

AGRI 0198 - FOOD, SOCIETY AND THE ENVIRONMENT

Catalog Description

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Description: Multiple perspectives and global connections between the environment, society and food production. Emphasis on agriculture's central position between nature and society and its key role in humanity's search for a productive and sustainable environment. (CSU, UC)

Course Student Learning Outcomes

- CSLO #1: Inventory the wide variety of human needs and wants derived from agricultural sources (food, beverages, medical and commercial products).
- CSLO #2: Evaluate the dependence of humans on commercial agriculture production and therefore natural resource use.
- CSLO #3: Review and quantify the significance of human-caused agricultural sources of pollution, in their various forms, and relate this to the longevity of natural ecosystems.
- CSLO #4: Recognize and identify the major world views, philosophies, and interpretations held historically and currently as related to humans, nature and the environment with regard to food production.

Effective Term

Spring 2019

Course Type

Credit - Degree-applicable

Contact Hours

54

Outside of Class Hours

108

Total Student Learning Hours

162

Course Objectives

1. Appraise the significance of the human population, its size, rates of growth and consumption on resources available for food production.
2. Calculate human population size globally and regionally using various growth rates and scenarios and relate this to demand on resources for food production.
3. Compare and contrast historical and modern food production systems & practices taking into considerations available technology and economics of the given time period.
4. Inventory the wide variety of human needs and wants derived from agricultural sources (food, beverages, medical and commercial products).
5. Evaluate the dependence of humans (particularly those living in industrialized nations) on commercial agriculture production and therefore natural resource use.

6. Apply scientific and ecological methodology to issues, public perceptions and questions that arise within the scope of this course.
7. Judge and debate factual information regarding agricultural practices as they relate to the long-term stability of biodiversity, ecosystems and natural resources.
8. Assess the significance of biotechnology in providing a full or partial solution in addressing food supply and environmental challenges, and appraise the risks in utilizing biotechnology for these purposes.
9. Analyze and identify various food safety factors and evaluate the practices and programs in place to ensure a safe food supply to humans in the United States as well as other countries (industrialized and developing).
10. Analyze and identify various environmental issues and factors related to food production and evaluate the programs and practices in place addressing agriculture and the environment.
11. Analyze and identify the global impacts of agriculture industrialization, corporatization and globalization on food production.
12. Estimate various scenarios that the fate of humanity will face if population growth continues at today's rate, specifically addressing the impact on the world food supply.
13. Propose solutions and methods for providing a sustainable global food supply in the future.
14. Identify and describe the essential components of Earth's natural environment; its physical, biological, energetic, and ecological elements and relate them to agricultural production.
15. Recognize and place humans as an influential and critical component of the natural environment and its long-term functioning.
16. Review and quantify the significance of human-caused agricultural sources of pollution, in their various forms, and relate this to the longevity of natural ecosystems.
17. Compare and contrast historical and modern perspectives of economics as they relate to resource utilization and sustainability.
18. Recognize and identify the major world views, philosophies, and interpretations held historically and currently as related to humans, nature and the environment with regard to food production.

General Education Information

- Approved College Associate Degree GE Applicability
 - AA/AS - Life Sciences
 - AA/AS - Social Sciences
- CSU GE Applicability (Recommended-requires CSU approval)
 - CSUGE - D Social Sciences
 - CSUGE - D7 Interdisciplinary Soc/Behav
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)
 - IGETC - 4 Soc./Behav Sciences
 - IGETC - 4G Intradis Social/Beha

Articulation Information

- CSU Transferable
- UC Transferable

Methods of Evaluation

- Classroom Discussions
 - Example: Instructor provided prompts will be discussed. Example: What are your thoughts on the essay, Worst Mistake in the History of the Human Race, written by Jared Diamond? Is he correct, way off base, or does he have a point? Compare and contrast the lifestyles of modern humans living in non-hunter-gathering

societies with those of hunter gatherers. Are twentieth century (modern) hunter-gatherers worse off than farmers/people who rely on farmers for food? Support your claim with evidence.

Class discussions will be assessed based on participation and accuracy of information provided.

