

Term Information

Effective Term Autumn 2015
Previous Value Autumn 2013

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

We are requesting GE status in the Natural Science (Biological Science) and Social Science (Human, Natural, and Economic Resources) categories.

What is the rationale for the proposed change(s)?

This course meets the rationale and learning outcomes for the GE category or categories we are requesting, as outlined in the Curriculum and Assessment handbook.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

N/A

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Anthropology
Fiscal Unit/Academic Org Anthropology - D0711
College/Academic Group Arts and Sciences
Level/Career Undergraduate
Course Number/Catalog 3411
Course Title Human Ecological Adaptations
Transcript Abbreviation Humn Ecolgl Adaptn
Course Description A study of the interactive relationships between humans and their environments, past and present, with a focus on human biology.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 7 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

Previous Value

Prereq: 2200 (200), or permission of instructor.

Exclusions

Not open to students with credit for 411.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code

26.1303

Subsidy Level

Baccalaureate Course

Intended Rank

Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

General Education course:

Biological Science; Human, Natural, and Economic Resources

The course is an elective (for this or other units) or is a service course for other units

Previous Value

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Students should understand the impact of the environment on human evolution and variability.
- Students should understand the impact of humans on the environment, past and present.
- Students should understand the relationship between human population growth and extensions of other species.

Previous Value

Content Topic List

- Past and present
- Hominid
- Evolution
- Human origins
- Ecological forces
- Physiology
- Material culture
- Environment
- Natural selection
- Disease
- Homo sapiens
- Subsistence

COURSE CHANGE REQUEST
3411 - Status: PENDING

Last Updated: Haddad,Deborah Moore
10/23/2014

Attachments

- 3411 Soc Sci Rational.docx: 3411 Soc Sci Rational
(GEC Model Curriculum Compliance Stmt. Owner: Freeman,Elizabeth A.)
- 3411 Bio Sci Rational.docx: 3411 Nat Sci Rational
(GEC Model Curriculum Compliance Stmt. Owner: Freeman,Elizabeth A.)
- 3411 Syllabus.doc: 3411 Syllabus
(Syllabus. Owner: Freeman,Elizabeth A.)
- 3411 GE Assessment Plan.docx: 3411 GE Assessment Plan
(GEC Course Assessment Plan. Owner: Freeman,Elizabeth A.)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Freeman,Elizabeth A.	10/22/2014 03:29 PM	Submitted for Approval
Approved	McGraw,William Scott	10/23/2014 08:51 AM	Unit Approval
Approved	Haddad,Deborah Moore	10/23/2014 12:01 PM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	10/23/2014 12:01 PM	ASCCAO Approval

HUMAN ECOLOGICAL ADAPTATIONS

Anthropology 3411 Class #15274

Autumn, 2013

T-Th 11:10-12:30, Koffolt Lab 0131

Prof. Jeffrey K. McKee

Department of Anthropology

Phone: 292-2745 (O), 740-657-8494 (H)

e-mail: mckee.95@osu.edu

Office Hours: Tuesday Thursday 10:00-11:00, Friday 11:30-12:30, and by appointment
4068 Smith Laboratory

GE LEARNING OUTCOMES WILL BE ADDED IF APPROVED

OVERVIEW: This course focuses on the interactive relationships between humans and their environments, past and present. Starting with an evolutionary perspective, the ecological forces shaping human origins will be covered along with potential ecological roles and impacts of our earliest known hominid ancestors. This leads to a study of modern human adaptations of morphology and physiology, as well as the role of material culture in the growth of the human population. Demographic considerations will be covered in some detail, including the possible effects on our adaptability. Today humans shape their own environments, affecting the conditions of natural selection and ongoing evolution of our species. We will study how our unique ecological role is important in determining disease vectors and our adaptations to disease. The course will conclude with a theoretical look at possible scenarios for future human ecological adaptations and impacts.

OBJECTIVES: The students should become familiar with the place of humans in nature and nature's place in humans. They will be expected to have a basic grasp of the conditions of human evolution and the types of environmental interactions that still affect our species today.

READING: Required text books: Kormondy, E.J. & Brown, D.E. (1997) *Fundamentals of Human Ecology* (Prentice Hall); McKee, J.K. (2003) *Sparing Nature* (Rutgers U. Press) Additional required readings are listed on the syllabus. Further outside readings from recent articles and/or web sites will be recommended to keep up to date with new research and issues, and assigned in conjunction with an essay project.

