People, Land, and Food
Geography / Environmental Studies 309

LECTURES: Mondays & Wednesdays 2:25-3:15pm
LOCATION: L196 Education Building
CLASS WEBSITE: https://learnuw.wisc.edu/

INSTRUCTOR: Prof. Holly Gibbs
CONTACT: hkgibbs@wisc.edu
WEBSITE: www.gibbs-lab.com
OFFICE HOURS: Mondays 12-2pm, or by appointment (Rm 373 Science Hall)

TA: Mikaela Weisse
CONTACT: mweisse@wisc.edu
OFFICE HOURS: Thursdays 1:15-3:15 (Rm 175c Science Hall)

COURSE OVERVIEW:

In this course we will examine how and why humans have transformed the global landscape and the consequences for biodiversity, climate, biogeochemical cycling and other ecosystem services needed to keep our planet habitable. We will explore these land-use tradeoffs between human necessities such as food production and unintended consequences such as habitat loss, floods, greenhouse gas emissions, and community displacement. We will study different agricultural systems in different regions and tackle topics such as food security, land scarcity, bioenergy and the impacts of agriculture on the environment. The drivers and pattern of tropical deforestation will also be a focus. We will examine a range of solutions from global policy to everyday decisions to feed and fuel the world without destroying the planet.

LEARNING OBJECTIVES

The goal of this course is to provide an opportunity to learn about and understand the complex social and environmental processes governing global land use and agricultural production. Major objectives are to acquire knowledge about a range of topics related to the people, land, and food and general academic skill development, including:
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- Gain knowledge on how and why humans have transformed land around the world and the associated environmental and social impacts
- Understand the global challenge of feeding and fueling the world while also protecting our environment and communities
- Investigate a range of solutions to increase food production and how they vary through space and time
- Identify opportunities and limitations of different farming and animal production systems
- Understand the impacts of globalization on land-use change
- Improve professional skills such as research, writing, presentation, and group process

GRADING AND ASSIGNMENTS

Your course grade will be based on (out of 1000 points):

10% Discussion Participation (100 points)
10% Pop Quizzes (100 points)
20% Mid-term exam (200 points)
10% Commodity analysis project (100 points)
10% Food waste project (100 points)
10% Food sustainability project (100 points)
20% End-of-term Exam (200 points)

*10% off per day for late assignments. No make-up exams or quizzes.

MAJOR DEADLINES - TBD

COURSE DETAILS

Attendance and Participation (100 points) – Your participation grade will be determined by your engagement in the class discussion sections and contribution to each other’s learning experience. We will have group exercises as well as whole-class discussions where you will have the opportunity to think, reflect and practice analytical skills. To be active learner you need to read and synthesize assignments before class and come prepared with discussion points and questions to enrich the classroom environment. Consistent attendance is expected.
Lecture slides – I will post slides on Learn@UW shortly following each lecture.

Required readings: I will post required readings on Learn@UW at least one week prior to class. Please read and synthesize all weekly readings before each Monday’s lectures. I will occasionally announce that some readings can be skinned or to focus on a specific section. Readings will consist of textbook chapters, scientific journal articles, reports, as well as popular books. Readings will be covered on exams and pop quizzes.

Pop Quizzes (100 points) – Quizzes will be cumulative and could cover material from lectures or readings in the previous weeks but will emphasize recent topics. The format will vary from short answer to multiple choices. NOTE that quizzes may be given at the beginning of class, so you will miss the opportunity to take the quiz if you are tardy. You can drop your lowest grade, but no make-up quizzes will be given under any circumstances.

Commodity Analysis Project (100 points) – You will each quantitatively analyze one agricultural crop’s production system and trade patterns using FAOSTAT, USDA data, online reports, and academic literature. In a 4-5 page double-spaced paper, you will discuss your findings in the context of environmental and agricultural requirements for farming this crop, social concerns, and changing yield and trade patterns for the top three producing countries. More information will be distributed in class.

Food waste and Sustainable solutions projects (100 points each) – Details coming soon!

