

Ecology (undergraduate course)

21:120:280 Index#04035, TTH 2:30-3:50, Boyden100 - Fall 09
3 credits



© Agnès Seugnet 2004

Instructors: Karina Schäfer and Claus Holzapfel, Department of Biological Sciences, Rutgers University Newark

Contact:

Claus Holzapfel, holzapfe@andromeda.rutgers.edu,
Boyden 408, phone: 973 353 5385
Karina Schäfer, karinavr@andromeda.rutgers.edu,
Boyden 410, phone: 973 353 1008

Synopsis:

The lecture course is intended as an advanced undergraduate introduction to ecology. The basic science of ecology – the interactions of living beings among themselves and with their environment – is laid out and related to environmental topics of societal concern (e.g., Global Warming, Land-use change, Biodiversity crisis, etc.).

Textbook (some chapters are required reading):

Ricklefs, R.E. (2001): *The Economy of Nature*, Freeman, 5th edition. ISBN 0-7167-3883-X (paperback)

or

Ricklefs, R.E. (2007): *The Economy of Nature - Data Analysis Update*. Freeman, 5th edition. ISBN 978-0-7167-7762-5 (paperback)

Course website on Blackboard (*lecture material will be posted there*)

CPS clickers

This class uses clickers therefore you will need to enroll at CPSOnline. If you enroll through CPSOnline, you will first need to setup a CPSOnline account.

Your Class Name: **Ecology 120:280** and your **class key** is **F50971I551**

You will need:

- ✦ Class Key (from your instructor)
- ✦ Connection to the Internet
- ✦ Enrollment Code/coupon (from the school bookstore) **or**
- ✦ Method of Payment (Credit card or personal check)

Format and grading

Lecture course attendance compulsory, 2 major exams and weekly quizzes (multiple choice, course grade will be based on these). Each of the instructors will give one exam (20% of grade) and in addition four short quizzes (10 % each, the worst quiz gets omitted).

Grading system

90-100 %	A
85-89	B+
77-84	B
75-76 %	C+
67-74	C
60-66	D

etc.

(fractions are rounded e.g., 89.5=90, 89.4=89)

Students are bound by the Rutgers or NJIT policies on Academic Integrity; see: <http://academicintegrity.rutgers.edu/integrity.shtml> or <http://www.njit.edu/academics/honorcode.php>.

Structure:

Introduction: What is Ecology? (1 day)



Part one: K. Schäfer (week 1-5)
I Life and Physical Environments
II Ecosystems
III Ecophysiology/Organisms

Review and Midterm (week 6)



Part two: C. Holzapfel (week 7-12)
IV Populations
V Species Interactions
VI Communities

Part three (Schäfer /Holzapfel)

Ecological applications

Global and Human Ecology (week 13)

Extinction and Conservation (week 14)

Review, and Finals

Day by day syllabus (Fall 2009)

Sept. 1	Schäfer &Holzapfel	Introduction: What is Ecology?	
Sept. 3	Schäfer	I Life and Physical Environments	
Sept. 10	Schäfer	abiotic factors	
Sept. 15	Schäfer	biotic factors	
Sept. 17	Schäfer	II Ecosystems	
Sept. 22	Schäfer	“terrestrial ecosystems	
Sept. 24	Schäfer	“aquatic ecosystems	
Sept. 29	Schäfer	III Ecophysiology, Organisms	
Oct. 1	Schäfer	Adaptation to Aquatic and Terrestrial Environments	
Oct. 6	Schäfer	Adaptation to Varying Environments	
Oct. 8	Schäfer	Review	
Oct. 13	Schäfer	Mid Term	
Oct. 15	Holzapfel	IV Populations	Structure
Oct. 20	Holzapfel		Growth and Regulation
Oct. 22	Holzapfel		Sex and Evolution
Oct. 27	Holzapfel	V Species Interactions:	Predation and Herbivory
Oct. 29	Holzapfel		Competition
Nov. 3	Holzapfel	<i>Halloween special</i>	
Nov. 5	Holzapfel		Coevolution and Mutualism
Nov. 10	Holzapfel	VI Communities	Community Structure
Nov. 12	Holzapfel		Community Evolution
Nov. 17	Holzapfel		Biodiversity
Nov. 19	Holzapfel		History and Biogeography
Nov. 24	Schäfer	Global Change Ecology	
Thanksgiving			
Dec. 1	Schäfer	Sustainability	
Dec. 3	Holzapfel	Extinction	
Dec. 8	Holzapfel	Conservation	
Dec. 10	Holzapfel	Review	
Dec. ??	Holzapfel	Finals (exact date to be determined)	