EVALUATION: Grades will be assessed on the basis of a midterm exam and comprehensive final exam worth 40% each. Exams will cover both lecture material and readings on the syllabus. An assigned essay worth 20% of the total will be based on an assessment of issues in the current academic literature; it will be a minimum of ten typed pages, and include at least 5 references from sources other than the regular assigned readings.

Grading percentages: Final grades will be distributed as follows: A 92-100; A- 90-91; B+ 88-89; B 82-87; B- 80-81; C+ 78-79; C 72-77; C- 70-71; D+ 68-69; D 60-67; E<60.

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>

Class Cancellations: In case of unexpected instructor absences the information will be posted on the following departmental website. This site should be consulted during inclement weather to check for possible class cancellations or delays. Do not call the department, check the website. <http://monkey.sbs.ohio-state.edu/news.htm>

Attendance: Much of this course depends on class discussions so attendance is necessary. Absences will be excused with proper written notification from a doctor or appropriate authority.

OUTLINE: **Human Ecological Adaptations** (Anthropology 3411)

Week

Introduction

- 1 8/22 - The human place in nature and nature’s place in humans.

Perspectives of Evolutionary Ecology

- 2 8/27 - Historical perspectives. Principles of ecology.
8/29 - Principles of evolution in an ecological context.
Reading: Kormondy & Brown Chapters 1, 2.

Evolutionary Ecology of the Hominins

- 3 9/3 - Hominin origins in African environments.
9/5 - Primate ecological adaptations.
- 4 9/10 - Early hominin adaptations and adaptability.
9/12 - NO CLASS, please study.
Reading: Kormondy & Brown Chapter 12.
- 5 9/17 - Geographic spread and ecological diversification of *Homo*.

***Homo sapiens* biocultural adaptations**

9/19 - Biological and cultural adaptations to new biomes.

Reading: Kormondy & Brown Chapters 6.

- 6 9/24 - Ecological & development adaptations of morphology and physiology. I.
9/26 - Ecological & developmental adaptations of morphology and physiology. II.
Reading: Kormondy & Brown Chapters 7, 8.
- 7 10/1 - Film and discussion
10/3 - Review Session
- 8 10/8 - **Midterm exam** (covers lectures and readings from weeks 1-7.)

The “ecological transition”

10/10 - Human survival and subsistence choices.

Reading: Kormondy & Brown Chapters 11, 14, 16.

Essays assigned. (Essays drawn from scientific literature in consultation with lecturer)

- 9 10/15 - Human survival and subsistence choices.
10/17 - Domestication of other life forms.

Pestilence

- 10 10/22 - Adaptations to disease. Human spread of disease.
10/24 - Adaptations to designed environments.
Reading: Kormondy & Brown Chapter 9, 10.

Human population dynamics

- 11 10/29 - Human population growth since the Pliocene. I.
10/31 - Human population growth since the Pliocene. II.
Reading: Kormondy & Brown Chapters 4, 5; McKee Chapters 1, 2, 3, 4.
*Hardin, G. 1968 The tragedy of the commons. *Science* 162: 1243-1248.
<http://www.sciencemag.org/cgi/content/full/162/3859/1243>
* *important:* class discussion next Tuesday will be on this article.
- 12 11/5 - Environmental carrying capacity and the tragedy of the commons.
11/7 - Film and discussion

Human impacts on Earth.

- 13 11/12 - Impact on wild populations
*11/14 - Environmental impact.
Reading: Kormondy & Brown Chapter 18; McKee Chapters 5, 6.

***Essays due 11/14**

- 14 11/20 - Film and discussion.
11/22- Informal student presentations
- 15 11/27 - Demographic, ecological and evolutionary projections.
11/29 - **NO CLASS** (*Thanksgiving*)
Reading: Kormondy & Brown Chapter 18; McKee Chapters 7, 8, 9.
- 16 12/3 REVIEW

Final Exam Wednesday December 11, 10:00-11:45 (Note day and time!!!)
(Covers all work, focusing on weeks 8-15)

Rationale for *The Human Ecological Adaptions* (ANTHROP 3411) as a Natural Science (Biological Science) GE course.

Why does this course qualify for GE status in the Natural Science (Biological Science)?

