag mechanization, part II  
9/15 The present and future of ag mechanization

**The Chemical Revolution**

9/18 Better living through chemistry  
9/20 The story of glyphosate, part I  
9/22 The story of glyphosate, part II

**The Genetic Revolution**

9/25 The story of hybrid corn  
9/27 GMOs – basic science  
9/29 GMOs – the big picture

**The Resistance Revolution**

10/2 Nature strikes back  
10/4 Herbicide resistance  
10/6 Antibiotic resistance

**Modern meat**

- 10/9 Vertical integration in animal agriculture
- 10/11 Discussion about Tribune series “The high price of pork”
- 10/13 More discussion

**Conservation agriculture**

- 10/16 Culture of conservation
- 10/18 Profiles of success in conservation
- 10/20 FALL BREAK

**Management Intensive Grazing**

- 10/23 What is MIG?
- 10/25 Grazing in New Zealand
- 10/27 Profiles of success in grazing

**Organic agriculture**

- 10/30 Historical development of organic agriculture
- 11/1 Modern organic agriculture
- 11/3 Profiles of success in organic agriculture

**Local food systems**

- 11/6 The local food movement
- 11/8 Profiles of success in local food
- 11/10 Profiles of success in local food

**Feeding the world**

- 11/13 Understanding malnutrition
- 11/15 Ending the war on fat
- 11/17 Solutions to world hunger

**Thanksgiving Break**

- 11/20–11/24 - no class all week

**Farm Crises**

- 11/27 The “Farm problem”
- 11/29 Solving the farm problem
- 12/1 Farm Crisis panel discussion

**Intergenerational transitions in agriculture**

- 12/4 Multi-generational farming
- 12/6 Opportunities for new farmers
- 12/8 Intergenerational transitions panel discussion

**Final exam**

- 12/13 – Take home final exam due Wednesday @ 1pm

## **EXPECTATIONS OF STUDENTS**

### **Participation and timeliness:**

I am expecting YOU to attend EVERY class, 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 feel free to discuss them with me and/or contact Disability Support Services at 298-2512.

### **Special note for education majors:**

Education majors who receive a "C- " or below must retake this course or find a substitute course to meet School of Agriculture graduation requirements