- Essay Examinations
 - Example: Essay examinations will be given on course content. Example: In essay format, describe the four cropping land use patterns in order of increasing intensity of resource use. Discuss at least four specific practices that occur in order for land use intensity to increase. Finally, explain at least two concerns raised about the impacts these practices are having on the sustainability of intensive agriculture. Assignment will be evaluated based upon accuracy and development of ideas. Essay will be graded based on utilizing a rubric developed by the instructor and shared with students.
- Objective Examinations
 - Example: Objective examinations will be given on course content. Example: True or False: Nikolai Vavilov's contribution to botany was his theory that crops originated in places that have the greatest diversity of that crop.
- Reports
 - Example: A series of short written reports will be completed by students based on required reading. Example: What does Pollan mean when he writes that "Such has been the genius of capitalism, to recreate something akin to a state of nature in the modern supermarket or fast-food outlet, throwing us back on a perplexing, nutritionally perilous landscape deeply shadowed again by the omnivore's dilemma"? (303) Reports will be graded using a rubric provided to students. Criteria included are connection of course materials/readings to report content, critical thinking, originality of ideas and grammar/spelling.

Repeatable

No

Methods of Instruction

- Lecture/Discussion
- Distance Learning

Lecture:

1. An instructor developed lecture is prepared using embedded images containing due dates, topics, learning outcomes and informational web sites to present the concepts used to evaluate an agriculture operation for factors of sustainability. Students will then apply the concepts to respond to discussion prompts. Course Objectives: 3,4, 5, 10, 11, 13, 14

Distance Learning

1. The instructor may use instructor-developed lecture content to initiate, maintain and monitor effective instructor/student contact. For example, an instructor may develop an online text, audio and/or video lecture (with captions), which explains the concept of Organic production practices or other USDA marketing programs. After reading/listening/watching the assigned lecture content students may be asked to participate in a discussion board assignment which explains their understanding and addresses the relevance of the lecture content. Course Objectives: 3, 6, 7, 9, 10, 13

Typical Out of Class Assignments Reading Assignments

1. Read the assigned pages from the textbook and supplemental sources and be prepared to discuss the origins and evolution of agricultural practices throughout history. 2. Student will be responsible for reading current media articles regarding agricultural practices and society's perception of those practices and then discuss the issues by applying scientific and ecological methodology to issues. For example, students will read current media articles regarding genetically modified foods and discuss the scientific accuracy or inaccuracy of the facts supporting the perceptions and opinions presented in the article.

Writing, Problem Solving or Performance

1. Complete a series of mini in-class opinion papers reporting on current issues in food production before and after the topic is discussed in class. 2. Students will compose a term paper drawing on material presented in the class, in reading materials as well as additional resources. Grading will be based on content and accuracy. The paper should be submitted in the following format: 1. Topic Title 2. Brief Summary 3. Introduction outlining the issue and approaches to investigate the questions raised. 4. Discussion of all facets of the issue including programs in place by public or private organization to address the issue. 5. Conclusions including proposed solutions and methodologies for addressing the issue and your assessment of the progress being made by public/private organizations in addressing the issue. The following are potential topics: -Population growth and agricultural productivity -The benefits and problems of inorganic fertilizer use in agriculture -Regulation and release of recombinant plants, animals and microorganisms into the environment -The Green Revolution -Biotechnology and sustainable agriculture - Historical famines and disease epidemics and the possibility in the future -"Pharming" -the agricultural production of pharmaceuticals

Other (Term projects, research papers, portfolios, etc.)

Students will interview individuals from the general public regarding current agricultural practices and issues in survey format and report their findings. After compiling the data collected, students will discuss the outcomes and evaluate and debate the accuracy when relating survey results to course information.

Required Materials

- Plants and Society
 - Author: Leventin & McMahon
 - Publisher: McGraw Hill
 - Publication Date: 2016
 - Text Edition: 7th
 - Classic Textbook?: No
 - OER Link:
 - OER:
- The New Oxford Book of Food Plants
 - Author: John Vaughan and Catherine Geissler
 - Publisher: Oxford University Press
 - Publication Date: 2009
 - Text Edition: 2nd
 - Classic Textbook?: No

- OER Link:
- OER:
- Where Our Food Comes From
 - Author: Gary Paul Nabhan
 - Publisher: Island Press
 - Publication Date: 2011
 - Text Edition: 1st
 - Classic Textbook?: No
 - OER Link:
 - OER:
- In Defense of Food: An Eater's Manifesto
 - Author: Michael Pollan
 - Publisher: Penguin Press
 - Publication Date: 2009
 - Text Edition:
 - Classic Textbook?: No
 - OER Link:
 - OER:
- Omnivore's Dilemma
 - Author: Michael Pollan
 - Publisher: Penguin Press
 - Publication Date: 2006
 - Text Edition:
 - Classic Textbook?: No
 - OER Link:
 - OER:

Other materials and-or supplies required of students that contribute to the cost of the course.