Human Ecological Adaptions, Anthrop 3411, takes an in depth look at the human place in nature and nature's place in humans. The central themes include the evolutionary biology of human origins and human variability in the context of energy and nutrient flows in ecological systems. Students are given historical perspectives on the development of anthropological human ecology as an interdisciplinary subject matter. Hominin ecological adaptations and environmental impacts are traced through the fossil record up to contemporary issues of the human/nature interface, including the impacts of technology and population dynamics. All topics are taught with basic principles, so there is no assumed knowledge of the students.

This course fits with the expected learning outcomes of a Natural Science (Biological Science) GE course in the following ways:

1. Students understand the basic facts, principles, theories and methods of modern science.

The course is driven by a fundamental understanding of the forces of evolution and principles of ecology through hypothesis testing.

2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.

One of the opening lectures is devoted to historical development of anthropological human ecology. Fundamental historical principals of evolution and ecology are melded into subsequent lectures.

3. Students describe the inter-dependence of scientific and technological developments.

This course covers technological development from the first stone tools, through the origins of agriculture, to the industrial revolution.

4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

A pivotal part of this course is a section called the "ecological transition," which is the gradual change from nature's control of humans to human control over nature. For the second half of the course we take an extended look at human impacts on the natural world and on fellow humans through the lens of scientific understandings and possible scientific solutions.

Rationale for *Human Ecological Adaptions* (ANTHROP 3411) as a Social Science (Human, Nature, and Economic Resources) GE course.

Why does this course qualify for GE status in Social Science?

Human Ecological Adaptations, Anthrop 3411, takes an in depth look at the human place in nature and nature's place in humans. The central themes include the evolutionary biology of human origins and human variability, along with the key roles played by culture in making us a unique animal. Students are given historical perspectives on the development of anthropological human ecology as an interdisciplinary subject matter. Hominin ecological adaptations, advances in material culture, and environmental impacts are traced through the fossil and archaeological record. Contemporary issues of the human/nature interface, including the impacts of technology and population dynamics, are discussed in the context of public policy. All topics are taught with basic principles, so there is no assumed knowledge of the students.

This course fits with the expected learning outcomes of a Social Science (Human, Nature, and Economic Resources) GE course in the following ways:

1. Students understand the theories and methods of social scientific inquiry as they apply to the study of the use and distribution of human, natural, and economic resources and decisions and policies concerning such resources.

The course is designed around the fundamental scientific principles of energy and nutrient flow, how humans and their predecessors have been affected by key resources and how we shape them now. Demographic models of population growth dominate the second half of the course.

2. Students understand the political, economic, and social trade-offs reflected in individual decisions and societal policymaking and enforcement and their similarities and differences across contexts.

Biological evolution can be viewed as a series of trade-offs, and that is true of cultural evolution as well. We trace material culture from the first stone tools, through the origins of agriculture, to the industrial revolution. The course goes beyond archaeology to look at variability in contemporary modes of subsistence and the social and biological consequences of subsistence decisions. Much of this is framed in the concept of "optimal foraging" models so that the comparisons can be objective.

3. Students comprehend and assess the physical, social, economic, and political sustainability of individual and societal decisions with respect to resource use.

A pivotal part of this course is a section called the "ecological transition," which is the gradual change from nature's control of humans to human control over nature. For the second half of the course we take an extended look at human impacts on the natural world and on fellow humans. There is a strong but not exclusive focus on human population dynamics and its implications for sustainability of the global environment as well as our current economic structures.

Assessment plan for ANTHROP 3411 (*Human Ecological Adaptations*)

Human Ecological Adaptations will be assessed on an annual basis to ensure that it is on track for achieving GE learning outcomes. This will be done primarily by using embedded questions in regular examinations administered during the course of the semester. Results of these questions – scored as a part of regular examinations – will be stored and tracked annually to provide an objective measure of class performance. I have used embedded multiple choice questions in my *Human Origins* class that were mutually agreed upon by my fellow physical anthropologists. The success rate has been about 98%. For *Human Ecological Adaptations*, a course I designed and for which I have been the sole instructor for many years, I will include more challenging embedded questions on key concepts to get a better idea of what is getting through and what is not of principles that reflect the GE standards, and then adjust my lectures accordingly if need be.

In addition, students will be encouraged to give more open-ended, anonymous assessments of what they've learned at the end of the course. Keywords from GE standards will be part of the questions asked, so that objective observers can assess the comments as well as myself.

Results (paper and electronic) of these outcomes will be archived in the Department of Anthropology, with due respect to FERPA requirements for confidentiality.