

Economics and Evolution

S Y L L A B U S

(Fall 2009)

Description and learning objectives: The course is essentially an introduction to **paleoeconomics**: the study of economic structures that evolved prior to the appearance of anatomically modern humans. The transition from the feed-as-you-go system of primate subsistence to hunting-gathering (i.e., redistribution in consumption of food items and division of labor in the acquisition of such items) is an example. Domestication of fire is another. As such, the course covers major topics in evolutionary and prehistoric economics with application to modern economic analysis and to allied ideas in biology and anthropology. Enrollment is intended for undergraduate mid- and upper-level students in economics and others with similar interests in related fields of science. Though the course is largely self contained, the interdisciplinary nature of the material may require students who lack the necessary background (in science or economics) to complete their knowledge by self study. [Prerequisites: Grade of C or better in ECON 160 for economics majors; special permission from the instructor for non-majors.].

OFFICE HOURS (in LT1011): Monday 11:00 – 12:00; Friday 2:20 – 3:20; or by appointment.

TEXTS: The main topics are covered in the following two books: (available from the bookstore).

Lewin, R., Human Evolution: An Illustrated Introduction, 5th ed. (Blackwell, 2005).

Ofek, H., Second Nature: Economic Origins of Human Evolution, (Cambridge University Press, 2001).

SUPPLEMENTARY TEXT:

Any standard intermediate microeconomic text such as Pindyck & Rubinfeld, Microeconomics (on reserve), or equivalent.

FURTHER READINGS: The lectures/readings occasionally refer to the following (to be placed on reserve):

First published as far back as 1776 and 1859, the two classics that established the fields of modern economics and evolutionary biology, respectively. Both are to this day clear and pleasant to read. Each in its own way is probably still the best introduction to itself, and to the entire field it helped to establish:

Smith, A., The Wealth of Nations (The University of Chicago Press, 1976).

Darwin, C., On the Origin of Species by Means of Natural Selection. Facsimile reprint of the first ed. first published by J. Murry, 1859 (Harvard University Press, 1964).

Easily accessible to lay readers, a more recent exposition of evolutionary theory, an account of human evolution, and a popular attempt to relate them both to economic issues are, respectively, provided by

Dawkins, R., The Selfish Gene, (Oxford University Press, 2006).

Klein, R., and Blake Edgar, The Dawn of Human Culture, (J. Wiley, 2002).

Ridley, Matt., The Origins of Virtue: Human Instincts and the Evolution of Cooperation, (Viking, 1996).

More technical (and more comprehensive) introductions to evolutionary theory and to the study of human evolution are given, respectively, by

Ridley, Mark, Evolution (Blackwell, 1996).

Klein, R., The Human Career: Human Biological and Cultural Origins, 2nd ed. (University of Chicago, 1999).

LECTURES, READINGS, AND HANDOUTS:

You are responsible for everything that transpires in class (or on its Web site) and for obtaining any written material that is distributed or returned. You should do the assigned readings before coming to class. The lectures will discuss parts of the readings in detail, or will provide additional material not contained in the

texts. Note that the quizzes and the exams may cover portions of the readings not discussed in class. Hence, neither the lectures nor the readings can be substituted for one another.

COURSE WEBSITE: <http://bingweb.binghamton.edu/~hofek/e383s4.html>

The primary online source for course materials and class information, this Web site will offer links and downloads regarding exams, answer keys, selected slides from class presentations, grade distributions, handouts and last minute announcements – among other things. The site will be updated continuously as the course progresses. So, you should check it on a regular basis (at least twice a week).

GRADED REQUIREMENTS :

Two in-class quizzes, midterm exam and a final examination (dates TBA).

Note: There will be no make-up midterm exams!

(For make-up final exams, see addendum at the bottom of this document)

GRADES:

Your final grade will be based on the final exam (45%), midterm (25%), quizzes (15% each). Active class participation may slightly improve your grade (up to 5%).

