

**Eastern Illinois University
New Course Proposal
EIU 4290G, Plants and Civilization, Honors**

1. Catalog description

- a) EIU 4290G
- b) Plants and Civilization, Honors
- c) (4-0-4)
- d) F, S, Su
- e) Plant Civ Honors
- f) A discussion of the role of plants in the origin and development of human civilization including hunters and gatherers, agricultural origins, plants and plant products which changed history, plant domestication and cultivation, the green revolution, and plants in the environment. Biological Sciences majors are excluded.
- g) Completion of 75 semester hours and admission to University Honors College
- h) Fall 2006

2. Student learning objectives and evaluation:

- a) In accordance with the goals of general education, students will:
 - describe stereotypes associated with hunters and gatherers (critical thinking, speaking)
 - analyze theories regarding the global origins of agriculture (critical thinking, writing, speaking, citizenship)
 - evaluate the differences between domestication and cultivation of plants and the processes by which plants are domesticated (critical thinking, speaking, writing)
 - identify plants and plant products which changed the course of human civilization and human history (critical thinking, citizenship)
 - evaluate the relationship between the green revolution and global hunger and to realize the limitations of the green revolution (critical thinking, citizenship)
 - evaluate the role of plants in the preservation of the global environment (critical thinking, citizenship)
- b) Assessment of student learning objectives:

Writing skills will be evaluated through a number of means. Six short essays or short writes (10%) will be written at the beginning of class. Students will be asked to agree or disagree with a statement based on lectures, discussions, and reading assignments and write a persuasive defense of their opinion. Six impromptu essays (20%) will be written at the end of class. Impromptu essays will be based on specific topics presented and discussed in class. Each student will write a ten-page term paper (30%) on an aspect of the role of plants in the development of human civilization. Speaking skills will be evaluated based on participation in weekly class discussions (20%) and an oral presentation (20%) at the end of the semester. Critical thinking and understanding of

the role of plants in the development of human civilization will be evaluated throughout the course by grading the content and quality of written and oral work.

- c) Not technology-delivered
- d) Not a graduate-level course
- e) This course is writing intensive. 60% of the course grade will be based on written assignments. In addition, the term paper will be returned to the student after preliminary evaluation for further revision. Students will be advised to consult with the instructor during the writing process.

	Short Writes (10%)	Impromptu Essays (20%)	Discussions (20%)	Presentations (20%)	Term Paper (30%)
Describe stereotypes associated with hunter gatherers	X	X	X	X	X
Analyze theories regarding global origins of agriculture	X	X	X	X	X
Evaluate differences in processes of plant domestication	X	X	X	X	X
Identify plant products which changed human history	X	X	X	X	X
Evaluate relationships between green revolution and global hunger	X	X	X	X	X
Evaluate role of plants in preservation of global environment	X	X	X	X	X

3. Outline of the Course

- a) Course outline is based on two 100-minute class meetings each week for 15 weeks. Weeks 1-11 and 13 introduce terms, themes, and reading materials. The twelfth week will be used for assessment, specifically the Watson-Glazer Critical Thinking Test (30 minutes) and completion of the Global Citizenship Survey if not already completed. The last two weeks and finals period will be reserved for oral presentations and discussion. Throughout the course, students will be expected to draw relevant connections between plants and civilization and their major disciplines.

Week 1 – Introduction

- Origin/evolution of life on earth; opposing views/opinions
- Origin and evolution of plants
- Flowers; pollination; sex lives of plants
- Understanding life cycles of plants
- **Readings** *Crops and Man*, Chapter 1
The Green World, Chapter 1

Week 2 – Human origins; Hunter-gatherers

- The hunter-gatherer stereotype

- Studying surviving hunter-gatherers
- Food resources of hunter-gatherers
- What do gatherers eat?
- Food plants in ritual and ceremony
- **Readings** *Crops and Man*, Chapter 1
The Green World, Chapter 2

