

Science, Society and Sustainable Food Systems Fall 2003

SOILS 150, 3 Credits

Instructor: Cathy Perillo, Crop and Soil Sciences, Johnson Hall 229, WSU-Pullman

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Office Hours: After class Friday or by appointment. *Feel free to drop in at any time, but it is advisable to set up an appointment to ensure my availability*☺.

Course Logistics:

Full-class meeting time/location: Wed and Fri 12:10-1pm, Johnson 204 (WSU-Pullman)

Discussion / Lab (register for one): Wed 1:10-3pm or Wed 3:10-5pm in Johnson 204 (and other places). The discussion/lab sessions will meet every week of the term (except Week 1), and are an integral part of the course.

Prerequisites: none (except for an open mind!) **Class web site:** <http://classes.css.wsu.edu/soils150/>

Required Text/Materials

Readings will be assigned from selected book chapters, popular press articles, and scientific research papers available on reserve at the Fischer Agricultural Sciences Library and/or on the Internet. There will also be a number of handouts. A three-ring binder is recommended to organize your handouts.

Overview

In this class we will explore the systems involved in bringing food to us (and other people!), with a special emphasis on the sustainability of these systems. The idea of 'sustainable food systems' has gained increasing momentum as world population continues to grow, more and more concerns are raised regarding the state of our environment, and farmers and city folks alike bemoan the loss of family farms. The increasing roles (sometimes controversial) of scientific and technologic advances add a new layer of complexity in understanding the issues and acting as informed citizens. We will explore the science behind a number of agricultural issues, as well as consider our own roles and connections to sustainable food systems.

The topic is a broad one, and we will use a number of tools to conduct our exploration, including readings, hands-on activities, discussions, guest presentations, reflective and investigative assignments, as well as some traditional 'lectures.' Besides what the instructors and guests present in the class, each of us brings our own areas of interest, experience and expertise, and we will likely all learn from each other (not just from the instructors!). Most (probably all!) of our personal areas of study (whether that be economics, English, or agriculture) are or can be connected to sustainable food systems. An overarching goal of the class is to shed light on those connections - to society, and to our own personal and professional lives.

Among the questions that students should be able to critically address by the end of the course are:

- What are the components of and relationships in the food system(s) of which I am a part?
- What are some of the important issues/threats with respect to having safe and healthy food *in perpetuity*?
- How can we evaluate *sustainability*?
- What are my own food system choices based on?

In addition to addressing these content-related questions, another important goal of the class is to enhance a number of skills including:

- Finding and interpreting information (with an emphasis on working with scientific information)
- Communicating effectively in orally and in writing
- Group discussion skills

As we move more and more into an ‘Information Age’ these skills related to finding, understanding and then *communicating about* information, become more and more crucial in our personal and professional lives. Success no longer depends as much on *what you know* – instead, having an informed understanding and making choices as to what you *do* with that information are increasingly important. We need to be able to turn information into knowledge that one can act on.

Objectives

In summary of the above overview in a few lines: The goals of *Science, Society and Sustainable Food Systems* are to provide students with an introduction to food systems, agricultural production practices and issues, concepts of sustainability, and the science behind many of the questions raised. Specific objectives are:

- 1) To develop a basic understanding of food systems and sustainability, including their components and interactions;
- 2) To develop an understanding of science and its role in sustainable food systems; and
- 3) To enhance skills in critical thinking and in using/evaluating different resource materials.

Students will have opportunities to explore various aspects of food systems and sustainability concepts, to use the scientific method in exploration of agricultural production approaches, to evaluate the perceptions and realities behind food systems issues currently in the popular press, and to explore and articulate their own experiences and perceptions with respect to sustainable food system.

Expectations and Evaluation of Performance

We will spend a fair amount of time working and discussion in groups (large and small). Mutual respect and effort are essential components and will be expected at all times. ☺ Also, attendance will be important for learning in this class. Assignments and readings are expected to be completed before the start of class on the due date. A separate handout will be provided that contains the assignments and readings, and associated due dates. Unless otherwise noted, all assignments should be typed.

1. Grading of Academic Students (*Students taking the class for credit*)

Students will be evaluated based on several homework assignments (short written essays) and short reports, two poster presentations of their research findings, a midterm and final exam, and class participation.

Discussion/Lab Section Activities (overall)	30%
Poster presentation (5%)	
Short exercises and reports (25% combined)	
‘Lecture’ Assignments	45%
Oral report on interview with agricultural professional (5%)	
Case study written report 1 (5%)	
Case study written report 2 (5%)	
Reflective essays, investigative, exercises and other assignments (30%)	
Quizzes (5%, 10% and 10%, see text below)	<u>25%</u>
TOTAL:	100%

Quizzes will consist of questions derived from both class lecture and discussion/lab sessions, and include assigned readings. Questions may include definitions of terms, short answers, interpretations of data, and brief essays. The quiz with the lowest grade will be worth 5% of your total grade and the other two (higher grades) will be worth 10%. The third quiz will be an oral given during final exam week.

Your in-class and ‘homework’ *assignments* are key parts of this course as well. They are designed to have you interact with the material in ways that are not possible by lectures alone.

Final Grades for Academic Students*

A	95-100	B+	87-89	C+	77-79	D+	66-69
A-	90-95	B	83-86	C	73-76	D	60-65
		B-	80-82	C-	70-72	F	<60

** Students registered through the University of Idaho will receive full letter grades only*

2. Granting of CEUs for Non-Academic Students *(taking the class for Continuing Education)*

To receive full benefit from the class, it is recommended that all sessions be attended. However, since extenuating circumstances do sometimes occur, granting of CEU credit is dependent on attending and actively participating in **at least 80% of all class sessions** (including discussion/lab).

Disability Accommodations

Reasonable accommodations are available for students who have a documented disability. Please notify the instructor during the first week of class of any accommodations needed for the course. Late notification may mean that requested accommodations might not be available. All accommodations must be approved through the Disability Resource Center (DRC) located in the Administration Annex Room 205, 335-1566. We also recognize that each student has strengths and weaknesses. If you have difficulty learning the material or doing the assignments/exams but don't have a documented disability, please see me for accommodations

Course Topics (General Outline*)

- I. Introduction to concepts & the ‘big picture’**
 - a. Introduction to agriculture, sustainability, and food systems
 - b. What is science and where does it come into play in agriculture and food systems?
 - c. Overview of world and PNW agricultural systems
 - d. Looking at systems holistically

- II. Production of our food**
 - a. ‘Conventional agriculture’ and overview of ‘alternative agricultural systems’
 - b. What, when, and why of fertilizers
 - c. What, when and why of pesticides
 - d. Plant breeding, genes and GMOs
 - e. Where does our food come from?

- III. Environmental issues related to food systems**
 - a. Soil conservation and health
 - b. Water quality / Quantity

- IV. Economic viability and sustainability**
 - a. Practical economics related to agriculture
 - b. Role of the consumer dollar

- V. Social aspects of and influences on sustainable food systems**
 - a. Food safety & desirability
 - b. Food quality and availability
 - c. Importance of and to rural communities

- VI. Other topics that are woven into the above (both in ‘lecture’ and discussion sessions)**
 - a. Technology, transportation and farm-to-market issues
 - b. How and where does science fit into the above?
 - c. How do professionals learn and evaluate food systems and sustainability
 - d. Personal reflection! How do we fit into the above?

* A separate handout will be provided that contains a detailed listing of the sessions topics (including discussion/lab sessions), assignments, readings, and associated due dates