TENTATIVE OUTLINE AND APPROXIMATE READING ASSIGNMENTS

Note. (*) = recommended, not required

PART 1: ELEMENTS OF EVOLUTIONARY BIOLOGY AND ECONOMICS

1. Introduction

Lewin: Units 1-3.
Ofek: Chap. 1.

2. Exchange in human and nonhuman societies

Adam Smith: Book I. Chapter II.
Ofek: Chap 2.
Matt Ridley, The Origins of Virtue, Chap. 2 (pp. 41-46) and Chap. 10 (pp. 195-210).
Pindyck & Rubinfeld: pp. 123-125, (269-271)*, 288-293.

3. Inheritance and natural selection

Lewin: Units 4, 12.
Dawkins: pp. 1-28, 33-45.
Ofek: Chap. 3.
Matt Ridley, The Origins of Virtue, Chap. 1 (pp. 17-27).
(Mark Ridley, Evolution: Chaps. 2,4)*
(Darwin: Chap.4)*.

4. Origins of nepotistic exchange in relation to division of labor

Dawkins: Chaps. 6, 10.
Lewin: Units 8, 13
Ofek: Chap. 6 and pp. 44-49 (50-53)* 54-61.
Matt Ridley, The Origins of Virtue, Chap. 1 (pp. 1-17).
Wilson. Chap. 18 (pp. 379-382).

PART 2: MAJOR PALEOECONOMIC TRANSITIONS IN PREHISTORY

5. Introduction

Lewin: Unit 5.
Ofek: pp. 125-128.
Matt Ridley, The Origins of Virtue, Chap. 6 (pp. 105-108).

6. *Australopithecus*: Transition from woodland to grassland

Lewin: Units 14, 19, 20.
Ofek: Chap. 7.
Klein and Edgar: pp. 29-42, 54-57.

7. *Homo habilis*: Transition from feed-as-you-go to hunting-gathering

- (a) Evolutionary patterns
Lewin: Units 21, 23.
Klein and Edgar: pp. 63-64, 74-76.
- (b) The feeding ecology
Lewin: Unit 31.
Ofek: pp. 62-75, 128-137.
Klein and Edgar: pp. 143-146.
Matt Ridley, The Origins of Virtue, Chap. 2 (pp. 47-50).

8. *Homo erectus*: Transition out of Africa and first control of fire

- (a) Patterns of evolution and dispersion
Lewin: Units 24, 26, 26.
- (b) Origins of market exchange
Ofek: Chap. 9
Pindyck & Rubinfeld: Sections 18.4 and 18.5.
- (c) Control and provision of fire
Ofek: pp. 153-162.
Klein and Edgar: pp. 155-157.

9. *Cro-Magnons* and their contemporaries: The middle to upper paleolithic transition

Lewin: Units 27,32,33,34.
Ofek: Chap 11.
Klein and Edgar: pp. 186-192, 257-264.

10. *Homo sapiens* at the verge of civilization: Transition to agriculture

Lewin: Unit 35.
Ofek Chaps. 12, 13.

ADDENDUM

ECONOMICS DEPARTMENT POLICY REGARDING MAKE-UP FINAL EXAMS

ALL make-up final exams in Economics will be given **Friday, December 18 from 8:00 to 10:00 AM**. All officially scheduled final exams are linked from the [BU Brain](#) – check **NOW** for conflicts. If a conflict exists you may request a make-up exam from the instructor of **ANY** of the conflicting courses. If you choose to request a make-up exam for an economics course, a sign-up list to request the make-up exam will be available in class after the add/drop deadline – ask the instructor. Students **MUST** make their request for a make-up exam in economics **NO LATER THAN FRIDAY, October 9**.

It is **the student's responsibility** to learn from the instructor if the request has been approved. Only students who are approved may take a make-up final exam. Students who have not requested a make-up exam in an economics course by **October 9** will be required to resolve conflicting exams with the instructor in one of their other courses.

Make-up exams are approved **ONLY** for the following conditions:

- Conflicts with the **OFFICIAL** final exam schedule (e.g. exams at the same time or more than two exams within 24 hours).
- DOCUMENTED** personal illness or family emergency.