Week 3 - Agricultural beginnings

- Agriculture as a divine gift
- Agriculture as discovery
- Agriculture as an extension of gathering
- The Near Eastern Center
- Indigenous African Agriculture
- The Chinese Center
- Southeast Asia and Oceania
- The Americas
- **Readings** *Plants, Man and Life*, Chapters 9, 10, 11
Crops and Man, Chapters 2, 8, 9, 10, 11, 12, 14
The Green World, Chapter 2

Week 4 - Weeds and crops; cultivation and domestication

- What is a crop? What is a weed?
- Origin of food crops
- Geography of plant domestication
- Cultivation
- **Readings** *Plants, Man and Life*, Chapters 1, 2, 3
Crops and Man, Chapters 3, 4, 6

Week 5 - Supermarket botany

- General botanical knowledge
- Fruits and seeds
- What you're eating
- **Readings** *Plants, Man and Life*, Chapters 4, 7, 8
The Green World, Chapter 4

Week 6 - The staffs of life

- Food production
- Wheat, rice, maize, barley, oats, rye, triticale, sorghum, millet, buckwheat, amaranth, soybeans, peanuts, beans, lentils, peas, potatoes, yams, sweet potatoes, taro
- **Readings** *Plants, Man and Life*, Chapters 5, 6
The Green World, Chapter 3

Week 7 - Plants that changed history

- Paper; the memory of humans
- Cotton; a despotic king
- Rubber; sulfur and a hot stove
- Tobacco; the loathsome weed
- Essential oils; smells
- **Readings** *The Green World*, Chapter 9

Week 8 - Plants in religion

- Biblical scholarship
- Plants and saints
- Plants of superstition, myth, and ritual
- Doctrine of signatures
- Plants of good and evil
- Trees of life
- The lotus
- Peyote
- **Readings** *The Green World*, Chapter 5

Week 9 - Medicinal plants

- Herbs, herbals, and herbalists
- Medieval medicine
- Beginnings of modern medicine
- Chinese medicine
- Native American medicine
- Colonial medicine
- Modern pharmaceuticals
- **Readings** *The Green World*, Chapter 7

Week 10 - The green revolution

- Malnutrition and starvation
- Biotechnology
- **Readings** *Plants, Man and Life*, Chapter 12
Crops and Man, Chapters 7, 14
The Green World, Chapter 2

Week 11 - Seeds of tomorrow

- *Nova* presentation
- **Readings** *Plants, Man and Life*, Chapter 5
Crops and Man, Chapter 7, 14

Week 12 - Assessment activities

Week 13 - Plants in the environment

- Forests
- Floods
- Soil erosion
- Pollution
- **Readings** *Plants, Man and Life*, Chapter 1
The Green World, Chapter 10

Week 14 – Presentations

Week 15 – Presentations

b) Not technology-delivered

4. Rationale

- a) This course offers a science-based senior seminar to Honors College students.
- b) Prerequisites: Admission to the University Honors College and completion of at least 75 semester hours.

- c) This course is similar to EIU 4111G (Plants and Civilization), however, Honors College students cannot receive credit for that course. In addition, this course includes a more detail-oriented curriculum and more in-depth discussion than EIU 4111G.
- d) This course will not be required by any major or program but will satisfy the general education senior seminar requirement for Honors College students.

5. Implementation

- a) Initial instructors: Dr. Gordon Tucker, Dr. Andrew Methven or any qualified member of the Department of Biological Sciences.
- b) There is no course fee charged for this course.
- c) Text and supplementary materials to be used:
 - Anderson, E. 1997. *Plants, Man and Life*. Missouri Botanical Garden, St. Louis.
 - Harlan, J. R. 1995. *Crops and Man*. American Society of Agronomy and the Crop Science Society of America, Madison.
 - Klein, R. M. 1997. *The Green World. An Introduction to Plants and People*. 2nd ed. Harper & Row, Publishers, New York.

6. Community College Transfer:

A community college course will not be judged equivalent to this course.

7. Date approved by the Department Curriculum Committee: October 6, 2005

8. Date approved by College of Sciences Curriculum Committee: 28 October 2005

9. Date approved by the Honors College: 24 October 2005

10. Date approved by CAA: 16 December 2005