Exams (400 points total) – You will have a mid-term exam covering the material from the first half of class, and then an end-of-semester exam covering the second half of the class. The exams will have short-answer and multiple-choice questions. Exams will include material covered in lectures, discussion sections, readings, and group project final presentations. Exams will emphasize material covered in lectures, but readings will be needed to help deepen and clarify topics discussed in lectures or discussions (*not everything discussed in class will be shown on the slides). There will be no formal review sessions but time will be allotted in lectures and discussion sections throughout the semester to review challenging information and answer specific questions.
COURSE SCHEDULE AND POTENTIAL READINGS*

Week 1, Jan 21 - Introduction to the course


Week 2, Jan 26 & 28 – Ecosystem Tradeoffs and History of Land Use Change


Week 3, Feb 2 & 4 - Agricultural Expansion in the Tropics

1. Union of Concerned Scientists. 2010, Chapter 4 Soybeans. From The Root of the Problem.

2. Union of Concerned Scientists. 2010, Chapter 5 Cattle and Pasture. From The Root of the Problem.


4. Union of Concerned Scientists. 2010, Chapter 6 Palm Oil. From The Root of the Problem.

Week 4, Feb 9 & 11 - Bioenergy and Indirect Land Use Change

* The schedule and readings may change over the semester as the course evolves; refer to learn@uw for the latest information


**Week 5, Feb 16 & 18 – Global Commodity Trade & Food for Water**


**Week 6, Feb 23 & 25 – Industrial Farming Systems**

o Burney et al. 2010, Greenhouse gas mitigation by agricultural intensification. *PNAS.*

o Tilman et al. 2011, Global food demand and sustainable intensification of agriculture. *PNAS.*


**Week 7, Marc 2 & 4 – Large-Scale Organic Agriculture**

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**Week 8, Marc 9 & 11 – Synthesis and Mid-term Exam**

No readings

**Week 9, Mar 16 & 18 – Small-Scale Traditional Agriculture**


**Week 10, Mar 23 & 25 – Solutions - Increase Agricultural Yields and Area**


**Week 11, Mar 30 & Apr 1 = HAPPY SPRING BREAK!**

**Week 12, Apr 6 & 8 - Solutions - Integrated Agriculture & Local Food**
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**Week 13, Apr 13-15 – Solution - Food Waste & Diet Trends**

- Parfitt et al. 2010, Food waste within food supply chains: quantification and potential for change to 2050. *Philosophical Transactions of the Royal Society B* 3065-3081 (optional)

**Week 13, Apr 20 – 22 - Where do we go from here? Wrap up.**

TBD

**Week 14, Apr 27 & 29 – Bringing It All Home –Presentations on Sustainable Solutions**

No readings

**Week 15, May 4 & 6 – Bringing It All Home –Presentations of Sustainable Solutions**

No readings

EXAM ON May 6
OTHER DETAILS

Contacting Professor or TA
Your professor and TA are both glad to meet with you outside class. Please attend office hours or approach us after class. We will do our best, but emails may take several days for a reply. Common questions will be answered on our message board at our class’s Learn@UW site, so frequently check for updates.

Electronic Devices
Electronic devices, such as laptops, phones, or tablets, are prohibited during lecture and discussion section. If you have specific needs that require you to use an electronic device, you must discuss it with the TA prior to class. Unauthorized use of an electronic device in class distracts you and other students, and thus will negatively impact your participation grade.

Religious Holidays
If you plan on missing class due to a religious holiday, please notify your TA by September 15.

Accommodations
If you have special concerns, needs, or a disability please see TA no later than September 15. We are happy to make accommodations and consult with you about the course, but you must come speak with the TA first. If you have a documented disability, and you need a reasonable accommodation in this course, please consult with TA immediately at the start of the course so we can design a solution that will help you be successful in the class.

Plagiarism and Academic misconduct
Section 14.03 of the University of Wisconsin System Administrative Code Defines academic misconduct as “an act in which a student: (a) seeks to claim credit for the work or efforts of another without authorization or citation; (b) uses unauthorized materials or fabricated data in any academic exercise; (c) forges or falsifies academic documents or records; (d) intentionally impedes or damages the academic work of others; (e) engages in conduct aimed at making false representation of a student’s academic performance; (f) assists other students in any of these acts." If you have any questions about what constitutes academic misconduct generally, you must consult www.wisc.edu/students/amsun.htm before proceeding in this course.

Any form of cheating or plagiarism is absolutely unacceptable and intolerable in this class and in the entire UW System. If you are suspected of doing so, your TA and Dr. Gibbs will speak to the Dean and file a written report in your permanent academic file. You are expected to familiarize yourself with your rights and duties as a UW
student, and about the consequences of cheating at:
www.wisc.edu/students/saja/misconduct/UWS14.html. Lack of knowledge regarding these guidelines will NOT be accepted as an excuse.

Your TA is licensed to use anti-plagiarism software. This software is extremely accurate, comparing student work to a database of previously submitted work, online sources (including Wikipedia), and published academic materials. Be aware that your TA or professor may choose to run your intellectual journal entries and/or test answers through the software.